

## **GNFAC Avalanche Forecast for Fri Dec 9, 2016**

Good Morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Friday, December 9<sup>th</sup> at 7:30 a.m. Today's advisory is sponsored by [World Boards](#) in partnership with the Friends of the Avalanche Center. This advisory does not apply to operating ski areas.

### Mountain Weather

Overnight the mountains around Big Sky and West Yellowstone received 3-5" of low density snow. Cooke City picked up 1-2" while the mountains around Bozeman squeezed out a trace to 1". At 5 a.m. snow has tapered off and temperatures are the warmest they've been in days. Currently, temps are in the single digits in the Bridger Range and Cooke City area and the low teens elsewhere. Winds are blowing 15-25 mph out of the W-SW with gusts over 40 mph being recorded at Big Sky and Hyalite. Today, strong winds will continue out of the W-SW and temperatures will warm into the teens to low 20s F under mostly cloudy skies. Another round of snow moves into the forecast area tonight and tomorrow. By tomorrow morning the southern ranges should see 2-4" while the northern areas will see 1-2".

### Snowpack and Avalanche Discussion

#### Madison Range Lionhead area near West Yellowstone

The mountains around Big Sky and West Yellowstone picked up 3-5" of low density snow overnight. This new load won't add a significant amount of weight/stress to the snowpack, but it will provide plenty of fresh ammunition for wind transport. Today, the primary avalanche concern will be fresh wind slabs. This problem will most prevalent on slopes leeward to west-southwest winds. Wind deposited snow will be sitting over a weak-old snow surface that formed during the recent cold weather. This will likely make fresh wind slabs sensitive to human triggers.

A secondary concern are avalanches failing on weak faceted snow near the ground. This weak layer has produced a string of large avalanches at the Big Sky and Yellowstone Club Ski Resorts ([photo](#), [photo](#)). Although these avalanches were triggered during control work, they're a good example of what's possible in the backcountry. Alex also found this layer to be his main avalanche concern while skiing in Beehive and Middle Basin yesterday ([video](#)).

Today, the combination of fresh snow, strong winds and buried weak layers make human triggered avalanches likely on wind loaded slopes which have a **CONSIDERABLE** avalanche danger. Non-wind loaded slopes have a **MODERATE** avalanche danger.

#### Bridger Range Gallatin Range

Weak, faceted snow near the ground continues to be the main concern in the mountains around Bozeman ([photo](#), [video](#)). Over the past few days, the Bridger Bowl Ski Patrol has triggered numerous avalanches during control work that have failed on this layer. Fortunately, skier triggered avalanches in the backcountry have been sparse. As the days pass without a significant loading event, this layer is becoming less reactive. However, the fact it exists warrants careful snowpack evaluation before committing to avalanche terrain.

A secondary concern today will be wind slab development. Increasing winds will transport available snow onto leeward slopes. Without new snow, wind transport won't be significant, but it will be something to pay attention

to. Keep in mind if you're participating in the Ice Fest in Hyalite, it only takes a small slide to produce severe consequences in the steep gullies where many ice climbs are found. Pay close attention to changing conditions and don't be afraid to back off your objective if instability is on the rise.

Today, buried weak layers and increasing winds make human triggered avalanches possible and the avalanche danger is rated **MODERATE**.

### Cooke City

The snowpack around Cooke City is shaping up. Snow depths range from 2-4' depending on aspect and elevation. Similar to snowpack depths, instabilities also vary with aspect and elevation. On Wednesday, I found two distinct weak layers on a north facing slope. Both showed instability, but only the deeper layer will linger into the weeks ahead ([video](#)). Fortunately, I did not encounter this unstable structure on other aspects. Given the sporadic nature of these buried weak layers, it's always wise to carefully assess the specific slope you plan to ski or ride.

Increasing winds today will also make wind slab development a growing concern. Keep a watchful eye out for blowing and drifting snow and avoid steeper terrain where wind loading is taking place.

In the mountains around Cooke City, human triggered avalanches are possible and the avalanche danger is rated **MODERATE**.

Alex will issue the next advisory tomorrow morning at 7:30 a.m.

We rely on your field observations. Send us an email with simple weather and snowpack information along the lines of what you might share with your friends: How much new snow? Was the skiing/riding any good? Did you see any avalanches or signs of instability? Was snow blowing at the ridgelines? If you have snowpit or test data we'll take that too, but this core info is super helpful! Email us at [mtavalanche@gmail.com](mailto:mtavalanche@gmail.com) or leave a message at 406-587-6984.

### **Upcoming Events and Education**

#### **BOZEMAN**

15 December, **Avalanche Awareness and Beacon Practice**, 6-8 p.m. at Beall Park.

#### **HELENA**

**TONIGHT!** 8 December, **Avalanche Awareness**, 6-7:30 p.m. at The Basecamp.

#### **WEST YELLOWSTONE**

15 and 16 December, **Snowmobile Introduction to Avalanches w/ Field Day**, West Yellowstone Holiday Inn Conference Hotel. More info and sign up [HERE](#).

#### **COOKE CITY**

Every Friday and Saturday, **Weekly rescue training and snowpack update**, Super 8 on Friday 6-7:30 p.m. and field location TBA for Saturday.

#### **BILLINGS**

15 December, **Snowmobiling In and Identifying Avalanche Terrain**, 6-8 p.m., Big Horn Resort.