GNFAC Avalanche Forecast for Mon Apr 18, 2022

Good morning. This is Alex Marienthal with a spring weather and snowpack update on Monday, April 18th. 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

Since Friday the mountains near Cooke City got 13” of new snow, and near Bozeman, Big Sky and West Yellowstone got 4-6”. Temperatures reached mid 30s F on Saturday and high 20s F yesterday. Wind was west-southwest at 15-25 mph with gusts of 30-60 mph. Today under mostly sunny skies, temperatures will reach mid-40s F, and wind will be 5-25 mph out of the west-southwest. Wind will remain west-southwest through the week with periods of moderate to strong speeds. Temperatures will drop to the teens and 20s F most nights and during the day will reach mid-30s to low 40s F. Tomorrow there is a chance for 1-4” of snow with more possible Thursday night and Friday.

Snowpack and Avalanche Discussion

All Regions

Clear skies and above freezing temperatures today, and maybe later in the week, will quickly get the new snow wet and make avalanches easier to trigger (**video**). Anticipate changing conditions and monitor the wetness of the snow surface. Plan to be off and out from underneath steep terrain that receives direct sunshine before it becomes unstable. If you see large pinwheels of snow on the surface or can make a snowball of moist snow, it is time to retreat to lower angle or shadier terrain.

Over the weekend recent new snow created dangerous avalanche conditions, especially where it was drifted into thicker, dense slabs by strong wind. We received reports of natural avalanches in the Bridger Range (**photo**) and Cooke City (**photo**) which broke during and immediately after the heaviest snow fell on late Saturday. On Saturday in East Rosebud Creek, outside our advisory area, five skiers from two separate groups were caught in a natural dry loose snow avalanche. Luckily, no one was injured. The avalanche became large as it entrained snow while it swept down the couloir they were climbing (**details**). Yesterday near Cooke City, skiers intentionally triggered a 4-16” deep slab of wind drifted snow (**photo and details**) as they descended a slope.

This week similar avalanches are possible which will involve the recent snow or snow that falls later this week. Watch for signs of unstable, wind-drifted snow and avoid steep slopes where you suspect it exists. Be especially cautious in terrain where even a small slab or loose snow slide would be deadly due to higher consequences, like potentially pushing you into rocks, trees or over cliffs. Before skiing or riding in steep terrain, dig down a couple feet and assess the stability of snow that fell over the last week. Avalanches could break on hardness differences within the recent snow, or on a hard melt-freeze crust buried below the recent snow. In isolated, colder areas, avalanches could break on weak layers 1-3 feet below the new snow.

Always follow safe travel protocols by skiing and riding with a partner, carrying a beacon, shovel and probe and exposing only one person at a time to avalanche terrain.

We will issue spring snowpack and weather updates each Monday and Friday through April, or as needed, and we will share relevant avalanche and snowpack information on our website and social media. If you get out, please send us your observations no matter how brief. You can submit them via our **website**, email (

mtavalanche@gmail.com), phone (406-587-6984), or Instagram (#gnfacobs).

Announcements, Avalanche Education and Events

Bridger Bowl is closed, and backcountry conditions exist. There is no avalanche mitigation or ski patrol rescue. In case of emergency, call 911. Please stay clear of work areas, snowmobiles, chair lifts and other equipment. Without the daily avalanche mitigation efforts of the ski patrol, backcountry conditions now exist within the boundaries of Bridger Bowl (**video**). Commonly traveled routes such as the North Bowl Road and any slope steeper than 30 degrees are avalanche terrain (i.e. most of the Ridge and Schlasman's terrain). Other groups above and below you may complicate principles of safe travel.

See our **education calendar** for an up-to-date list of all local classes.

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