

## **GNFAC Avalanche Advisory for Mon Feb 17, 2014**

Good Morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Monday, February 17 at 7:30 a.m. [Helio Collective](#) and [World Boards](#), sponsors today's advisory. This advisory does not apply to operating ski areas.

### **AVALANCHE WARNING**

The Gallatin National Forest Avalanche Center is continuing a **Backcountry Avalanche Warning for the mountains around Cooke City**. Relentless snowfall and strong winds have created highly unstable conditions. Very dangerous avalanche conditions exist and both natural and human triggered avalanches are likely. Travel in avalanche terrain is not recommended and avalanche runout zones should be avoided. **The avalanche danger is rated [HIGH](#) on all slopes in the mountains around Cooke City.**

This warning will either be terminated or updated by 6:30 a.m. on Tuesday, February 18.

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### Mountain Weather

Yesterday, a fast moving storm system dropped 2-3 inches of high density snow in most locations with the exception of Cooke City which picked 6-8 inches. This morning temperatures are in the teens F and winds are blowing 15-25 mph out of the WSW with ridge top gusts reaching into the 40s. Today, snowfall will be limited to a few passing shows and no real accumulations are expected. The main weather event will be wind, which will continue to blow out of the WSW at 15-30 mph with gusts in the 40s. Temperatures will be above average today with highs climbing into the 30s F under partly cloudy skies.

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### Snowpack and Avalanche Discussion

#### Cooke City

The mountains around Cooke City have received a massive amount of snow over the past week. [Fisher Creek Snotel](#) site is recording 4" of SWE (snow water equivalent) over the past six days with higher amounts likely at upper elevations. Strong winds have been as consistent as the snowfall, which has been a major factor in elevating the avalanche danger.

Yesterday, multiple natural avalanches were observed in the mountains around Cooke City ([photo](#), [video](#)). One avalanche released on Town Hill dusting a few houses with a powder cloud. When slides are nearly reaching town you know conditions are bad.

Today, the snowpack will remain under a tremendous amount of stress. Until the snowpack gets some time to relax, I would avoid all avalanche terrain. This means steering clear of avalanche run out zones or any low angle slope attached to a larger steeper slope. Also, don't underestimate the danger of small slopes. Unassuming terrain such as road cuts or small gullies have a nasty tendency of catching people off guard during these types of conditions.

Today, very dangerous avalanche conditions exist and avalanche danger is rate [HIGH](#) on all slopes.

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## Madison Range Gallatin Range

### Lionhead area near West Yellowstone

Consistent snowfall and strong winds are also creating unstable conditions from Big Sky to West Yellowstone. Over the past 48 hours numerous natural and human triggered avalanches have been reported. Here is a list of the more notable events:

- Yesterday, three skiers were caught in a slide up Beehive Basin in the northern Madison Range. The slide was triggered as the skiers were ascending the slope. Two escaped unharmed, but one party member suffered a leg injury. The avalanche occurred on a west facing slope at 8,700 feet.
- Yesterday, a skier near Bacon Rind in the southern Madison Range triggered a slide on an east facing slope. The slide broke 1-2 feet deep and failed on a layer of surface hoar ([photo](#)).
- Yesterday, my partner and I skied near Quake Lake in the southern Madison Range. We observed multiple natural avalanches that had occurred within the past day. These slides failed on south-southeast facing slopes and ran on facets buried 2-3 feet deep ([photo](#)).
- On Saturday, Doug and his partner remotely triggered a small slide up Lightning Creek in the Taylor Fork of the southern Madison Range ([photo](#), [video](#)).

Today, the snowpack will continue to feel the stress of new snow and wind. Upper elevation slopes leeward to WSW winds are loaded and are near their tipping point. Yesterday, my partner and I experienced multiple collapses and large shooting cracks as we traveled along a wind-loaded ridgeline.

Slopes do not need to have a wind-load in order to produce avalanches. Facets buried 2-3 feet deep have proven to be reactive under the weight of new snow or the weight of a skier or rider. A break in the weather today will reduce the chance of natural avalanches but human triggered avalanches remain likely. For this reason the avalanche danger is rated **CONSIDERABLE** on all aspects and elevations.

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### Bridger Range

Today, the primary avalanche concern for the Bridger Range will be wind loaded slopes. A few inches of new snow combined with strong westerly winds have likely formed wind slabs in upper elevation terrain. Slopes below the ridgeline will be the most susceptible to holding wind deposited snow. Although fresh wind slabs will be relatively small in size, they pose a serious threat if triggered in steep-high consequence terrain. Before dropping in, make sure the slope below you is not heavily wind loaded and always be thinking about the consequence of an avalanche.

On non-wind loaded slopes there is the possibility of avalanches being triggered on a layer of facets buried 1-2 feet deep. This layer exists on isolated slopes and should be assessed before committing to steeper terrain.

Today for the Bridger Range the avalanche danger is rated **MODERATE** on wind loaded slopes and slopes steeper than 35 degrees. All other slopes have a **LOW** avalanche danger.

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**Beehive Basin Avalanche Incident:** Three local skiers were ascending a steep, west facing slope around 8,700 feet. The slide released with all three skiers on the slab. The top skier was carried a short distance but was able to self-arrest by grabbing a tree. The middle skier was carried downhill and completely buried at one point. Fortunately, he ended up only slightly buried and uninjured when the slide stopped. The lowest skier was hit hard by the debris and carried hundreds of feet downhill. This skier ended up nearly completely buried against a

tree with only their head sticking out of the snow. This person suffered a serious leg injury and required evacuation by Big Sky Search and Rescue. Doug will do a more thorough investigation today and we will provide more details in tomorrow's advisory.

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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.

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## EVENTS/EDUCATION

February 20, BOZEMAN: Thursday, 6:30-8:00 p.m., REI, **Women's Specific Avalanche Awareness** lecture. Pre-registration is required: [www.rei.com/stores/bozeman.html](http://www.rei.com/stores/bozeman.html)

February 22, BIG SKY: Saturday, 10 a.m. – 2 p.m., Beehive Basin Trailhead, **Companion Rescue Clinic**. In partnership with Grizzly Outfitters. Space is limited and pre-registration is required. <https://ticketriver.com/event/9964>

February 22, WEST YELLOWSTONE: Saturday, 7:00-8:00 p.m., Holiday Inn, **1 –hour Avalanche Awareness for Snowmobilers** lecture.

More information our complete calendar of events can be found [HERE](#).

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