

## **GNFAC Avalanche Advisory for Sun Feb 12, 2012**

Good morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Sunday, February 12 at 7:30 a.m. Cooke City Motorsports and Yamaha, in partnership with the Friends of the Avalanche Center, sponsors today's advisory. This advisory does not apply to operating ski areas.

The GNFAC would like to extend a huge thanks to everyone who participated in the 10<sup>th</sup> annual King and Queen of the Ridge. The event was a great success. Congratulations to the Queen – Nikki Kimball who set a female record with an amazing 27 hikes. Nate Opp of the Big Sky Ski Patrol was crowned King with 26 hikes. A great effort was put forth by all who participated.

### Mountain Weather

Over the past 24 hours 1-2 inches of new snow has fallen in the mountains around Cooke City and West Yellowstone. The mountains around Bozeman and Big Sky have remained mostly dry. This morning, temperatures are in the low 20s under mostly cloudy skies and winds are blowing 5-10 mph out of the WNW. Today, temperatures will warm into the high 20s under mostly cloudy skies and winds will stay light out of the WNW. A weak weather disturbance will brush by our area producing a slight chance of mountain snow showers this afternoon.

### Snowpack and Avalanche Discussion

#### The mountains around Cooke City:

Cooke City is an incredible place! Over the past few days this area has picked up over a foot of low density snow producing what a reliable source called "my deepest day of powder skiing this winter". This latest round of snow totaled .5 inches of [SWE](#) (snow water equivalent) meaning the density of the new snow ranged between 3-5%.

Although a foot of new snow sounds like a lot, there are two factors working in our favor. One – this storm came in with very little wind. Two - .5 inches of SWE is not an overbearing load.

Today, avalanches occurring within the new storm snow are the primary concern ([photo](#)). Soft slab avalanches over a foot deep will be easy to trigger in steep terrain. It will be possible to trigger new snow avalanches on all aspects and elevations.

A secondary concern is avalanches breaking on a layer of facets buried 4-5 deep. While it's becoming more difficult to impact this layer, it's not entirely out of the question. Slopes with a southerly aspect, specifically those in steep rocky terrain will be the most prone to deep slab avalanches.

Today, plenty of fresh snow will make human triggered avalanches likely and the avalanche danger is rated [CONSIDERABLE](#).

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

The mountains around West Yellowstone have the structural integrity of a house of cards.

This 'house of cards' structure is both deceiving and tricky - in some areas the 'cards' have a stronger load capacity, while in others feeble 'cards' are struggling to support even the most meager of loads.

Although the latest storm did not deliver a tremendous amount of weight, it did produce enough to keep the snowpack on edge.

The primary avalanche concern today will be any slope that has received a wind load. The predominant wind direction during this latest storm was out of the west, making slopes on the east half of the compass the most prone to recent wind loading. Fresh wind drifts will likely be resting over a layer of weak near surface facets that formed prior to the storm. This layer will make any wind loaded slope sensitive to the weight of a skier or rider.

A secondary concern is the possibility of triggering a slide on a layer of weak facets near the ground. Although the likelihood of triggering a deep slab avalanche is slowly diminishing, it remains possible. Steep slopes, specifically those with thin rocky margins will be the most prone to larger avalanches.

Today, human triggered avalanches remain likely on all wind loaded slopes where the avalanche danger is rated [CONSIDERABLE](#). Non wind loaded slopes have a [MODERATE](#) avalanche danger.

#### The northern Madison Range:

Today's primary avalanche concern for the northern Madison Range will be steep wind loaded slopes. Recently formed wind drifts will likely be resting over a layer of small, sugary facets that formed prior to the storm ([photo](#)). Mid to upper elevation slopes on the east half of the compass will be the most likely to hold unstable snow.

Today, human triggered avalanches remain likely on steep wind loaded slopes which have a [CONSIDERABLE](#) avalanche danger. Less steep, non wind loaded slopes have a [MODERATE](#) avalanche danger.

#### The northern Gallatin Range and the Bridger Range:

The northern Gallatin Range, specifically the Hyalite Drainage has the strongest snowpack in our advisory area. Yesterday, skiers up the Flanders drainage found soft skiing and stable conditions. Skiers found similar conditions on Mt Ellis on Friday.

In the Bridger Range, the snowpack is not as strong ([video](#)), but the lack a significant load is keeping the avalanche danger reduced. Yesterday, the Bridger Bowl Ski Patrol did not produce any significant avalanches during control work and no activity was observed in the surrounding terrain.

Today, human triggered avalanches remain possible on slopes steeper than 35 degrees which have a [MODERATE](#) avalanche danger. Less steep slopes have a [LOW](#) 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](mailto:mtavalanche@gmail.com) or call us at 587-6984.

#### [EDUCATION](#)

Bozeman

FREE 1-hour Avalanche Awareness at REI on Thursday, February 16 at 6:30 p.m. For more information call REI at 406-587-1938.