

## **GNFAC Avalanche Advisory for Fri Feb 28, 2014**

Good Morning. This is Mark Staples with the Gallatin National Forest Avalanche Advisory issued on Friday, February 28 at 7:30 a.m. **Cooke City Motorsports** and **Yamaha**, in partnership with the **Friends of the Avalanche Center**, sponsor today's advisory. This advisory does not apply to operating ski areas.

### Mountain Weather

Snowfall started yesterday late afternoon. Since then, 6-8 inches has fallen near Bozeman and Big Sky and Cooke City, and 2 inches has fallen near West Yellowstone. In the Bridger Range temperatures this morning were in the single digits F and dropping. South of Bozeman and near Big Sky temperatures were in the teens and low 20s F. Near Cooke City and West Yellowstone temperatures were in the high 20s F. Winds were hardly blowing in the Bridger Range while most other places had winds averaging 10 mph gusting to 20 mph from the W and SW.

Today a cold front will move south causing temperatures to drop and winds to increase as the front passes. Temperatures will drop to the single digits F this afternoon in northern areas while further south temperatures will reach the low teens F. A second wave of moisture will move north and collide with this cold front producing snow that will favor the southern areas. By tomorrow morning, the mountains near Cooke City and West Yellowstone should get an additional 8-12 inches of snow. Mountains near Bozeman and Big Sky should get 4-6 inches of snow.

### Snowpack and Avalanche Discussion

#### Cooke City

The mountains near Cooke City have received 11.5 inches of water ([snowfall graph](#)) since the end of January. This huge load has stressed the snowpack and created a difficult avalanche problem. Read Doug's article on [Deep Slab Avalanches](#) to understand more. We call this problem a low probability/high consequence scenario because these avalanches are hard to trigger and few will occur, but ones that do occur will be very large and destructive.

Just south of Cooke City on the west side of Woody Ridge, skiers triggered a large avalanche on Wednesday where the snowpack was only a foot deep. The resulting avalanche broke 10 feet deep and 50 feet wide on a slope that is barely 35 degrees in steepness. See pictures of this slide: [before](#), [after](#), [crown](#). These avalanches are the most difficult ones to predict. For now the best thing to do is stick to slopes less than 30 degrees in steepness and not connected to steeper ones. Once snowfall ends and the snowpack gets a breather, stability should improve. For today, I'm rating the avalanche danger not based on the likelihood of triggering a slide but on how I would travel ([danger descriptions](#)). For this reason the avalanche danger is rated [\*\*CONSIDERABLE\*\*](#).

#### Gallatin Range Madison Range

#### Lionhead area near West Yellowstone

The main concern in the mountains south of Bozeman, near Big Sky, and near West Yellowstone is a thin layer of facets buried 2-3 feet deep. This layer is tricky because it was variable from slope to slope when it formed and it has gotten stronger at different rates on different slopes. Unfortunately it remains a problem and has continued to create avalanches on some slopes. A snowboarder triggered a slide ([photo1](#), [photo2](#)) on this layer on

Wednesday on Lone Mountain on an ESE aspect and was partially buried. This slide is notable because it broke 500 feet wide. Skiers triggered two slides at the same time on this layer yesterday on Lone Mountain on a more northerly aspect ([photo](#)). Additionally we received a report of snowmobile triggered slide yesterday nearby in 2nd Yellowmule along Buck Ridge.

In the northern Gallatin Range this layer seems a little better but does exist on many slopes ([video](#)). A falling cornice triggered a small slide on Wednesday that did not propagate very far ([photo](#)).

Further south near West Yellowstone the same layer exists. It has definitely gotten stronger on many slopes as I found near Cabin Creek and Lionhead and Doug found near Hebgen Lake. However, we've been surprised by this layer and are hesitant to trust it too much just yet. Additionally, I saw several slides on Lionhead that broke near the ground ([video](#), [photo1](#), [photo2](#)). I did not expect to see these large avalanches but we can't ignore them. Be careful where you park your sled because similar slides can run further and wider than you might expect.

With recent avalanches, new snow this morning, and more coming, the avalanche danger is rated **[CONSIDERABLE](#)**. As with the mountains near Cooke City, I'm rating the danger based on travel advice more than the likelihood of triggering an avalanche. Skiing or riding in avalanche terrain is not out of the question but requires careful snowpack evaluations to do so safely.

### The Bridger Range

In case you haven't noticed the Bridger Range has gotten a lot of snow lately and the skiing and riding have been amazing. There have been no reported avalanches, and the snowpack is mostly strong. Until last night and this morning with 1 inch of snow water equivalent, loading has been slow and steady. I would be cautious today and would give the snowpack a few days to adjust to this recent load. For today avalanches within the new snow are likely on slopes steeper than 35 degrees where the avalanche danger is rated **[CONSIDERABLE](#)**. Less steep slopes have a **[MODERATE](#)** danger.

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.