

GNFAC Avalanche Advisory for Sun Mar 14, 2010

Good Morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Sunday, March 14, at 7:30 a.m. **Bridger Bowl**, in cooperation with the **Friends of the Avalanche Center**, sponsors today's advisory. This advisory does not apply to operating ski areas.

Mountain Weather

A moisture laden cold front has swept over southwest Montana depositing 2-5 inches of snow in the upper elevations of our advisory area. The southern Madison Range was the grand recipient of this storm picking up 4-5 inches of new snow while the northern Madison Range picked up 3 inches. The northern Gallatin Range, Bridger Range and mountains around Cooke City only picked up 1-2 inches. Temperatures have remained relatively warm with nighttime lows dropping only to the mid twenties while highs today will reach the mid to upper thirties. Winds have been blowing 5-10 mph out of the N through much of our advisory area although stronger winds are being recorded in the Bridger Range blowing at 15-25 mph out of the N and in the Lionhead area at 20-30 mph out of the S. Moisture will taper off today leaving mostly cloudy skies and warmer temperatures. A ridge of high pressure will bring sunny skies and above average temperatures for the early part of the week.

Snowpack and Avalanche Discussion

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

Winter has made an attempt to return to southwest Montana leaving 2-5 inches of new snow over the upper elevations of our advisory area. Although this brief shot of snow does not fix our waning snowpack in the long run, it does pose a few immediate problems. Weak layers close to the snow surface are the primary concern and will easily react to the stress applied by the newly fallen snow. Slopes that have received recent wind loading will push these weak layers to the brink making them the most susceptible to human triggered avalanches.

Before this storm arrived warm days and cold nights developed a variety of weak layers at or near the snow surface on most slopes. On south facing slopes, near surface facets have formed over a melt freeze crust due to radiation recrystallization and are now being capped by this new snow. This process has developed the perfect weak layer - bed surface combination and will produce loose snow and soft slab avalanches under the stress of a skier or rider. On slopes with a more northerly aspect, near surface facets and surface hoar will likely be found 4-8 inches under the surface and will become increasingly sensitive under this new load ([video](#)). Although the weak layers closest to the surface will pose the greatest threat, buried surface hoar 1.5-2 feet below the surface continues to be found on shady slopes throughout our advisory area ([photo](#)). This layer is especially tricky because it does not exist on all slopes. On some slopes it remains sensitive while on others it has gained strength. I found this layer near Cooke City on Thursday where it was our primary avalanche concern ([video](#)).

Although 2-5 inches of new snow does not seem like it could create larger slides, areas that received wind loading before and during the storm can easily rack up new slabs twice this depth, making for more dangerous avalanche conditions. Yesterday a skier near Cooke City remotely triggered a wind slab that broke up to a foot deep and nearly fifty feet across ([photo](#)). This wind slab formed very quickly when strong winds out of the S-SW blew for only a few hours and transported light density snow onto this leeward slope. With up to 5 inches of new snow in the past 24 hours the possibility of triggering a wind slab avalanche remains very real warranting a

cautious approach when traveling in the backcountry. With the presence of new snow, wind loading and multiple weak layers in the snowpack human triggered avalanches are possible and the avalanche danger is rated a strong **MODERATE**.

New Beacon Park: Skiing or riding near West Yellowstone? Test your beacon skills at a new beacon park near the old airport where you can search for pre-placed beacons switched on/off by a control panel. Look for it by orange snow fence and signage just south of the snow cross track. For more information on beacon parks, visit: <http://bit.ly/dqXrFM>

I will issue the next advisory tomorrow morning at 7:30 a.m. If you get out in the backcountry let us know what you find. You can reach us at 587-6984 or email us at mtavalanche@gmail.com.