

## **GNFAC Avalanche Forecast for Thu Feb 23, 2012**

Good morning. This is Mark Staples with the Gallatin National Forest Avalanche Advisory issued on Thursday, February 23 at 7:30 a.m. **Cooke City Motorsports and Yamaha**, in partnership with the Friends of the Avalanche Center, sponsor today's advisory. This advisory does not apply to operating ski areas.

### **AVALANCHE WARNING**

The Gallatin National Forest Avalanche Center is issuing a **Backcountry Avalanche Warning for the Bridger Range and the mountains around Cooke City**. Heavy snowfall, extreme winds and a very weak snowpack are causing unstable conditions. Today the avalanche danger is **HIGH** on all slopes. Areas of unstable snow exist. Natural and human triggered avalanches are likely. Avalanche terrain including avalanche runout zones should be avoided.

This warning will either be terminated or updated by 6:00 AM on February 24, 2012

### **AVALANCHE FATALITY**

Yesterday a snowmobiler was killed in an avalanche along the groomed trail to Daisy Pass near Cooke City. Four people were caught in this avalanche. The victim was fully buried, two others were buried with their arms sticking out of the snow, and the fourth was buried up to his knees. There were 7 riders total and all were carrying beacons, probes, and shovels. The victim was uncovered in less than 10 minutes. He was caught when he got off his sled which was still had its tail end on the groomed trail ([photo](#) of avalanche path). Doug and Eric are investigating this avalanche today and will have more information tomorrow. All of us at the Avalanche Center send our deepest sympathies to family and friends.

### **Mountain Weather**

In the last 24 hours the heaviest snowfall occurred in the Bridger Range and the mountains near Cooke City. Yesterday's snow was wet and heavy while snow that fell late last night had a much lower density because temperatures dropped into the low teens and single digits F. The exact amount of snow is hard to gauge, but the [snow water equivalent](#) (SWE) is measured exactly and tells how much weight was added to the snowpack:

- Near Cooke City 1 inch of SWE (5-10" of snow)
- In the Bridger Range 0.5 - 0.9 inches of SWE (3-5" of snow)
- Near Big Sky, Hyalite, and West Yellowstone 0.4 to 0.6 inches of SWE (2-4" of snow)
- Near the Taylor Fork 0.2 inches of SWE (1-2" of snow)

Further complicating snowfall totals is yesterday's extreme winds which averaged 50 mph from the W with gusts of 60-90 mph. This morning winds were blowing 15-20 mph from the WNW with gusts of 40 mph. Today will be mostly cloudy with an additional 2-4 inches of snow falling. Temperatures will warm into the high teens F.

### **Snowpack and Avalanche Discussion**

*The Bridger Range and the mountains around Cooke City:*

In the last 72 hours almost 3 inches of [snow water equivalent](#) has fallen in the Bridger Range and the mountains around Cooke City. This is a lot of weight for the snowpack to support. Yesterday's extreme winds made the situation worse. The snowpack contains weak layers that produced avalanches prior to and at the onset of this storm. More avalanches will occur today. Avalanches, like yesterday's fatal slide, will occur in areas that do not often see avalanches (photo) because the extreme winds loaded many slopes that typically do not receive wind drifted snow. One avalanche occurred on "Town Hill" just above Cooke City. It was skier triggered and broke 2 ft deep and 300 ft wide. In the Bridger Range, one natural avalanche occurred just north of Bridger Bowl in a popular spot called Peter's Pinnacle.

Many slides near Cooke City are breaking on a layer of near surface facets found on all slopes ([video](#)). In the Bridger Range, avalanches will break on a similar layer but quickly step down to weak snow near the ground and produce very large avalanches. Today the avalanche danger is **HIGH** on all slopes. Avoid avalanche terrain including avalanche run out zones.

*The Gallatin and Madison Ranges and the Lionhead area near West Yellowstone:*

The Gallatin and Madison Ranges and the Lionhead area near West Yellowstone have unstable conditions in most places as well. There have been many recent avalanches before yesterday (see photos of many recent slides [here](#) and a [video](#) from a slide in Beehive Basin). With more snow overnight and yesterday's extreme winds, more avalanches will occur today.

In some places signs of instability are not obvious due to very warm temperatures at lower elevations. During a tour up Flanders drainage in Hyalite Canyon yesterday, Eric found stable conditions early in his tour at lower elevations, but conditions quickly became unstable as he climbed higher. He experienced collapsing and cracking and got unstable results in stability tests ([photo](#)). Another skier saw many recent natural avalanches in the upper bowls of Hyalite. Guides near West Yellowstone reported poor visibility but did see one recent avalanche. For today, the avalanche danger is **HIGH** on any wind loaded slope and **CONSIDERABLE** on non wind loaded slopes. These danger ratings mean human triggered avalanches are likely on any slope over 30 degrees. Avalanches can also be triggered from low angle slopes under or next to steeper slopes.

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.