

## **GNFAC Avalanche Forecast for Mon Mar 10, 2014**

Good Morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Monday, March 10 at 7:30 a.m. **Mystery Ranch** in partnership with the **Friends of the Avalanche Center**, sponsor's today's advisory. This advisory does not apply to operating ski areas.

### Mountain Weather

Over the past 24 hours 1-3 inches of snow fell in the mountains around Big Sky, West Yellowstone and Cooke City. The mountains around Bozeman picked up a trace to one inch. At 4 a.m. mountain temperatures are in the upper 20s to mid-30s F and winds are blowing 15-25 out of the WSW with ridge top gusts reaching 50 mph in Hyalite and Big Sky.

Today, an active weather pattern will remain in place as a strong storm system pushes in from the west. Precipitation will start this morning producing valley rain and mountain snow. Temperatures will be the warmest before noon, but will gradually drop through the day. Snow levels should reach the valley floor by late afternoon. Winds will gradually shift to the NW which will favor the northern mountains with snowfall amounts. The mountains around Bozeman, Big Sky and Cooke City should see 8-10 inches of new snow by tomorrow morning. The southern Mountains will likely pick up 4-6 inches.

### Snowpack and Avalanche Discussion

#### Cooke City

Today, the main concern will be avalanches breaking in the upper portion of the snowpack. On mid to low elevations slopes, the snow surface has lost strength due to above freezing temperatures. This will make wet loose avalanches likely on steep slopes. At upper elevations, wind slabs will be the primary concern. Watch out for and avoid wind loaded slopes.

Deep slab avalanches are also a concern in the mountains around Cooke City. On Saturday, a monster of a slide was triggered on the north side of Scotch Bonnet Mountain. The slide broke ten feet deep, hundreds of feet wide and failed on facets near the ground ([photo](#)). There are more deep slab dragons lurking out there - the best strategy against triggering one of these beasts is to stay clear of areas where slabs are thinner, specifically around rock bands and scoured ridgelines.

New snow avalanches will be a growing concern as snow develops through the day. Pay close attention to changing conditions and don't be afraid to alter your plans if instability is on the rise.

Today, human triggered avalanches are likely on wind loaded slopes steeper than 35 degrees which have a **CONSIDERABLE** avalanche danger. All other slopes have a **MODERATE** avalanche danger. The avalanche danger could rise through the day if snow and wind hit harder than expected.

Gallatin Range Madison Range

#### Lionhead area near West Yellowstone

Spring weather is upon us, and as a result the snowpack is changing. On mid to low elevation slopes, above freezing temperatures and rain have softened the snow surface. This will make wet loose avalanches likely on steep slopes. At upper elevations, new and windblown snow has created a few different avalanche problems.

It remains possible for humans to trigger wind slabs in upper elevation-exposed terrain. Human triggered avalanches are also possible on non-wind loaded slopes where faceted layers can be found mid-pack and near the ground ([video](#)).

Yesterday, Doug and his partner experienced unstable results on facets near the ground during stability tests in Beehive Basin. My partners and I found similar conditions on Ernie Miller Ridge in the southern Madison Range yesterday.

This layer has been quiet for weeks but has started making noise due to an increased snowload. When facets near the ground start talking – it's best that we start listening. As more snow and weight are added to this layer, there is an increasing possibility we will see more avalanches failing on it. If a skier or rider was able to impact this layer, the resulting avalanche would be large and unmanageable.

As snow and wind impact the area today, all these avalanche problems are on the table. For this reason human triggered avalanches are possible and the avalanche danger is rated **MODERATE**. The danger could rise to **CONSIDERABLE** if snow, rain and wind arrive earlier than expected.

### Bridger Range

Yesterday, the Bridger Bowl Ski Patrol triggered wind slabs 1-3 feet deep during control work. These slides occurred on upper elevation slopes below the ridgeline. It remains possible for skiers or riders to trigger wind slabs in upper elevation-exposed terrain. There is the slight avalanches could fail on deeper layers in the snowpack ([video](#)).

Wet loose avalanches are also a concern on mid to low elevations slopes. Use extra caution when traveling in steep terrain, especially on slopes where terrain traps such as gullies and creek beds are present.

Today, human triggered avalanches are possible on wind loaded slopes and slopes steeper than 35 degrees which have a **MODERATE** avalanche danger. Less steep, non-wind loaded slopes have a **LOW** avalanche danger. The avalanche danger could rise to **CONSIDERABLE** on steep slopes if today's storm arrives earlier than expected.

### **CORNICES**

It's worth noting that cornices are growing large in size and have been the triggers for large avalanches over the past week. As more snow and wind put additional stress on these monsters, they will continue to break loose especially as they creep during warm weather. Avoid slopes directly under cornices, and give them a wide berth along ridgelines because they can break farther back than one might expect ([photo](#)).

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.

### **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](http://www.montana.edu/snowscience/tracks)