

Wilson Peak Avalanche Accident

1 skier caught and injured
Wilson Peak, MT near Big Sky, MT
Custer Gallatin National Forest – April 3, 2022

AVALANCHE SYNOPSIS

On April 3, 2022, two skiers traveled from the North Fork Trailhead near Big Sky to Wilson Peak in the Northern Madison Range. The pair skied a run off the north side of Wilson Peak. At approximately 2:10 p.m., during their return ascent up the west ridge of Wilson Peak, they triggered an avalanche that caught and carried the skier who was lower on the slope.

The upper skier was 10' from the ridgeline when the avalanche initiated. He yelled "Avalanche", dug into the bed surface and avoided being caught. His partner was approximately 100' lower on the slope and was injured by impacting a tree while being carried by the slide. The upper skier descended the avalanche path, found his partner on the surface of the debris and provided medical care. After an initial assessment, the pair moved down the slope to eliminate continued exposure to the avalanche terrain above. They activated the SOS feature on their satellite communication device because injuries to the skier's upper leg and hip made self-evacuation unlikely, if not impossible.

The pair had avalanche beacons, probes and shovels. Both have formal avalanche training (Pro Level 1 and Recreational Level 2 & Companion Rescue). Both had read the avalanche forecast the morning of the accident and are regular readers of the GNFAAC avalanche products. They did not dig a snowpit the day of the accident. They had discussed "New Snow" and "Wind-Drifted Snow" as their primary avalanche concerns for the day. Earlier in the day when considering their descent route, the pair identified wind-loading on a steep chute and chose to avoid it in favor of a wind-scoured, likely more stable slope.

The Gallatin County Sheriff Search and Rescue team responded with a member of the Gallatin National Forest Avalanche Center staff and evacuated both members of the party. The skiers were evacuated to an ambulance in Big Sky by 4:20 p.m. on April 3rd.

WEATHER AND SNOWPACK

The avalanche occurred on a northeast-facing slope at 9,600' elevation. It was likely a slab of recently wind-drifted snow, and broke an estimated 6-12" deep, 100' wide and ran 300' vertical. It is classified SS-ASu-R2-D1.5-I. The group estimated the slope angle to be 35-40 degrees in steepness.

From March 23-28 the mountains near Big Sky had well above freezing temperatures every day, and many nights that remained too warm for the snowpack to freeze. After March 29 temperatures were below freezing each night and a thick, supportable crust formed on the surface of the snowpack on most slopes. These mountains received 3" of snow on March 31 and April 1. Moderate southwest winds drifted this snow into dense slabs on top of the frozen crusts. On April 2, near Beehive Basin 3.5 miles northwest of this accident, a group of skiers found unstable drifts of snow and intentionally triggered a

6-8" deep by 30' wide slab of wind-drifted snow on a steep slope ([details on the website](#)). The night of April 2 another 2-3" of snow fell, and wind speeds recorded at Big Sky Resort and The Yellowstone Club, located 6 and 9 miles respectively to the southwest of the accident, were westerly at 20-30 mph with gusts of 40-60 mph. At the time of the avalanche temperature was 37 F at the Yellowstone Club's Timberline Weather Station at 9,800'.

The avalanche forecast on April 3, 2022, stated:

... a person can trigger a small slab of recently wind-drifted snow or a small loose snow avalanche. Similar avalanches were triggered by skiers in Beehive Basin yesterday, and on Black Mtn. on Friday. Avalanches will involve 1-3" of new snow and probably be too small to bury a person, but even the smallest avalanche can knock you off your feet. Be cautious of steep slopes that have high consequences of being caught in a small slide, like above cliffs, rocks or trees.

It is unlikely to trigger a larger avalanche on deeper weak layers, but not impossible... Before riding steep slopes, dig to double check that a poor or unstable snowpack structure does not exist. Stack the odds in your favor by only exposing one person at a time to avalanche terrain and always carrying proper rescue gear. Today, large avalanches are unlikely and the avalanche danger is LOW.

[GNFAC Avalanche Forecast for Sun April 3, 2022](#)

GPS coordinates and elevation:

Crown: 45.33149, -111.33208, Elevation 9,660'

Injured skier: 45.33156, -111.3315, Elevation 9,480'

Toe of debris: 45.33224, -111.33121, Elevation 9,350'

Pictures and additional info: <https://www.mtavalanche.com/node/26424>

INVESTIGATION

GNFAC forecasters Alex Marienthal and Dave Zinn gathered information about the event from an interview with the non-injured skier after the rescue. Ian Hoyer went with Gallatin County Sheriff SAR during the rescue and gathered photos and information from the site of the avalanche.

Any questions should be directed to:

Alex Marienthal or Dave Zinn

Avalanche Specialists

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The Red X was the location of the upper skier, the Blue X was the initial location of the lower skier and the Green X is where the lower skier slid to. The black outline is the approximate dimensions of the slide.



Crown of the avalanche that caught and injured a skier on Wilson Peak on April 3, 2022.



Debris of the avalanche that caught and injured a skier on Wilson Peak on April 3, 2022.



Site of avalanche and rescue viewed from the helicopter.