

# **GNFAC Avalanche Forecast for Thu Dec 15, 2016**

## **AVALANCHE WARNING**

**ISSUED ON DECEMBER 15 2016 at 3 p.m.**

The Gallatin National Forest Avalanche Center is issuing a Backcountry Avalanche Warning for the mountains near Cooke City, the Lionhead area near West Yellowstone, Southern Madison Range, and Southern Gallatin Range. Heavy snowfall measuring 1-2 feet with and strong westerly winds is adding weight to a weak and unstable snowpack. The avalanche danger is rated **HIGH** on all slopes. Natural and human triggered avalanches are likely today. Avalanche terrain and avalanche runout zones should be avoided.

Good Morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Thursday, December 15<sup>th</sup> at 7:30 a.m. Today's advisory is sponsored by [Montana Ale Works](#) and [Bridger Bowl](#). This advisory does not apply to operating ski areas.

## Mountain Weather

Overnight the mountains around Big Sky, West Yellowstone and Cooke City received 4-6" of new snow and it's still snowing. The mountains around Bozeman received 1-2". At 5 a.m. temperatures range from the teens to mid-20s F and winds are blowing 15-30 mph out of the W-SW with gusts upwards of 50 mph being recorded around Big Sky and Hyalite. Today, a strong westerly flow will continue to push moisture into the area producing additional mountain snowfall. The southern ranges will see consistent snowfall today and tonight with 8-10" likely by tomorrow morning. The mountains around Bozeman will see more intermittent snowfall, but should see 3-6" by tomorrow morning. Highs today will warm into the mid to upper 20s F and winds will remain moderate to strong out of the W-SW.

## Snowpack and Avalanche Discussion

Bridger Range   Northern Gallatin Range

**Primary Problem** – Wind Slabs

**Secondary Problem** – Deep Persistent Slabs

The Bridger Range and northern Gallatin Range are on the edge of this potent winter storm. While these areas did not pick up a heavy amount of snow, they have been impacted by strong winds. Currently, Hyalite weather station is recording winds of 30-50 mph out of the W-SW, this is a major red flag. With fresh snow available for transport there's little doubt wind slabs are forming on leeward slopes. These slabs will likely be sensitive to human triggers.

A more dangerous concern are avalanches failing at the ground. A poor snowpack structure has produced large, full depth avalanches over the past week. A large Natural slide on the north face of Mt Blackmore ([photo](#)) last Monday and the Hidden Gully slide at Bridger Bowl ([photo](#)) last weekend are prime examples of what's possible. North facing slopes seem to have the most unstable snow with large facets sitting on an ice crust near the ground. However, all aspects are prone to an unstable structure. Evaluate each slope carefully and don't trust any slope where facets near the ground exist.

Today, the avalanche danger is rated [\*\*CONSIDERABLE\*\*](#) on wind loaded slopes and slopes steeper than 35 degrees. Less steep, non-wind load slopes have a [\*\*MODERATE\*\*](#) avalanche danger.

Madison Range Southern Gallatin Range

Lionhead area near West Yellowstone Cooke City

### **Primary Problem** – Wind Slabs, Storm Slabs and Deep Persistent Slabs

In the southern mountains the avalanche danger will increase with the introduction of new snow and wind. This combination will add a significant amount of stress to a weak snowpack structure. As the storm continues, wind slabs and storm slabs will grow increasingly sensitive to human triggers. Avalanches failing in the new snow could propagate farther than you might expect and produce enough volume to carry or bury a skier or rider.

The real concern today will be avalanches failing on weak, faceted snow near the ground. Slides originating within the new snow could easily step down to this layer, producing larger and more destructive avalanches. Yesterday, a skier outside of Cooke City observed a few natural avalanches, one being three feet deep and six hundred feet wide. Both of these slides occurred on slopes with a northerly aspect. These slides are just a few of many that have occurred throughout the week. Check out our [photo](#) and [video](#) pages for an extended list.

Today, given the poor snowpack structure and new load, I would not trust any slope steeper than 30 degrees. For this reason, the avalanche danger is rated [\*\*CONSIDERABLE\*\*](#) on all slopes. If the storm hits harder than expected today, the avalanche danger could climb to [\*\*HIGH\*\*](#) on slopes steeper than 35 degrees.

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

### **December 11, 2016 Avalanche Fatality:**

A skier was killed in an avalanche on Henderson Mountain outside Cooke City on Sunday, December 11. The skier was in a party of 5 and his descent was the 7<sup>th</sup> track on the slope when it avalanched. He was carried into the trees and buried under 5' of snow. Another person was buried to his waist, uninjured, as he stood in the runout zone. The victim was found with avalanche transceivers and dug up in 15-20 minutes. CPR was initiated, but unsuccessful as trauma was a factor in his death. The slope was only 250 vertical feet, but steep, averaging 40 degrees. The crown was 3' deep and the path was 150' wide. The avalanche broke on a layer of weak, sugary facets sitting on an ice crust 1' above the ground.

We will issue a full report later in the week.

Here is a [video](#) and [7 photos](#) from our investigation.

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.

## **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**, Soda Butte Lodge 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.