

## **GNFAC Avalanche Forecast for Thu Dec 19, 2013**

Good morning. This is Mark Staples with the Gallatin National Forest Avalanche Advisory issued Thursday, December 19 at 7:30 a.m. [Helio Collective](#) and the [Bountiful Table](#) sponsor today's advisory. This advisory does not apply to operating ski areas.

### Mountain Weather

This morning the Bridger Range received 7-9 inches of new snow. South of Bozeman near Hyalite Canyon and Big Sky 2-3 inches fell. Further south near West Yellowstone and Cooke City only about ½ inch fell. Temperatures were dropping this morning with the coldest temperatures of 10 degrees F in the Bridger Range. It was 15 degrees F near Big Sky and 20 degrees F near West Yellowstone and Cooke City.

This morning at 7 a.m. snowfall was slowing and should end this morning with only an inch or two of additional snow. Light winds were only blowing 5-10 mph from various directions but should increase as they shift to the north and blow 10-20 mph. Temperatures will drop into the single digits and low teens F. The next round of snow should come Friday evening.

### Snowpack and Avalanche Discussion

#### Bridger Range

Yesterday a skier triggered and was caught in an avalanche on Saddle Peak about 300 feet below the summit. This slide ran past the traverse back to Bridger Bowl. According to him "unless you are comfortable with dying, it is a good idea to avoid Saddle Peak" and "only dumb luck and divine intervention kept us alive." He was caught in the slide but fought as hard as he could to avoid being carried the full length of the avalanche and avoided being buried.

The snowpack in the Bridger Range became very weak during extreme cold weather in the first week of December. During the last 10 days, the snowpack has produced avalanches which are clear signs of unstable conditions. The weight of today's new snow will only make matters worse. For today the avalanche danger is rated **HIGH** on slopes steeper than 35 degrees and **CONSIDERABLE** on less steep slopes. Watch for north winds this afternoon which could further elevate the avalanche danger.

#### Madison Range Gallatin Range

#### Lionhead area near West Yellowstone

Less new snow means less weight was added to the snowpack, and there is little change in the avalanche danger in other areas. The structure of the snowpack remains unchanged and unstable as well. Avalanches fracturing over wide areas ([photo](#)) and avalanches triggered from a distance ([photo](#)) are major warning signs. Many slides have been seen in Hyalite Canyon where we've received many excellent observations. I suspect many slides have also occurred in other areas.

Most slides have broken on weak faceted snow about 1 foot above the ground. In many places there is a slab of new snow resting on these facets ([video](#)) as Doug and Eric found on Lionhead near West Yellowstone. The most reactive and most unstable combination is a hard wind slab resting on these facets. Some slopes like one Doug found yesterday above Bear Basin near Big Sky lack the slab and the entire snowpack is weak and faceted (

[photo](#)). Similar slopes with the slightest wind-blown snow are ripe for avalanches. Today the avalanche danger is **CONSIDERABLE** on wind-loaded slopes and **MODERATE** on all others. Very strong winds over the last five days have loaded many slopes. Non wind loaded slopes may have a lower danger but are still pretty sketchy.

### Cooke City

Near Cooke City over the last two days, my partner and I found weak facets about 1 foot above the ground mostly where the snowpack is a meter deep or less. It is a tricky situation because some slopes have a deep (over 5 feet) and somewhat strong snowpack. This variability is scary because it can be hard to tell which slopes are more likely to produce an avalanche. Without a careful snowpack evaluation and terrain selection, riding in avalanche terrain will be like playing Russian Roulette. Eventually you lose. I was fooled yesterday and rode into a chute on Scotch Bonnet. Fortunately as I pulled the trigger, I got an empty chamber. To further complicate matters, isolated slopes have a layer of buried surface hoar about 2 feet deep ([video](#), [snowpit](#)). Fresh wind slabs can also be triggered. For today the avalanche danger is **CONSIDERABLE** on wind-loaded slopes and **MODERATE** on all others.

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](mailto:mtavalanche@gmail.com) or call us at 587-6984.

### **BACKCOUNTRY SKIERS AND RIDERS NEEDED FOR MSU SURVEY**

This project aims to collect GPS location information and survey responses from backcountry skiers and riders to better understand what types of terrain decision we make. The focus is on backcountry skiers and riders of all abilities and experience. You need not be an expert backcountry skier to participate in this research. For more information and to sign up: [www.montana.edu/snowscience/tracks](http://www.montana.edu/snowscience/tracks)

### **SNOWMOBILE AVALANCHE EDUCATION**

The Canadian Avalanche Association produced a series of videos titled “Throttle Decisions” on avalanche safety for snowmobilers. [Mark’s blog post](#) outlines the topics.

### **EVENTS/EDUCATION**

GARDINER: TODAY, December 19, 7-8 p.m. **Avalanche Awareness**, at the Yellowstone Association in Gardiner. Call Zachary for more info at: 406-848-2850.

WEST YELLOWSTONE: **Snowmobiler Intro to Avalanches w/ Field Course**; 19 and 20 December. Info and registration: <https://www.ticketriver.com/event/7116>

BOZEMAN: Saturday, December 21, 10:30-11:30 a.m. **FREE Avalanche Transceiver Workshop**, Bridger Bowl, next to the rental shop at Jim Bridger Lodge. NO registration required. Just show up.

WEST YELLOWSTONE: Sunday, December 29, 10 a.m., **Companion Rescue Clinic for Snowmobilers**, Pre-Registration is required. <https://www.ticketriver.com/event/9387>