# GNFAC Avalanche Forecast for Mon Mar 7, 2011

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

Mountain Weather

Since yesterday morning 3-4 inches of snow has fallen in the Bridger Range, while a trace to 2 inches has fallen elsewhere. Mountain temperatures are ranging from 5 degrees F in Cooke City to the low teens in most other locations. Winds are fairly calm, blowing out of the WSW at 5-15 mph, with the exception of the Ridge at Bridger Bowl where they are blowing out of the SSE at 5-10 mph. Today, temperatures will warm into the low 30's under partly cloudy skies and winds will stay light out of WSW. An increasing chance of snow will arrive tomorrow afternoon.

Snowpack and Avalanche Discussion

The mountains around Cooke City and the Washburn Range:

Cooke City is in a zone of its own, receiving more than two feet of new snow over the past five days. The latest storm to impact the area deposited more than 18" of new snow in a 24 hour period. An observer in the area reported multiple point release slides as well as a few natural slab avalanches in the upper elevations (photo). Fortunately the snowpack in this area lacks a widespread weak layer which is helping to keep avalanche activity to a minimum.

The primary avalanche concern today will be wind loaded slopes, mainly in upper elevation terrain and along ridgelines. A secondary avalanche concern is terrain located below large cornices. Additional loading on cornices has occurred with the recent new snow pushing them closer to failure. Cornices have the ability to break farther back then one might expect and can act as triggers for larger slides once released. Avoiding slopes under overhanging cornices and giving them a wide berth near the ridgelines is a smart idea.

Today, all wind loaded slopes have a CONSIDERABLE avalanche danger. Slopes that have not received a wind load have a MODERATE avalanche danger.

An additional threat will be wet loose avalanches on slopes heavily affected by the sun. If the sun appears and temperatures warm, wet loose avalanches will be possible on steep, rocky slopes where the surface snow is heavy and
wet.

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

Yesterday, Doug and I investigated a human triggered avalanche in the southern Madison Range (photo1, photo2 , photo3). The slide was triggered from a cornice drop by a pair of skiers skinning up the ridge (the first report we received was that this slide was remotely triggered, but we later found out it was triggered by a cornice drop). This avalanche broke 2-5 feet deep, propagated 150 feet across and occurred on a SE facing slope around 9,000 ft (video). A heavy wind load sitting over a thin layer of small grained facets capped by a 2 cm ice crust was the culprit for this event. The slide was confined to a wind loaded pocket and did not propagate into non-wind loaded terrain.

Although we are not finding buried facets to be a widespread problem, this latest slide is a poignant reminder that lingering instabilities still exist. Looking at the character of this slide, I recognized similarities to both the human triggered slide that Doug investigated near Cooke City a few weeks ago and the slide that resulted in a fatality in the Bridger Range last month. The common thread that ties these slides together is a heavy wind load sitting over a weaker - lower density layer. Many times hard wind slabs are difficult to trigger, but once initiated, they often result in large devastating slides.

Recognizing and avoiding large wind whales and slopes directly under cornices will be the best way to stay out of trouble. Obvious clues such as cracking and collapsing and recent avalanche activity is bull's eye data the snowpack is unstable.

Today, human triggered avalanches are possible on wind loaded slopes which have a MODERATE avalanche danger. Slopes that have not received a wind load have a LOW avalanche danger.

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 or call us at 587-6984.

PHOTOS, SNOWPITS, VIDEO and SURVEY RESULTS

1. We've recently uploaded more photos and snowpits to our web site.

2. We're creating a series of "How To…" stability test videos. So far we've made clips on performing a CT and ECT. There are located under <Stability Tests> on the Resources page.

The results from our survey are posted online. Thanks to all who participated. You can check out the results at http://bit.ly/fpLuSi.