

## **GNFAC Avalanche Advisory for Sat Dec 17, 2016**

Good Morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Saturday, December 17<sup>th</sup> at 6:45 a.m. Today's advisory is sponsored by [Montana State Parks](#) and [Gallatin County Search and Rescue](#). This advisory does not apply to operating ski areas.

### **AVALANCHE WARNING**

**ISSUED ON DECEMBER 17 2016 at 5 a.m.**

The Gallatin National Forest Avalanche Center is issuing a Backcountry Avalanche Warning for the mountains around **Cooke City**. Very dangerous avalanche conditions exist and the avalanche danger is rated **HIGH** on all slopes. Natural and human triggered avalanches are likely today. Avalanche terrain including avalanche runout zones should be avoided.

This warning will expire or be updated by 6:00 a.m. on December 18<sup>th</sup>, 2016.

#### Mountain Weather

Bundle up out there because it's COLD! Temperatures this morning range from -15 to -25 F with wind chills in the -30 to -40 range. With such cold temps no new snow fell overnight, but the southern mountains did pick up 3-4" during the day yesterday. Currently, skies are clear and winds are blowing 10-25 mph out of the N-NW. Today, highs will struggle to climb above zero degrees F and winds will continue to blow 10-25 mph out of the N-NW. Skies will become partly to mostly cloudy by tonight and winds will steadily increase shifting to the W-SW. However, no new snow is expected tonight or tomorrow.

#### Snowpack and Avalanche Discussion

##### Cooke City

Today, very dangerous avalanche conditions exist in the mountains around Cooke City. Over the past three days, this area has received over two feet of snow totaling close to 3" of SWE (snow water equivalent). This tremendous load has been deposited on a weak snowpack structure.

Facets near the ground remain the primary layer of concern. Prior to this storm, natural avalanches were failing on this layer and a skier was killed last Sunday in an avalanche that also broke on this layer (click the link below to read the complete accident report). Given the current snowpack structure in the mountains around Cooke City, all slopes steeper than 30 degrees should be avoided including avalanche run out zones.

Today, travel in avalanche terrain is not recommended and the avalanche danger is rated **HIGH** on all slopes.

##### Southern Gallatin Range   Southern Madison Range

##### Lionhead area near West Yellowstone

The mountains near West Yellowstone did not receive as much snow as Cooke City, but they still got hammered. Madison Plateau Snotel site is recording 2.4" of SWE over the past three days and Carrot Basin Snotel site in the southern Madison Range is recording 1.5" of SWE. This fast and heavy load was deposited on a weak snowpack

structure ([video](#)).

Yesterday, I rode in the Lionhead area and witnessed this poor structure first hand ([video](#)). I was a little surprised I didn't see more natural activity or experience cracking or collapsing. However, I didn't let that influence my terrain selection and I avoided all slopes steeper than 30 degrees.

Today, the snowpack remains under a significant amount of stress and the avalanche danger is rated **HIGH** on wind loaded slopes and slopes steeper than 35 degrees. Less steep, non-wind loaded slopes have a **CONSIDERABLE** avalanche danger.

Bridger Range Northern Gallatin Range

Northern Madison Range

The northern ranges weren't spared from the latest storm, but snow totals were roughly half of what the southern ranges received. Despite the lighter load, large avalanches have been triggered by both Big Sky and Bridger Bowl Ski patrols. Most avalanches have been occurring on upper elevation, wind loaded slopes facing the north half of the compass. These slopes have a facet-crust combination near the bottom of the pack. This combo has produced unstable conditions over the past few weeks.

Although north facing slopes have produced the most avalanche activity, all slopes are prone to unstable conditions. As the snowpack continues to adjust and winds increase throughout the day, human triggered avalanches remain likely on wind loaded slopes and slopes steeper than 35 degrees which have a **CONSIDERABLE** avalanche danger. Less steep, non-wind loaded slopes have a **MODERATE** avalanche danger.

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

### **Henderson Mountain Avalanche Fatality Report**

The report on the December 11 avalanche fatality outside Cooke City is complete. You can read it [HERE](#).

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**

#### **COOKE CITY**

Every Friday and Saturday, **Weekly rescue training and snowpack update**, Soda Butte Lodge, 6-7:30 p.m. and field location TBA for Saturday.