

## **GNFAC Avalanche Advisory for Mon Feb 6, 2017**

Good Morning. This is Alex Marienthal with the Gallatin National Forest Avalanche Advisory issued on Monday, February 6<sup>th</sup> at 7:15 a.m. Today's advisory is sponsored by the [\*\*King and Queen of the Ridge event\*\*](#) at [\*\*Bridger Bowl\*\*](#) with a special thanks to the [\*\*Bridger Brigade\*\*](#) team who completed the most hikes (98) and raised the most money. Thanks to everyone who hiked and donated to the Friends of the Avalanche Center. This advisory does not apply to operating ski areas.

### Mountain Weather

Since yesterday morning the mountains near Cooke City got 6-8" of heavy new snow, near West Yellowstone and south of Big Sky got 3-4", and no snow fell in the mountains near Big Sky and Bozeman. Wind overnight was out of the southwest at 20-30 mph with gusts of 50-60 mph. At Big Sky, wind was 50-60 mph with a gust of 75 mph on the summit. Temperatures this morning are in the 20s to low 30s F, and will warm a few degrees today before falling to the teens F tonight. Wind will remain out of the southwest at 20-30 mph today. Snow later today will deliver 6-8" to the southern ranges, 3-5" near Big Sky, and 2-3" near Bozeman.

### Snowpack and Avalanche Discussion

#### Cooke City

Heavy snowfall and strong wind pushed the snowpack near Cooke City to its breaking point. Skiers in Sheep Creek yesterday reported a large natural avalanche that broke small trees, ran across flat terrain and up a small hill ([\*\*photo\*\*](#), [\*\*photo\*\*](#), [\*\*photo\*\*](#)). Skiers on Henderson bench triggered an avalanche that partially buried one skier ([\*\*photo\*\*](#), [\*\*photo\*\*](#)). A skier on town hill triggered a slide, was caught and able to hug a tree to avoid getting swept away ([\*\*photo\*\*](#)). A slide near Lulu Pass was triggered by snowmobilers with multiple riders on the slope and skiers below.

Fisher Creek SNOTEL received 3.2" of [\*\*snow water equivalent\*\*](#) (SWE) since Friday and 4.3" of SWE since last Monday. This much snow alone is enough to create large avalanches. Strong winds drifted snow into thick slabs to load slopes with more weight than they've had all season. Avalanches over the weekend ran on southerly and northerly aspects, on wind loaded and non-wind loaded slopes, and broke within the storm snow and deeper on persistent weak layers.

All steep slopes could be sensitive to the weight of a skier or rider today. Avoid avalanche terrain and minimize exposure to avalanche runout zones. Large and destructive avalanches are likely and could run far into flat terrain. The avalanche danger today is [\*\*HIGH\*\*](#) on wind loaded slopes and [\*\*CONSIDERABLE\*\*](#) on all other slopes.

#### Southern Madison Range   Southern Gallatin Range

#### Lionhead area near West Yellowstone

The mountains south of Big Sky and near West Yellowstone received 1-2 feet of snow with 2" of SWE since Friday. Strong wind drifted this snow into thick slabs that will be easy to trigger today. Wind loaded slopes are the most likely place to trigger a large avalanche and where natural avalanches are possible.

Weak layers of surface hoar and facets buried 1-3 feet deep could produce avalanches on steep slopes, whether wind loaded or not. These layers are not on every slope, which makes them difficult to assess. Dig to look for

these layers today before riding steep slopes. The avalanche danger today is [CONSIDERABLE](#) on all slopes.

[Bridger Range](#) [Northern Madison Range](#) [Northern Gallatin Range](#)

In the mountains near Bozeman and Big Sky, strong wind over the weekend had minimal snow to transport. Small wind slabs formed near ridgelines and are possible to trigger ([photo](#)), but have become mostly glued on and stubborn. These slabs should be approached with caution. Assess the consequences of terrain before riding steep slopes.

Surface hoar and facets buried about one foot deep could produce avalanches. Eric and I found a thin layer of facets above an ice crust on a SE aspect in Hyalite ([video](#)), Doug found Surface Hoar on Mt Ellis ([video](#), [photo](#)), and yesterday I found a thin layer of facets north of Bridger that propagated in stability tests. These layers can be thin and difficult to spot. Dig a hole and do a quick compression test. If your column breaks clean about a foot below the surface, you found the layer and should approach steep slopes with caution. The avalanche danger today is [MODERATE](#).

Doug will issue the next advisory tomorrow morning by 7:30 a.m.

We rely on your field observations. Send us an email with simple weather and snowpack information along the lines of what you might share with your friends: How much new snow? Was the skiing/riding any good? Did you see any avalanches or signs of instability? Was snow blowing at the ridgelines? If you have snowpit or test data we'll take that too, but this core info is super helpful! Email us at [mtavalanche@gmail.com](mailto:mtavalanche@gmail.com) or leave a message at 406-587-6984.

### [Upcoming Events and Education](#)

**Beacon Training Park at Beall:** Open and free to the public for avalanche beacon practice seven days a week from 9 a.m. to 8 p.m., southeast corner of Beall Park in Bozeman.

#### **BOZEMAN**

February 7, **Sidecountry and Avalanche Awareness**, 6-7:30 p.m., Beall Park.

February 8, **1-hr Avalanche Awareness**, 7-8 p.m., Roskie Hall, Montana State University.

February 10 and 11, **Companion Rescue Clinic**, REI and field day, more info and register [here](#).

#### **WEST YELLOWSTONE**

February 11, **1-hr Avalanche Awareness**, 7-8 p.m., West Yellowstone Holiday Inn.

#### **COOKE CITY**

**Weekly rescue training and snowpack update**, 6:30-7:30 p.m., Cooke City Super 8 on Friday, Lulu Pass Road for field location Saturday (Look for the [yellow sign](#)).

#### **ENNIS**

February 17, **1-hr Avalanche Awareness**, 6-7 p.m., Madison Valley Rural Fire Department Station 1.