GNFAC Avalanche Forecast for Mon Apr 21, 2025

Good morning, this is Alex Marienthal with a spring weather and snowpack update on Monday, April 21st. Daily avalanche forecasts have ended for the season. We will issue weather and snowpack updates on Monday and Friday mornings through April. This information does not apply to operating ski areas.

Mountain Weather

This morning there is 4-5" of new snow in the Bridger Range, Hyalite and Cooke City, 1-2" near Big Sky, and none elsewhere. Wind has been out of the west and southwest at 5-15 mph with a few gusts of 25-40 mph. Temperatures are 20s to low 30s F.

Today, under mostly cloudy skies, temperatures will reach low to mid-30s F with light snow showers, and some thunder possible this afternoon. Tonight temperatures will drop to the teens and low 20s F. Wind will remain light to moderate out of the west. There is a chance for 1-3" more snow by this evening near Bozeman and Cooke City.

Tomorrow skies will be mostly sunny, and the rest of the week skies will be partly sunny to mostly cloudy. During the middle of the week, daytime temperatures will reach 30s to low 40s F with overnight lows in the 20s F. There is a chance for light snow on Tuesday night and Wednesday with 1-2" possible. At the end of the week temperatures will warm to high 40s F with chances for rain and snow to start the weekend, then temperatures cool with higher chances for snow next Sunday and Monday.

Snowpack and Avalanche Discussion



Any avalanche problems will involve the new snow. Otherwise, the snowpack is generally stable and larger avalanches are unlikely. Skiers or riders can trigger **wind slab avalanches**, around 4-8" deep, on steep slopes where the 4-5" of new snow has been drifted into thicker or stiffer slabs. Additionally, **dry loose** and **wet loose avalanches** are possible to trigger and could run long distances on firm crusts below the new snow. When the sun comes out, the new snow will quickly get wet and easily slide on steep, sunny slopes.

On Saturday skiers triggered small wind slab avalanches, 3-6" deep and 10-20' wide, in the northern Bridgers (<u>observation and photos</u>) and near Cooke City (<u>photos</u>). Today you might encounter similar drifts, or some slightly larger drifts in areas with more new snow.

Slides will be generally small, but any type of avalanche can be hazardous in terrain where they could push you into rocks, trees, over a cliff, or carry you a long way down a steep slope. Before riding steep slopes, assess the terrain for consequences of being knocked over by a small slide.

Be on the lookout for fresh drifts and avoid them, especially in consequential terrain. Monitor the snow surface for wet snow avalanche potential, and if it is becoming moist find lower angle terrain or shadier slopes with drier snow.

Daily forecasts are done for the season, but avalanches will continue. Remain diligent with your snowpack and terrain assessments, and be ready to adapt your plans to changing conditions. See below for more general spring snowpack and travel advice.

Announcements

The Hyalite Canyon Road is closed to ALL MOTORIZED VEHICLES until May 16. This is a regular annual road closure to reduce road damage during the spring thaw. Bicycle and foot traffic are allowed. Contact the Bozeman FS Ranger District for more info.

Bridger Bowl Ski Area is closed for the season, and uphill travel is allowed. Please give employees and machinery plenty of room as they work to clean up from the season. Backcountry conditions exist as spring storms impact the range. There are no ski patrol services, rescue or avalanche mitigation. Call 911 for any incidents requiring outside assistance.

GENERAL SPRING SNOWPACK AND TRAVEL ADVICE

Spring weather can be highly variable and create a mix of avalanche problems. Snow conditions and <u>stability</u> 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 <u>stability</u>. 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 fresh snow a day to adjust before hitting big terrain. New snow instabilities can be challenging to assess, and spring storms bond to old snow differently across aspects and elevations. Conservative terrain selection is essential during and immediately following storms. Avoid wind-loaded slopes and slopes steeper than 35 degrees for 24-48 hours after new snow and wind.

New snow can quickly change from dry to wet on a spring day, and <u>stability</u> can decrease rapidly with above freezing temperatures or brief sunshine. New snow may bond well early in the morning and then easily <u>slide</u> later. Wet loose slides are likely during the first above freezing temperatures or sunshine immediately after a storm. Anticipate changes in snow <u>stability</u> as you change <u>aspect</u> 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 <u>trigger</u> 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 the 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,
- Rollerballs or pinwheels 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 <u>stability</u> will decrease through the day as snow warms up. The snow surface hardness, rate of warming, duration of sunshine, <u>aspect</u> and elevation determine how fast <u>stability</u> will decrease through the day. Be aware that sunny aspects may have a <u>wet snow avalanche</u> danger while shadier slopes still have a <u>dry snow avalanche</u> 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. <u>Cornice</u> falls can also entrain large amounts of loose snow or <u>trigger slab</u> avalanches. Stay far back from the edge of ridgelines and minimize exposure to slopes directly below cornices. Regardless of whether a <u>cornice</u> triggers a <u>slide</u> or not, a falling <u>cornice</u> 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!

Mark, Alex, Ian and Dave

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