

## **GNFAC Avalanche Advisory for Fri Jan 11, 2013**

Good morning. This is Mark Staples with the Gallatin National Forest Avalanche Advisory issued on Friday January 11 at 7:30 a.m. Today's advisory is sponsored by the Montana FWP Recreation Trails Grant. 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 Southern Madison and Southern Gallatin Ranges and the Lionhead area near West Yellowstone. About one foot of new snow rests on an extremely weak layer of faceted snow crystals. Today the avalanche danger is [HIGH](#) on all slopes. Areas of unstable snow exist. Natural and human triggered avalanches are very likely. Avalanche terrain including avalanche runout zones should be avoided.

This warning will either be terminated or updated by 6:00 AM on January 12, 2013

### **Mountain Weather**

Since yesterday, the southern Madison Range and the mountains near West Yellowstone area received 8-10 inches of new snow. The Bridger Range and northern Gallatin Range received 4-5 inches while the mountains near Big Sky and Cooke City received a paltry 2 inches. Temperatures this morning were near 0 degrees F and northerly winds were fortunately only blowing 5-10 mph. Today northerly winds will increase to 10-15 mph and temperature should drop to about -10 degrees F. Snowfall will continue until this afternoon and produce an additional 2-3 inches in most areas. Very cold temperatures will last thru this weekend.

### **Snowpack and Avalanche Discussion**

#### Southern Madison Range Southern Gallatin Range

#### Lionhead area near West Yellowstone

In the southern Madison and southern Gallatin Ranges and the Lionhead area near West Yellowstone, snowfall since Monday totals about 12-14 inches. This snow rests on an extremely weak layer of faceted snow crystals that formed during the first week of January. Prior to yesterday's storm, stability tests indicated that this weak layer could produce avalanches ([video](#)). With yesterday's additional snow, human triggered avalanches are now very likely. These avalanches may be triggered in flat terrain below steeper slopes. For today, dangerous avalanche conditions exist and the avalanche danger is rated [HIGH](#).

#### Northern Madison Range Cooke City

Since the beginning of the week, snow totals are 14 inches near Cooke City and 7 inches near Big Sky. While significantly more snow fell this week near Cooke City, this area mostly lacks a weak layer of faceted crystals under the new snow. There are exceptions especially in lower elevation areas like Town Hill. On Wednesday while riding near Cooke City, the main problem I found was an upside-down and heavily wind-affected snowpack. This means hard snow was resting on softer snow and required a full throttle to ride through fresh drifts. This combination is a good recipe for human triggered avalanches. Fortunately this unstable combination

is typically short lived.

It's a different story near Big Sky which has a very weak layer of faceted crystals under the new snow ([photo](#)). On Monday along Buck Ridge, Doug and Eric found this weak layer to be so fragile that it could barely support its own weight much less the weight of any new snow. For today, the avalanche danger is [CONSIDERABLE](#) on slopes steeper than 35 degrees. Less steep slopes have a [MODERATE](#) avalanche danger.

#### Bridger Range Northern Gallatin Range

The mountains near Bozeman received 4-5 inches of low density snow overnight. This light snow combined with only an inch or two early this week will not increase the avalanche danger much today. These areas have a weak layer of facets that formed during the first week of January ([video](#)) but last night's light snow did not add much stress to this layer. Additionally, strong winds this week made the distribution this weak layer somewhat random, and it does not exist on every slope. For these reasons, today human triggered avalanches are possible and the avalanche danger is [MODERATE](#).

Eric 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. If you are unsure what types of information we are looking for, this article explains it well ([article](#)).

#### EDUCATION

TOMORROW and Sunday, January 12 and 13, Snowmobiler Introduction to Avalanches with Field Course in Bozeman. Space is still available. For more information and to sign up: <https://www.ticketriver.com/event/4979-snowmobiler-introduction-to-avalanches-w-field>

Wednesday, January 16, 7:00 p.m. "The Sidecountry is Backcountry" at MSU's Procrastinator Theater in Bozeman, a free 1-hour presentation.

Saturday, January 19, Rescue Clinic for Snowmobilers in Cooke City starting at Cooke City Motorsports. This 6 hour clinic teaches how to use avalanche rescue gear and perform an avalanche rescue. Registration is required. For more info and to sign up, visit: <https://www.ticketriver.com/event/4980-companion-rescue-clinic-for-snowmobilers>

Saturday, January 19, 6 -7 p.m., 1-hour Avalanche Awareness at the Cooke City Community Center.

Wednesday, Thursday, and Saturday, January 23, 24, and 26. MSU Introduction to Avalanches with Field Course. Wed and Thurs evenings and all day Saturday. For more information and to register, visit: <https://www.ticketriver.com/event/4970-introduction-to-avalanches-w--field-course>