

## **GNFAC Avalanche Advisory for Sat Jan 11, 2014**

Good morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Saturday, January 11 at 7:30 a.m. **Yellowstone Club Community Foundation** in partnership with the **Friends of the Avalanche Center**, sponsors today's advisory. This advisory does not apply to operating ski areas.

### **AVALANCHE WARNING**

**ISSUED ON January 11 2014 AT 05:00 pm**

The Gallatin National Forest Avalanche Center is issuing a **Backcountry Avalanche Warning for the southern Gallatin Range, Southern Madison Range and Lionhead area near West Yellowstone**. Over the past two days more than a foot of heavy, dense snow has fallen onto a weak and unstable snowpack. In addition to the new snow, strong winds have transported snow onto leeward slopes causing additional stress. Weak facets near the ground will be unable to support this new load making both natural and human triggered avalanches likely. **The avalanche danger is rated HIGH on all slopes in the southern Gallatin Range, southern Madison Range and Lionhead area near West Yellowstone**. Very dangerous avalanche conditions exist. Travel in avalanche terrain is not recommended and avalanche runout zones should be avoided.

Go to [www.mtavalanche.com/current](http://www.mtavalanche.com/current) for the most current avalanche information.

This warning will either be terminated or updated by 6:30 AM on Monday, January 13<sup>th</sup>.

### Mountain Weather

Yesterday, the mountains around Cooke City picked up 6-8 inches of new snow. Most other areas picked up 1-3 inches with the exception of the Bridger Range which remained dry. This morning, temperatures are in the upper teens to mid-twenties F and winds are blowing 15-30 mph out of the WSW with localized gusts reaching into the 40s. Today, winds will increase out of the west as the next storm system approaches. Sustained wind speeds of 25-35 mph can be expected with gusts reaching into the 50s at higher elevations. Today will be the warmest day of the week with highs reaching into the mid to upper 30s F under mostly cloudy skies. Valley rain and mountain snow should start to impact southwest Montana by this afternoon. The southern mountains will receive the heaviest snowfall with 4-6 inches likely by tomorrow morning. The northern mountains should pick up 2-4 inches.

### Snowpack and Avalanche Discussion

Bridger Range Gallatin Range Madison Range

Lionhead area near West Yellowstone

Yesterday, a skier triggered a large slide in Beehive Basin near Big Sky on a northeast facing slope around 9,300 ft. The slide broke 2-4 feet deep, propagated more than 300 feet wide and failed on a layer of depth hoar near the ground. A sympathetic slide released on an adjacent slope also producing a crown 3-4 feet deep. The avalanche was triggered in an area where the snowpack was thinner, but propagated into a deeper part of the pack. The slope angle near the crown was in the mid-30s and the slide ran down and covered a skin track on a lower angle

part of the slope ([photo](#), [photo](#)).

What makes this situation tricky is not all slopes are unstable. I was also in Beehive Basin yesterday and dug multiple snowpits that gave me both stable and unstable results. This is a great example of spatial variability and is an excellent reminder that a stable test result on one slope is not indicative of what you will find on a neighboring slope. This type of situation exists throughout much of our forecast area.

The bottom line is – when the snowpack structure is poor and faceted layers are present, the snowpack should not be trusted ([snowpit](#)).

In addition to buried facets, fresh wind slabs will also be a problem. Strong winds out of the west-southwest have transported snow onto leeward slopes forming sensitive wind drifts. Slides that initiate within the new snow could easily step down to deeper layers in the pack producing larger, more dangerous avalanches.

Today, strong winds, fresh snow and buried weak layers make human triggered avalanches likely and the avalanche danger is rated **CONSIDERABLE**. If today's storm arrives early the avalanche danger could rise to **HIGH** by this afternoon on wind loaded slopes and slopes steeper than 35 degrees.

### Cooke City

Over the past few days the mountains around Cooke City have received more than a foot of snow totaling over one inch of SWE. Fortunately, the snowpack in this area is relatively strong and should be able to handle the load ([video](#)).

The primary avalanche concern today will be wind slabs. Strong west-southwest winds have transported the new snow onto leeward slopes forming sensitive wind drifts. Terrain facing the east half of the compass will be the most prone to wind drifted snow, but it will be possible to find fresh wind slabs on all aspects. Slopes directly below ridgelines as well as cross loaded terrain features such as sub-ridges will be areas to avoid. Cornices and large wind drifts are obvious signs of recent loading. As more snow and wind impact the area today, wind slabs will continue grow in size and distribution.

A scarier scenario will be triggering a slide on deeper layers in the pack. While faceted layers are not widespread, they do exist in certain areas. Isolated slopes with a snowpack 3-4 feet deep or less have weak facets near the ground where avalanches could break deeper.

With more snow and wind in the forecast, the avalanche danger is rated **CONSIDERABLE** on all wind loaded slope and all slopes steeper than 35 degrees. Slopes less than 35 degrees lacking wind drifted snow have a **MODERATE** avalanche danger. The avalanche danger could rise to **HIGH** on steep and wind loaded slopes if heavy snow and strong winds impact the area throughout the day.

I 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.

### **ANDROID APP**

If you have an android phone or tablet, you can download our new free app. It's a slick way to get the advisory. [Search Google Play for GNFAC](#). An iOS version is coming soon. Stay tuned.

### **MONTANA ALE WORKS FUNDRAISER DINNER**

Montana Ale Works is hosting the 6th Annual Fundraiser Dinner for the Friends of the Avalanche Center. Chef Roth is creating an elegant, multiple course menu. His culinary creation will be paired with wines from the Ale Works cellar. Seating is limited to 40. Get your tickets early. <https://www.ticketriver.com/event/9572>

## EVENTS/EDUCATION

Today, January 11, WEST YELLOWSTONE: Saturday, 7-8 p.m. at Holiday Inn, **1-hour Avalanche Awareness** lecture.

January 13, DILLON: Monday, 7-8 p.m., School of Outreach, **1-hour Avalanche Awareness** lecture.

January 15, BOZEMAN: Wednesday, 6:30-7:30 p.m., MSU Procrastinator Theater, **Sidecountry IS Backcountry** lecture.

January 16, BOZEMAN: Thursday, 6-8 p.m., Beall Park, **1-hour Avalanche Awareness and Transceiver Practice**.

January 18 & 19, BOZEMAN: Saturday, 12-4:30 p.m. Bozeman Public Library; Sunday, all day in the field, **Snowmobiler Introduction to Avalanches with Field Course**. Pre-registration is required: <https://www.ticketriver.com/event/8565-bozeman--snowmo-intro-to-avalanches-w-field>

January 22,23 & 25, BOZEMAN: Wednesday and Thursday 7-9:30 p.m.; all day Saturday in field, **Introduction to Avalanches with Field Course**. Pre-registration is required: <https://www.ticketriver.com/event/7113>

January 22 & 23 &26, BILLINGS and COOKE CITY: Wednesday and Thursday 6-9 p.m.; all day Sunday in field, **Snowmobiler Introduction to Avalanches with Field Course**. Pre-registration is required: <https://www.ticketriver.com/event/9380>

January 25, WEST YELLOWSTONE: Saturday, 7-8 p.m. at Holiday Inn, **1-hour Avalanche Awareness** lecture.

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