

## GNFAC Avalanche Advisory for Wed Jan 4, 2012

Good morning. This is Doug Chabot with the Gallatin National Forest Avalanche Advisory issued on Wednesday, January 4 at 7:30 a.m. This advisory is sponsored by Outlaw Partners and Big Sky Ski Patrol. This advisory does not apply to operating ski areas.

### Mountain Weather

Yesterday, under sunny skies, mountain temperatures hovered in the high 20s except in the Bridger Range where they hit the mid 30s. Winds are blowing west to southwest averaging 15-20 mph with gusts hitting 30 mph. Today will be sunny with wind speed and direction remaining the same. Temperatures, however, will approach their record highs and near 40F in the early afternoon.

### AVALANCHE INCIDENTS

We have posted [many photos on our website](#) from the two avalanche fatalities outside Cooke City. We also have two video clips of our investigations posted:

- Henderson Mountain avalanche involving a snowmobiler ([video](#)).
- Hayden Creek avalanche involving a skier ([video](#)).
  - [Remembering Dave Gaillard](#) on Facebook.

Full reports will be made public later this week.

### Snowpack and Avalanche Discussion

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

Avalanche activity and signs of instability continue to be reported from Cooke City. Yesterday, skiers felt collapsing on all aspects and triggered a slide on a small rollover. The weak, faceted snowpack throughout the Bridger, Madison, Lionhead and southern Gallatin Ranges are also unstable. Even though there has not been much loading from new or wind-blown snow since Saturday, the snowpack needs time to adjust. Above freezing temperatures can help, but not fully heal weak layers this time of year. Warm air will only penetrate the top few inches of the snowpack, and January evenings are still cold. The snow structure remains bad: weak layers near the ground are poorly supporting slabs of new snow. When I think about what the avalanche danger might be for a given day I contemplate how I would approach the backcountry. And right now Eric, Mark and I are unanimously tip-toeing around, cautiously route-finding, digging snowpits, watching our slope angles, and notching back our actions. Signs of instability are decreasing with every passing day, but dangerous avalanche conditions prevail. For today, it's very likely to trigger an avalanche and the danger is rated [CONSIDERABLE](#).

### The northern Gallatin Range:

On the hunt for instability in the northern Gallatin Range, Mark and his partner toured into the weakest zone we know about: Mount Ellis. He skied up the ridge and dug a few snowpits along the way. He had no collapsing or cracking and he found the facets at the lower half of the pack to be gaining strength. But all is not well. Gaining strength is not the same as being strong. He also found surface hoar buried a foot down in [one of his pits](#) which

could be seen as a stripe in the snow ([photo](#)). These feathery crystals were underneath a supportable slab which gave him pause. He did not ski the open slopes; instead he opted for lower angled terrain to the south. Skiers in Lick Creek found this exact layering a day ago and also decided to be conservative. Given that it's possible to trigger slides, today the avalanche danger is rated [MODERATE](#) on all slopes.

Mark 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.

## FACEBOOK QUESTION

A great question was posted on the [Friends Facebook page](#) about my ECT score in the Hayden Creek Avalanche Fatality video. He asked, "Wouldn't an ECT score of 26 lead one to think the slope was reasonably safe?" My answer:

- No. For the Extended Column Test (ECT) we are most interested on whether it propagates or not instead of the actual score. One reason it took so many hits was because the slab was thick, plus the slope already avalanched which can affect the strength of the surrounding snows. In this case, the fact it propagated was valuable information. Only 15 feet away the snowpack was one third as deep; a thin area that may have yielded much lower ECT scores. This test helps us answer the question, "Once we collapse a weak layer, can it propagate?" Since we were standing at an avalanche crown, we already knew the answer was "yes." But the ECT illustrated the weakness well in the video. In summary, an ECT that propagates does NOT indicate stability, no matter its score.

## EVENTS/EDUCATION

To check out all our education programs: <http://www.mtavalanche.com/workshops/calendar>

### BOZEMAN

[Women's 1-hour Avalanche Awareness Lecture](#). TONIGHT, January 4, 6:30- 8 p.m. at REI.

[Snowmobiler Introduction to Avalanches with Field Course](#). Lectures on Saturday, January 7, with an all day field session Sunday, January 8. Advanced registration IS REQUIRED.

[1-hr Avalanche Awareness Lecture](#). Wednesday, January 11, 6:30-7:30 p.m. at REI.

### BIG TIMBER

[1-hr Avalanche Awareness Lecture](#). Tuesday, January 10, 7-8 p.m. at Big Timber High School.

### HELENA

[1-hr Avalanche Awareness Lecture](#). Thursday, January 12, 6:30-8:30 p.m. at Exploration Works.

### COOKE CITY

[1-hr Avalanche Awareness Lecture](#). Saturday, January 14, 5-6:00 p.m. at Cooke City Community Center.

### CODY, WYOMING

[Snowmobiler Introduction to Avalanches with Field Course.](#) Lectures on Saturday, January 14 at Mountain Valley Motorsports with an all day field session near Cooke City on Sunday, January 15. Advanced registration IS REQUIRED.

## BILLINGS

[Snowmobiler Introduction to Avalanches with Field Course.](#) Lectures on Tuesday, January 24 from 6-9 p.m. at Hi-Tech Motor Sports with an all day field session in Cooke City on Sunday, Jan 29. PRE-REGISTER BY JAN 23 at Hi-Tech!! Register with Sharon at 406-652-0090; [hitech@hi-techmotorsports.com](mailto:hitech@hi-techmotorsports.com).