

GNFAC Avalanche Advisory for Mon Feb 15, 2010

Good Morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Monday, February 15, at 7:30 a.m. **Javaman**, in cooperation with the **Friends of the Avalanche Center**, sponsor today's advisory. This advisory does not apply to operating ski areas.

Mountain Weather

Over the past 24 hours a ridge of high pressure brought sunny skies and calm conditions to southwest Montana, but the existing ridge has started to break down giving way to the next weather system moving in from the west.

Currently it is snowing lightly and a trace to one inch has fallen in the northern ranges with no accumulations being recorded in the south. Ridgeline winds have increased this morning to 10-15 mph out of the W-NW and will continue at this level throughout the day. Temperatures will remain mild with highs in the 30's and lows in the teens. We can expect to see 1-2 inches of new snow in the mountains by the end of the day.

Snowpack and Avalanche Discussion

The Bridger Range, northern Madison and Gallatin Ranges, mountains around Cooke City and the Washburn Range:

One to two feet of new snow has fallen in the northern ranges and mountains around Cooke City over the past few days. Strong winds during and after this storm transported much of this new snow to leeward slopes forming wind slabs 1-2 feet thick. This new and significant load is poorly bonded to the underlying near surface facets and surface hoar that formed prior to the storm. This poor bond between the new snow and old snow surface has resulted in widespread natural and human triggered avalanches. A majority of these slides took place during or immediately after the storm and occurred on all aspects and elevations. Wind loaded slopes have been the most active, but slopes that did not receive wind loading have also produced avalanches. Although most avalanches are running on weak layers closer to the surface, avalanches are still possible on buried facets near the ground.

On Saturday skiers in the Brackett Creek drainage north of Bridger bowl observed a large natural avalanche that broke on buried facets near the ground producing a crown over a 100 feet wide and 3-5 feet deep ([photo](#)). This is a great example that buried facets that formed during the early part of the season are still capable of producing large and destructive avalanches. Yesterday I traveled around Buck Ridge and observed numerous slides both natural and human triggered that were all running on surface hoar and near surface facets 1-2 feet below the surface ([video](#)). A skier in Beehive Basin north of Big Sky triggered a larger avalanche on a south facing slope that propagated hundreds of feet across and ran the entire slope. Despite the fact the snowpack has had more than 24 hours to adjust, natural avalanches remain possible and human triggered avalanches remain probable.

For this reason the avalanche danger is rate:

CONSIDERABLE on all wind loaded slopes and non wind loaded slopes steeper than 35 degrees.

MODERATE on all non wind loaded slopes less than 35 degrees.

The southern Madison Range, southern Gallatin Range and the Lionhead area near West Yellowstone:

Although the southern half of our advisory area did not pick up nearly as much snow as the northern half, the exceptionally weak snowpack structure that has been a concern since mid-December remains largely intact. Buried facets near the ground continue to produce a weak foundation for the growing slab and can be found on all aspects and elevations. Triggering an avalanche on this layer is becoming less likely as the winter rolls on, but the risk still remains. Other concerns within the snowpack are two layers of surface hoar that now sit 1.5 to 2 feet below the surface. These weak and sensitive layers exist mainly on protected slopes and will easily fail under the weight of a skier or snowmachine. On other slopes strong winds have created fresh wind slabs that will also produce avalanches and possibly cause the buried surface hoar or facets near the ground or to fail, producing much larger avalanches.

Skiing and riding in the backcountry today will require expert route finding and travel skills. If you do end up in avalanche terrain stack the odds in your favor by traveling with good partners, exposing one person at a time, and avoiding obvious trigger points where the snowpack is shallow such as rock outcroppings and steep rollovers. With many weak links holding the chain together, failure is a real possibility with the proper amount of force.

For today, human triggered avalanches are probable and the avalanche danger is rated:

CONSIDERABLE on all wind loaded slopes and non wind loaded slopes steeper than 35 degrees.

MODERATE on non wind loaded slopes less than 35 degrees.

Doug will issue the next advisory tomorrow morning at 7:30 a.m. If you get out in the backcountry let us know what you find. You can reach us at 587-6984 or email us at mtavalanche@gmail.com.

Avalanche Education

1. Bozeman: Lindley Center

Join the Friends of the Avalanche Center for a FREE 2-hour beacon practice from 6 p.m. to 8 p.m. on Thursday, February 18th. All ages welcome.

2. Bridger Bowl

AAI Level 1 Avalanche Course - Friday, February 19th to Sunday, February 21st

www.americanavalancheinstitute.com

3. Bridger Bowl

AAI Level 2 Avalanche Course - Monday, February 22nd to Thursday, February 25th

www.americanavalancheinstitute.com

4. Moonlight Basin

Comprehensive avalanche awareness class - Thursday, March 4th to Saturday, March 6th

events@moonlight.com or 406-993-6026