

GNFAC Avalanche Advisory for Tue Apr 3, 2012

Good Morning. This is Doug Chabot with the Gallatin National Forest Avalanche Advisory issued on Tuesday, April 3 at 7:30 a.m. **On Site Management** and **Alpine Orthopedics** sponsor today's advisory. This advisory does not apply to operating ski areas.

Mountain Weather

Yesterday was sunny, but mountain temperatures only reached into the mid-30s. Under clear skies this morning temperatures are in the high teens as winds blow 10-20 mph out of the southwest. Today will be sunny with temperatures reaching the 50s as winds remain light. Tonight looks to be clear and cold again with more sunshine on Wednesday. In the valleys I'm forecasting balmy temps in the 60s along with sightings of flip-flops, shorts and pasty white legs.

Snowpack and Avalanche Discussion

The Bridger, Gallatin and Madison Ranges, the Lionhead area near West Yellowstone and mountains around Cooke City:

Southwest Montana is going to get hit with a big storm this morning--a solar storm. The sun will be out in full spring glory with mountain temperatures easily reaching into 50s. Last night's sub-freezing temperatures will ward off melting for a few hours, but melting is inevitable. Wet, loose snow avalanches will occur naturally on steep, sunny slopes. A thick ice crust underneath Monday morning's new snow is a great sliding surface, but this will likely turn to mush by mid-afternoon too. Pinwheels growing in size as they roll downhill or sinking past your boot tops into wet, unsupportable snow are signs the surface snow is rapidly losing strength. Today, there are two avalanche concerns.

1. Wet, loose avalanches on any slope getting sun exposure.
2. As these wet slides slurry downhill they gain mass and could trigger a slab avalanche (both wet or dry). These avalanches would be deep since the weakest layer is large facets near the ground.

The mountains from West Yellowstone to Big Sky to the Bridger Range have deep slab instability. The entire winter's snowpack is being supported by junk. I dug to the ground at Lionhead and found fist **hardness** facets trying to hold up a six foot thick pencil hardness slab (**photo**). Triggering a slope will require either a large load like a wet loose avalanche, or riding over a thinner spot where we could initiate a fracture in the facets. Any slab avalanche would be large and nasty. Additionally, on slopes that get direct solar radiation the snow is likely moist under the surface crusts. A moist snowpack is weaker than a dry one because frozen bonds are replaced by liquid water.

The avalanche danger today will start out as **MODERATE** on all slopes, but quickly rise to **CONSIDERABLE** on slopes getting direct sun. Wet, loose snow avalanches may appear harmless, but they can quickly carry you into terrain traps or off cliffs. And if they trigger a slab avalanche, well, all bets are off.

Outside Cooke City the probability of wet, loose avalanches will mirror the other areas. New snow from Monday is sitting on an ice crust and today these mountains will get their share of sun and above freezing temperatures. However, most slopes lack depth hoar which lessens the chance of finding any deep slab instability.

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 or call us at 587-6984.

Our last advisory of the season will be Easter Sunday, April 8th.