

GNFAC Avalanche Advisory for Sat Mar 20, 2010

Good Morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Saturday, March 20, at 7:30 a.m. **Yellowstone Club**, in cooperation with the **Friends of the Avalanche Center**, sponsors today's advisory. This advisory does not apply to operating ski areas.

Mountain Weather

Happy spring equinox. In the past 24 hours a moist northerly flow has brought an additional 2-3 inches of snow to the Bridger Range, bringing the storm total to 8-10 inches. All other ranges in our advisory area picked up an additional trace to one inch throughout the day yesterday. As the storm moved out, skies cleared and temperatures dropped to some of the lowest readings we have seen in the past few weeks. Currently mountain temperatures are in the single digits to low teens, but will warm into the high 30's F to low 40's F as the day progresses. Winds have been light out of the W at 5-15 mph and will remain calm throughout the day. A ridge of high pressure will build over southwest Montana bringing us sunny skies and warm temps through today and tomorrow.

Snowpack and Avalanche Discussion

The Bridger Range:

The Bridger Cloud worked its magic over the past two days, dumping 8 inches of highly needed powder on Bridger Bowl and close to 10 inches on the Brackett Creek snotel site. More importantly, this storm deposited close to an inch of SWE (snow water equivalent), which is a substantial amount of weight to be added to the snowpack in a short period of time. In addition, gusty winds during the early morning hours on Friday transported the new snow, loading mid to upper elevation slopes and forming stout wind rolls resembling a two foot chop on most aspects.

Yesterday, Mark and I toured around the Flatirons north of Ross Peak and found variable riding conditions ranging from dust on crust to knee deep powder turns with a few wild wind rolls thrown in-between. The new snow was surprisingly reluctant to move during ski cuts and stability tests even though it was deposited on a variety of snow surfaces, including sun crusts and near surface facets. This is because the storm came in warm and left cold, allowing for sufficient bonding to occur between the new snow and old snow surfaces. If you are traveling in the backcountry today, keep in mind that a skier was caught earlier this week in small but powerful avalanche that formed from strong winds with less snow than we have now ([photo1](#), [photo2](#), [photo3](#)).

Today is the first official day of spring and the sun's strengthening rays may play a factor in today's avalanche conditions. As the new snow absorbs large amounts of radiant heat it will warm significantly creating less cohesion and unstable conditions. If enough heat is absorbed, roller balls, point releases, and wet snow avalanches could occur, mainly on steep slopes with direct exposure to the sun. For today, the dry snow avalanche danger is rated **MODERATE** while the wet snow avalanche danger could rise to **CONSIDERABLE** as the day heats up.

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

The last day of winter made an attempt to freshen up snow conditions in the mountains throughout our advisory area. Unfortunately this attempt was weak and short lived with only 2-4 inches falling in the Gallatin and

Madison Ranges and mountains around Cooke City. Although this light shot of snow may seem insignificant, it did fall over a variety of weak layers all of which are capable of creating an avalanche. The layer of most concern is a thin layer of facets 6-10 inches below the surface that could be buried deeper on slopes that have received recent wind loading. The combination of wind slabs sitting over a weak layer could produce dangerous avalanches, especially if triggered in high consequence terrain such as steep rocky areas and slopes exposed to terrain traps.

If triggered, these isolated wind slabs do have the potential to step down to deeper layers creating larger and more destructive avalanches. We saw a good example of this last weekend on Lone Mountain, when a skier triggered a small wind slab that stepped down to facets near the ground creating a large avalanche that ran full track, 1,200 vertical feet ([photo](#)). This is a prime example that weak facets near the ground are still lingering, just waiting for the proper trigger. Another layer of concern is a layer of buried surface hoar that can be found 1.5-2 feet below the surface on slopes with an off exposure to the sun.

Although this storm deposited only a small amount of new snow, wet snow avalanches remain a concern on slopes with direct exposure to the sun. While most of these wet snow avalanches will be confined to the new snow, the possibility of a small dribbler triggering a larger avalanche does exist. For today, human triggered avalanches are possible and the avalanche danger is rated **MODERATE**.

New Beacon Park

The Friends of the Avalanche Center used a donation from **Yellowstone Adventures** to purchase an avalanche beacon training park in West Yellowstone. You can search for pre-placed beacons switched on/off by a control panel. Look for it by the orange snow fence just south of the old airport ([photo](#)).

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.