GNFAC Avalanche Forecast for Mon Apr 22, 2024

Good morning, this is Dave Zinn with a spring weather and snowpack update on Monday, April 22nd. The Gallatin National Forest Avalanche Center has stopped issuing daily avalanche forecasts for the season. We will issue weather and snowpack updates throughout April on Monday and Friday mornings. This information does not apply to operating ski areas.

Mountain Weather

Since Friday, there has been a mix of sun and clouds with no significant precipitation. Temperatures have generally been above freezing during the day and below freezing at night. On Monday morning, temperatures are in the teens to 20s F, with 10-20 mph winds from the west to northwest.

This week, peak high temperatures in the 40s to low 60s F will be on Wednesday, with the warmest temperatures occurring in the mountains around Bozeman and Big Sky. In many areas, nighttime lows will be above freezing. Temperatures will cool again on Thursday, with a mix of rain and snow beginning Wednesday night.

Snowpack and Avalanche Discussion

All Regions

Warm temperatures, wind-loading, and the possibility of rain and snow later in the week will drive avalanche problems through Friday. As Alex outlined in his **video** from the Bridger Range, be flexible with your travel plans because conditions can rapidly fluctuate between stability and instability in the spring.

Wet snow avalanches will be the primary concern on most slopes. These will generally occur as wet loose slides that start at a point and spread as they gather snow (**recent examples from the Bridger Range**). The probability of larger and more destructive wet slab avalanches will increase as nighttime lows remain above freezing and daytime highs climb mid-week. Last week, melt-water moved through the snowpack, and riders in the Taylor Fork (**photos and details**) and the Northern Gallatin Range (**photos and details**) remotely triggered wet slab avalanches that broke on weak faceted snow near the ground, and a similar slide broke naturally on Mt. Abundance near Cooke City (**details and photos**). These were a good reminder that avalanches can still fail deep within the snowpack.

There is a chance of rain on Thursday and Friday. Besides being unpleasant for travel, rain on snow will destabilize the snowpack. Thankfully, identifying wet snow instability is relatively easy. Avoid travel on steep slopes if it is raining (because… yuck!), get on to the snow early in the day when surface-level crusts are supportable and get off before the crust breaks down and more than the upper few inches become slushy and wet. Ensure a safe egress route, as conditions often deteriorate more quickly at lower elevations.

Relatively small dry snow avalanches are possible on upper-elevation slopes that remain shady and cool. This weekend, skiers outside the advisory in the Tobacco Root Mountains triggered a small wind-slab avalanche on a high, north-facing run (**details**). Small avalanches in technical or extreme terrain can be deadly if they push backcountry travelers off cliffs or into trees and gullies. If the upper snowpack is dry, dig down and back off steep objectives if you find instability in your tests, observe shooting cracks or indications of fresh wind-loading.

Remain diligent with your snowpack assessments and route-finding, and adapt your decision-making to changing conditions.

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.