GNFAC Avalanche Forecast for Fri Mar 8, 2013

Good morning. This is Mark Staples with the Gallatin National Forest Avalanche Advisory issued on Friday, March 8 at 7:30 a.m. **Alpine Orthopedics** and the **Lone Peak Brewery** sponsor today's advisory. This advisory does not apply to operating ski areas.

Mountain Weather

Overnight the mountains near Cooke City and West Yellowstone received an inch of new snow. A few other areas got a trace. This morning temperatures were near 20 degrees F. Winds were blowing 5-10 mph from the S with gusts of 15 mph – surprisingly calm for SW Montana. Today mostly cloudy skies will keep temperatures from rising above freezing and winds will remain calm. The mountains near Big Sky and West Yellowstone could get an inch of snow while Cooke City could get a few inches. This weekend should have calm winds and sunny skies with a chance of snow for Monday.

Snowpack and Avalanche Discussion

Bridger Range Madison Range Gallatin Range

Lionhead area near West Yellowstone Cooke City

Wind slabs yesterday were mostly unreactive and generally well bonded to the underlying snow. The lead climbing ranger and forecaster from Mt Shasta joined me for a ride in the southern Madison Range through Teepee Basin, Cabin Creek, and Sage Basin. We cut lots of fresh drifts on steep rollovers but none moved or even cracked – a good sign. Local ski patrols reported similar conditions. Watch out, because wind slabs have a habit of catching us off guard.

Layers of facets in the upper 3 feet of the snowpack continue to propagate fractures in stability tests as Doug found south of Hebgen Lake (**video**) yesterday. North of Hebgen Lake, these layers propagated about a third of the time in our stability tests. Propagation is the second step to get an avalanche. The first step is fracture initiation which depends on the balance between stress and strength. To initiate a fracture, find a place where the snowpack is stressed (like near big drift of wind-blown snow) or find a place where the faceted layers are weaker. Weak places often exist near rocks or cliff bands and are called sweet spots or trigger points by ski patrollers. At a ski area, they know where these points exist.

We don't know where these trigger points exist in the backcountry. For this reason, it's worth digging a few snowpits only 3 feet deep to assess these faceted layers. Watch this **video** if you are snowmobiling. These layers are variable which can be an advantage. It means we can find slopes where these layers either don't exist or where they don't propagate fractures. For today stubborn wind slabs and buried weak layers mean human triggered avalanches are possible and the avalanche danger is rated **MODERATE**.

Another problem: Cornices are currently very large and often break closer to ridgelines than expected. A very experienced skier and avalanche professional had a large cornice break between his legs yesterday even though he was far from the edge (**photo**). Had he fallen with it, he was certain that he would have died.

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 or call us at 587-6984.

Montana Ale Works Fundraiser Dinner

Tickets are on sale now to the *5th Annual Friends of the Avalanche Center Dinner and Wine Pairing* on Wednesday, March 13th at 6:00 p.m. Call the host stand at 587-7700 to reserve your space. Tickets are $75 and all proceeds go to the Friends of the Avalanche Center. There are only 40 tickets available and this event sells out every year so get them while you can!