

## **GNFAC Avalanche Forecast for Mon Feb 24, 2014**

Good Morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Monday, February 24 at 7:30 a.m. [\*\*Pinhead Classic Telemark Festival\*\*](#) and [\*\*Alpine Orthopedics\*\*](#) sponsors today's advisory. This advisory does not apply to operating ski areas.

### Mountain Weather

Cooke City was the gold medal winner last night picking up 6-8 inches of new snow. The mountains around Big Sky won silver with 3-4 inches while the rest of advisory area shared the bronze with 1-2 inches. Currently, mountain temperatures are in the teens to low 20s F and winds are steadily increasing out of the west. [Hyalite weather station](#) is recording gusts up to 80 mph while the mountains around [Big Sky](#) and [Cooke City](#) are recording gusts up to 50 mph.

Today, light snow will linger in the mountains, but no real accumulations are expected. Temperatures will warm into the mid to upper 20s F and winds will remain strong out of the WNW. Another round of moisture is forecasted to impact the area tonight into tomorrow. Judging by the lackluster performance of this latest storm, my expectations are fairly low. I'll go out on a limb and say 3-5 inches are possible in the northern mountains and Cooke City by tomorrow morning. The southern ranges should see 2-4 inches.

### Snowpack and Avalanche Discussion

#### Cooke City

February has been a snowy month. The mountains around Cooke City have received new snow nearly every day over the past three weeks - totaling 8.7 inches of SWE (snow water equivalent) since February 1<sup>st</sup>.

Over the past 24 hours this area has received 6-8 inches of new snow with higher amounts likely at upper elevations. Strong westerly winds will be transporting the new snow onto exposed leeward slopes, forming thick and touchy wind slabs. I expect natural avalanches to be occurring in steep, upper elevation terrain where loading rates are the highest. Avoiding wind loaded slopes today will be the best way to avoid triggering an avalanche.

On non-wind affected slopes, which are few and far between, avalanches remain possible within the new snow. Density changes in the top 1-2 feet of the snowpack have the potential to produce soft slab avalanches in steep terrain. This type of instability is not a major concern, but something to consider when riding on steeper, more sheltered slopes.

Today, very dangerous avalanche conditions exist on wind loaded slopes steeper than 35 degrees which have a [\*\*HIGH\*\*](#) avalanche danger. All other slopes have a [\*\*CONSIDERABLE\*\*](#) avalanche danger.

#### The Bridger Range   Northern Gallatin Range

#### Northern Madison Range

The mountains around Bozeman and Big Sky have not received as much snow as Cooke City, but have been impacted by large storms over the past week.

New snow instability is the common thread that ties these areas together. Wind slabs will be the most likely problem today as strong winds continue to impact the area. Upper elevation slopes leeward to westerly winds have the greatest tendency to produce avalanches.

If you're traveling in the northern Gallatin Range or Northern Madison Range, a secondary concern is a layer of facets buried 2-3 feet deep. I came across this layer yesterday while skiing in Hyalite ([video](#)). This layer was most reactive on south facing slopes where it formed on top of an ice crust. A similar set up was responsible for the accident in Beehive Basin last week (see report below).

Although this layer is buried deep and gradually gaining strength, it should not be entirely ruled out. It's worth putting the shovel to the snow to see if this layer exists in the area you plan to ride.

Today, human triggered avalanches are likely on wind loaded slopes which have a [CONSIDERABLE](#) avalanche danger. Non-wind loaded slopes have a [MODERATE](#) avalanche danger.

Southern Madison Range Southern Gallatin Range

Lionhead area near West Yellowstone

The mountains near West Yellowstone, including the southern Madison Range have a widespread layer of facets buried two and half feet deep. This layer has been buried for over three weeks and is gradually gaining strength. On Saturday, Mark and his partners rode around Cabin Creek in the southern Madison Range and found this layer to be reactive in stability tests. It was taking hard force to get this layer to fail, but it continued to propagate in extended column tests.

Although avalanches are getting harder to trigger, the situation in the southern mountains remains serious. Facets buried 2-3 feet deep means any slide triggered on this layer will likely be large and dangerous. A recent slide in the Lionhead area is a good reminder of what's possible. Check out of the [actual video footage](#) posted on youtube.

It is worth noting that winds have been picking up over the past few hours. [Taylor Fork weather station](#) is recording gusts close to 50 mph. Lionhead weather station is showing lighter winds, but I expect snow is loading on the leeward side of Lionhead ridge. Wind slabs will be a growing concern today if winds remain elevated.

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.

### **Beehive Basin Accident Report**

The Beehive Basin Accident report is posted online and can be read here:  
<http://www.mtavalanche.com/accident/14/02/18>

Doug 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.

### **EVENTS/EDUCATION**

Information on our complete calendar of events can be found [HERE](#).