

## **GNFAC Avalanche Advisory for Mon Dec 14, 2009**

Good Morning. This is Doug Chabot with the Gallatin National Forest Avalanche Advisory issued on Monday, December 14 at 7:30 a.m. **Team Bozeman**, in cooperation 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 continuing a **Backcountry Avalanche Warning for the southern Gallatin and southern Madison Ranges, the Lionhead area near West Yellowstone, the mountains around Cooke City and the Washburn Range**. New snow over the last 48 hours was deposited on an extremely weak snowpack. **Today the avalanche danger is HIGH on all slopes**. Areas of unstable snow exist. Natural and human triggered avalanches are likely and avalanche terrain including runout zones should be avoided.

### Mountain Weather

Last night a fast moving system dropped 2 inches in town and in the mountains around Bozeman while 6 inches fell at the Yellowstone Club and Lone Peak. The southern mountains picked up another 4-6 inches outside West Yellowstone with closer to 10 inches near Cooke City. Mountain temperatures are in the single digits to teens with strong 20-30 mph winds out of the west. Lulu Pass outside Cooke City is extra windy with gusts measuring 40-50 mph. Under mostly cloudy skies a few lingering snow showers will drop 1-2 inches in the south as winds continue from the west.

### Snowpack and Avalanche Discussion

The southern Gallatin and southern Madison Ranges, the Lionhead Area near West Yellowstone, the mountains outside Cooke City and the Washburn Range:

**Since Friday night the southern mountains have gotten their largest and heaviest load of snow of the season. We use snow water equivalency (SWE) to measure this weight. Over two feet fell outside Cooke City with a SWE of 1.7", and 1.1" SWE created 1 ½ feet of snow near West Yellowstone. And it was windy too. Lots of new snow plus wind creates meaty, thick slabs. Wind-loading is an avalanche problem all by itself, but in the southern mountains this weight was added to junky, unbonded, sugary facets. These wind slabs are the bully kicking sand in the face of our 90lb weakling snowpack. It doesn't stand a chance.**

Faceted snow extends all the way to the ground around Lionhead-our most unstable snowpack. Around Cooke City and Taylor Fork, there are plenty of facets underlying this new snow that will fracture too. On Sunday in Carrot Basin Mark was able to get collapsing, cracking and even trigger an avalanche (see photo page) *before* the storm picked up; never a good sign. The southern mountains are under an Avalanche WARNING because the avalanche danger is **HIGH** on all slopes. Be especially mindful of not traveling underneath slide paths during these periods of high instability. Avalanches will propagate far distances and can be triggered from low on the slope.

*The northern Madison Ranges:*

The northern Madison Range encompasses the mountains around Big Sky. With six inches of new snow and wind the avalanche danger has risen. The viciously cold temperatures last week did the snowpack no favors. Facets grew and became weaker. Yesterday Eric and I were teaching an avalanche class on Buck Ridge where we dug a few snow pits. Some holes had two feet of facets to the ground while others were slightly better with a supportable base. But they all had lots of weak, sugary snow making wind-loaded slopes especially unstable. As evidence, a skier triggered a small avalanche on Sunday in Beehive/Middle Basin. And the ski patrol at Big Sky is battling a snowpack that only got weaker with the recent cold. Given the strong winds, new snow and unstable snowpack, today the avalanche danger is rated **HIGH** on all wind-loaded terrain and **CONSIDERABLE** on all other slopes.

#### *The Bridger and northern Gallatin Ranges:*

The Bridger Range and northern Gallatins received only a few inches of snow since Friday. But don't let that fool you into thinking things are looking up, because they're not. A wind-loaded pocket swept an ice climber to his death on Thursday (see accident page below) and a skier triggered a shallow, wind-loaded slope near Mt Blackmore on Saturday (see photo page below). These avalanches are fracturing on a layer of facets 2-8 inches thick underneath the wind slabs. It's not taking much wind to touch the snow and create unstable soft slabs. These slabs are not always obvious so I'm being conservative in my snowpack assessments. My level of confidence is low. Thus, for today, the avalanche danger is rated **CONSIDERABLE** on all slopes.

See photos at: <http://www.mtavalanche.com/photo>

I will issue the next advisory tomorrow morning at 7:30 a.m. If you get out in the backcountry give us a call or email with your observations. You can reach us at 587-6984 or email us at [mtavalanche@gmail.com](mailto:mtavalanche@gmail.com).

#### HYALITE ACCIDENT REPORT

**We posted the accident report on the avalanche that killed Guy Lacelle in Hyalite Canyon. You can read it out on our Accidents page at: <http://www.mtavalanche.com/accident/09/12/13>**

#### AVALANCHE EDUCATION

1. BOZEMAN: On Tuesday, December 15 at 7pm there will be a FREE one hour Avalanche Awareness Lecture at the Bozeman Public Library.
2. WEST YELLOWSTONE: TWO DAY GUIDES COURSE. On Thursday, December 17, (noon-5pm) at the Holiday Inn is an afternoon of avalanche lectures. Friday, December 18, will be in the field. Registration is NOT required. More info at: <http://www.mtavalanche.com/education/classes/snowmobilers>
3. BOZEMAN: Montana Outdoor Science School is offering a Level 1 Avalanche Course January 7-10. For more information, contact Moss at 406-582-0526.