GNFAC Avalanche Forecast for Wed Apr 15, 2020

Good Morning. This is Ian Hoyer with a spring weather and snowpack update on Wednesday, April 15th. The Gallatin National Forest Avalanche Center has stopped issuing daily avalanche forecasts for the season. We will issue weather and snowpack updates on Monday and Friday mornings through April.

Mountain Weather

Snowfall began mid-day yesterday with 6-8" accumulating by this morning in the Bridger Range and near Big Sky, 4" in the northern Gallatin Range, and 1-2" near West Yellowstone and Cooke City. Winds are 10-15 mph out of the west-northwest with gusts of 30 mph. Temperatures this morning are in the high teens and low 20s F. With a cold front pushing through today, temperatures will only rise a couple degrees this afternoon. Snow will continue today, with an additional 3-7" falling today near Bozeman and Big Sky, and 2-4" near West Yellowstone and Cooke City.

Moderate west winds today will shift to the northeast as the cold front passes through this afternoon and evening. Tomorrow will bring a mix of sun and clouds, but the snowfall will be mostly done. Sunny skies and warmer temperatures will prevail by Friday and through the weekend.

Snowpack and Avalanche Discussion

All Regions

There is a good bit of new snow this morning around Bozeman and Big Sky and more is on its way today. Expect the new snow to be unstable, especially if snowfall rates are intense. As the storm started yesterday the new snow was already reactive. Skiers at Bridger unintentionally triggered a slide that broke 16" deep, under last weekend's new snow, and ran past 8 lift towers on the Schlasman's lift (~1,000 vertical ft) (**photo**). Skiers also got dramatic shooting cracks and found the new snow unstable near the Bridger Ridge and in Beehive Basin (**photo**). The more new snow that you find in an area today the more dangerous conditions will be. In addition, west winds have drifted the new snow into much deeper drifts near ridgelines. Watch out for and avoid these drifts. With a shift to northeast winds overnight, be on the lookout for drifts in unusual places tomorrow.

Compounding our concerns with the new snow is the fact that there are still weak layers in the upper snowpack that remain reactive. Over the last week we've gotten multiple reports of unstable test results on weak layers (surface hoar and facets) buried 1-3' deep. An avalanche breaking on these layers will be much larger than a slide confined to the new snow.

When the sun breaks through the clouds (either tomorrow or Friday), the snow surface will get wet and instability will spike again. It won't take long for the strong mid-April sun to turn the new snow into unstable glop. Avoid steep terrain as this transition occurs.

A special note if you are planning on riding steep terrain at Bridger Bowl - remember that the ski area has been closed for a month, there has been no avalanche mitigation, and a backcountry snowpack exists. Don't let familiarity lull you into complacency in what is now serious uncontrolled avalanche terrain. Tone it down and dial it back until the new snow settles.

Please continue to send us your observations. You can fill out an observation form, email us (mtavalanche@gmail.com), leave a VM at 406-587-6984, or Instagram (#gnfacobs). We greatly appreciate your

support.

Give Big Gallatin Valley

Give Big Gallatin Valley is April 30th - May 1st. The Friends of the Avalanche Center are participating again this year and we'd really appreciate your support! Thank you.

CLOSURES AND STAY-AT-HOME ORDER

A **Stay at Home order** is in effect for the State of Montana due to COVID-19. This order specifically discourages "outdoor recreation activities that pose enhanced risks of injury or could otherwise stress the ability of local first responders to address the COVID-19 emergency (e.g., backcountry skiing in a manner inconsistent with avalanche recommendations or in closed terrain)".

Bridger Bowl is closed and advises against uphill travel which could place first responders at risk. Backcountry conditions exist. There is no avalanche control or ski patrol rescue. Please do not loiter or congregate in the parking lots.

Park County is requesting anyone who is not a permanent resident or provider of essential service to avoid travel to Cooke City/ Silvergate. This includes both single day and overnight visitors.

Hyalite Canyon is closed to vehicle traffic and will reopen on May 16th. This is the regular spring use closure.

GENERAL SPRING SNOWPACK AND TRAVEL ADVICE

Spring weather can be highly variable and create a mix of avalanche problems to watch out for. Snow conditions and stability can change drastically from day to day or hour to hour. Anticipate rapid change and plan accordingly. Abundant snowfall over the winter with more spring snow to come makes avalanches possible into summer.

NEW SNOW AND WIND LOADED SLOPES

Spring storms are notorious for depositing heavy amounts of snow in the mountains. Even with a deep and generally stable snowpack throughout the advisory area, heavy and rapid loads of new snow will decrease stability. The main problems to look out for are avalanches breaking within the new snow, wind slabs, and loose snow avalanches. The likelihood of triggering an avalanche spikes during and immediately after snowstorms. New snow instabilities tend to stabilize quickly, but it's a good idea to give new snow a day to adjust before hitting big terrain. New snow instabilities can be difficult to assess, and spring storms bond to old snow differently across aspects and elevations. Conservative terrain selection is essential during and immediately following storms. Wind loaded slopes and slopes steeper than 35 degrees should be avoided for 24-48 hours after new snow and wind.

New snow can quickly change from dry to wet on a spring day, and stability can decrease rapidly with above freezing temperatures or brief sunshine. New snow may bond well early in the morning, and then easily slide later. Wet loose slides are likely during the first above freezing temperatures or sunshine immediately after a storm. Anticipate changes in snow stability as you change aspect or elevation, and over the course of the day. An early start is always an advantage. Be ready to change plans or move to safer terrain at the first signs of decreasing stability.

WET SNOW AVALANCHES

Spring and wet snow avalanches go hand-in-hand. Above freezing temperatures, rain, and/or intense sunshine cause the snow to become wet and weak, and make wet avalanches easy to trigger or release naturally. Conditions tend to become most unstable when temperatures stay above freezing for multiple days and nights in a row. Avoid steep terrain, and be aware of potential for natural wet avalanches in steep terrain above you, if you see:

- Heavy rain,
- Above freezing temperatures for more than 24 hours,
- Natural wet avalanches,
- Roller balls or pin wheels indicating a moist or wet snow surface,
- Or if you sink to your boot top in wet snow.

In general, if the snow surface freezes solid overnight, the snowpack will be stable in the morning and stability will decrease through the day as snow warms up. The snow surface hardness, rate of warming, duration of sunshine, aspect and elevation determine how fast stability will decrease through the day. Be aware that sunny aspects may have a wet snow avalanche danger while shadier slopes still have a dry snow avalanche danger. Getting off of steep slopes should be considered when, or before, the above signs of instability are present. Wet snow avalanches, whether loose snow or slabs, can be powerful, destructive and very dangerous. Conservative terrain choices, starting early in the day, and careful observations can keep you safe. See Alex's recent video, and this article for more spring travel advice.

CORNICES

Cornices along ridgelines are massive and can break under the weight of a person (photo). Prolonged above freezing temperatures and rain make them weaker and possible to break naturally. They can break off suddenly and farther back than one might expect. Cornice falls can also entrain large amounts of loose snow or trigger slab avalanches. Stay far back from the edge of ridgelines and minimize exposure to slopes directly below cornices. Regardless of whether a cornice triggers a slide or not, a falling cornice is dangerous to anyone in its path.

DISCLAIMER

It does not matter if new snow falls or not, avalanches will continue to occur until the existing snowpack is mostly gone. Always assess the slope you plan to ride with diligence and safety in mind. Do not let your guard down. Travel with a partner, carry rescue gear and only expose one person at a time in avalanche terrain.

Have a safe and enjoyable spring and summer!

Doug, Alex, Ian and Dave

For more spring travel advice see this **article** from our GNFAC forecaster blog.