

## **GNFAC Avalanche Forecast for Mon Apr 29, 2024**

Good morning. This is Alex Marienthal with a spring weather and snowpack update on Monday, April 29th. The Gallatin National Forest Avalanche Center has stopped issuing daily avalanche forecasts, and this is our final weather and snowpack update for the season. Any observations we receive we will continue to share on our website.

Thanks for reading the forecast, donating money, time or gear, and/or submitting observations this winter. Have a safe spring and summer.

### Mountain Weather

Since Thursday there has been a mix of snow and rain up to 8000' with mostly snow above. Near Big Sky, Hyalite, Island Park and Cooke City received 8-15" of snow (0.9-1.9" [snow water equivalent](#)), and the Bridger Range and West Yellowstone got 2-4" (0.5-0.7" SWE). Over the weekend temperatures reached mid-30s to low 40s F during the days, and dropped to low 30s F most nights. On Saturday wind shifted to the east with gusts to 25 mph, and yesterday backed to westerly at 5-15 mph.

This morning, temperatures are 20s to low 30s F, and wind is west-southwest at 5-15 mph. Temperatures will reach high 30s to mid-40s F today, and drop to teens F overnight. The next few days temperatures will reach low 30s F with overnight lows in the teens F. This afternoon wind will increase to 15-25 mph with gusts of 30-40 mph out of the west-southwest. Snow showers tonight could drop 1-3" by morning. More snow showers tomorrow evening through Thursday could drop up to a foot of snow in the mountains near Bozeman, Big Sky, and Cooke City with 1-3" near West Yellowstone and Island Park. Next weekend, wet spring weather looks to continue with temperatures warming back to 30s and 40s F.

### Snowpack and Avalanche Discussion



#### **All Regions**

Over the next few days avalanches will primarily involve the recent snow and more snow that falls. Avalanches could range from fresh slabs of wind-drifted snow to wet-loose avalanches. Watch for blowing snow at ridgelines and cracking around your feet or skis as a sign that fresh, unstable drifts exist. If there is sunshine the new snow will quickly become moist and easily slide on sunny, steep slopes. Avalanches could be large, especially where there is more new snow, but even small slides can easily catch and carry you. Minimize exposure to terrain traps like cliffs, rocky outcrops and trees.

On Friday there were natural wet slab avalanches near Cooke City ([photos](#)), and skiers in Beehive Basin experienced loud collapses on a wet and unsupportable snowpack ([observation](#)). I skied north of Cooke City the last couple days, and on Saturday found wet unsupportable snow up to 10,000' ([observation](#)). Large wet slabs, and wet-loose avalanches deeper than the new snow, are not as likely the next few days due to light freezes the last couple nights and cold temperatures in the forecast. However, there is uncertainty of how well the snowpack froze below the new snow, and conditions could change quickly if there is more sunshine and warmth than expected. If you find a wet unsupportable snowpack, or the sun comes out and starts to melt the snow surface, seek lower angle or colder slopes.

Lower elevations are showing dirt and grass, but snow in the mountains means avalanches are possible. Remain diligent with careful snowpack assessment and route-finding, and carry proper avalanche rescue gear. The

variable and quickly changing spring weather creates a mix of avalanche concerns to watch for. The snowpack can change drastically from day to day, throughout the day, and across different aspects and elevations. Carefully evaluate the snowpack throughout the day, and have alternate plans in case you find unstable snow. See below for general spring snowpack and travel advice.

## **Give Big Gallatin Valley is May 2-3, 2024.**

On May 2-3, please support the excellent non-profits of Gallatin County, including the Friends of the Avalanche Center ([GNFAC Giving Page HERE](#)). Your support goes toward offering free and low-cost avalanche education, weather stations, and avalanche center operations. This season, the education program reached over 5,000 students, including school-age youth and motorized and human-powered users. 6,500 people read our daily avalanche forecasts and more followed along on social media.

## **Upcoming Avalanche Education and Events**

**Hyalite Road Closure:** Hyalite road is closed to ALL MOTORIZED VEHICLES until the morning of 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.

### **Events and Education Calendar.**

[\*Loss in the Outdoors\*](#) is a support group for those affected by loss and grief related to outdoor pursuits. Check out the link for more information.

## **GENERAL SPRING SNOWPACK AND TRAVEL ADVICE**

Spring weather can be highly variable and create a mix of avalanche problems. 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 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 [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 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 [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.