

Daisy Pass Road Avalanche Fatality
4 snowmobilers caught, 3 partially buried, 1 fully buried and killed
Gallatin National Forest
February 22, 2012

Synopsis

Seven snowmobilers departed Cooke City, Montana and ascended Miller Creek drainage via Daisy Pass Trail Road. Approximately 2.25 miles up the Road the group stopped to play in a small meadow downhill from the road. At the time of the avalanche, the victim was attempting to turn his snowmobile around but got stuck on the steep cut bank on the uphill side of the road putting he and three other riders in the path of the avalanche. The victim was completely buried; the three others were partially buried. The group started a beacon search, located the victim within two minutes and had him completely dug out in ten minutes. The victim did not have a pulse and did not survive. It is unclear whether the avalanche released naturally or was triggered by the victim. The slide ran approximately 600 vertical feet and left a debris pile 4-6 feet deep. The slope angle near the starting zone was estimated at 45 degrees. US classification of the avalanche is SS-U-D2-R2.

GPS Coordinates

Burial Location: N 45 02'17.07, W 109 56'32.46

Toe of Debris: N 45 02'16.64, W 109 56'33.53

Elevation of burial site: 8937 feet

Photos

<http://mtavalanche.com/images/12/miller-avalanche-3>

<http://mtavalanche.com/images/12/miller-avalanche-2>

<http://mtavalanche.com/images/12/miller-avalanche-1>

<http://mtavalanche.com/images/12/cooke-city-fatality>

Video

http://www.youtube.com/watch?v=0G59UGoRqN0&list=PL9C43F61223259BFE&index=3&feature=plpp_video

Weather

Snowfall and temperature data for this incident are from the Fisher Creek SNOTEL site located one mile to the east of the accident site. Wind data is extrapolated from a weather site 37 miles to the northwest at 9,900 feet in Hyalite Drainage in the northern Gallatin Range.

During the 48 hours prior to the avalanche incident, Fisher Creek SNOTEL site recorded 2.5 inches of SWE (snow water equivalent). Winds averaged 40-50 mph out of the WNW with gusts near 100 mph at 9,900 feet. Temperatures rose during the two days prior from 13°F to 29°F. At the time of the accident temperatures were 29°F with west-northwest winds gusting 90-100 mph. Snowfall rates measured S3 (about 1" hour) and blizzard conditions resulted in poor visibility.

Avalanche

Seven riders were visiting Cooke City from Saskatchewan, Canada, all of them familiar with the area. At approximately 12:00 p.m. on February 22nd, the victim Norm and riding companions Clint, Jason, Clayton, Brent, Darren and David were ascending the Daisy Pass Trial Road. Approximately 2.25 miles up the road the group stopped to play in a small meadow located below the road. Clint and Brent descended into the meadow while Jason, David and Norm stayed on the road. Darren and Clayton were 2-300 meters down road from Norm.

Before the avalanche occurred, Norm attempted to turn his snowmobile around on the road but got stuck in the steep cut bank on the uphill side. Norm's sled was stuck at a 45 degree angle with the skis pointing uphill and the track on the road. Jason was approximately twenty feet up the road from Norm and David was ten to fifteen feet downhill from Norm. Brent had gotten his sled stuck in the meadow below the road and Clint was assisting him.

Unexpectedly and without warning the avalanche impacted the three riders on the road, completely burying Norm and partially burying Jason and David. Jason was able to free himself and David's arm was sticking out of the snow. Brent was only slightly buried. Jason, Brent and Clint uncovered David who was unharmed. Darren and Clayton arrived on scene moments later. The group realized Norm was missing and turned their avalanche transceivers to receive. Norm's signal was quickly picked up and the group had Norm dug out within ten minutes.

Norm did not have a pulse and CPR was immediately initiated. Brent left the scene to alert Cooke City Search and Rescue. Brent, along with members of Cooke City SAR, arrived back on scene approximately 15 minutes after they were alerted. After thirty minutes of CPR the AED advised a shock. A shock was applied without results. More CPR and a second shock was applied without results. CPR was performed on the victim for approximately 50 minutes before being called off. The victim was then transported to the Cooke City Fire Hall.

Every member of the party was experienced in mountain snowmobiling and had ridden the area numerous times. Each rider carried rescue gear and knew how to use it. The victim was wearing an ABS air bag but was unable to deploy it. One rider had taken avalanche training from a snowmobile club. They had been informed by the hotel owner the morning of the accident that the avalanche danger was HIGH. They did not see the daily advisory issued by the GNFAAC.

The area where the avalanche occurred was not an obvious avalanche path. The riders knew the avalanche danger was HIGH and were making decisions to stay away from avalanche terrain. It is unclear whether the avalanche was triggered by the victim at the bottom of the slope or if it released naturally. Either way, this was an unusual event with a tragic result.

Information for this report was acquired through firsthand interviews with Morgan Dale, the Law Enforcement Officer of the Gardiner Ranger District, Clint Shkuratoff, a member of the victim's group as well as Ben Zevora and Kay Wittle from Cooke City Search and Rescue.

Search and Rescue

At approximately 12:10 p.m. Brent Tremblay left the scene of the accident to alert Cooke City Search and Rescue. Upon receiving the call, members of Cooke City SAR responded immediately and arrived on scene at 12:30 p.m. They assisted in CPR and applied an AED to the patient. CPR was conducted for a total of 50 minutes and two shocks were applied without results. CPR was called off at 1:15 p.m. and the scene was clear by 1:30 p.m.

Snowpack

On the day of the accident the avalanche danger was rated HIGH on any wind-loaded slope and any slope steeper than 35 degrees. Storm SWE was measured at 2.5 inches and strong, gusty winds created unstable conditions. Prior to the storm, natural avalanche activity was reported on Sunday (Feb 19th) and Mark Staples was able to trigger an avalanche on Saturday (Feb 18th). Mark was in Cooke City on the 17th and 18th of February investigating the snowpack as part of his normal duties. He found a layer of near surface facets buried one foot deep on all aspects. On southerly aspects the facets were on a melt freeze crust and propagated in his Extended Column Tests. Snow depths ranged from 130 cm to 225 cm. He noted there was a lot of low density snow available for wind transport.

The starting zone was heavily cross-loaded with northwest winds. Given the sensitive and unstable nature of the snowpack over the weekend, we believe the avalanche released on the layer of near-surface facets, likely buried under 3-4 feet of windblown snow. Though we could not determine what triggered this avalanche, our opinion is that it was probably a natural slide, making this fatality a rare event.

On February 23rd, the accident site was investigated by GNFA's avalanche specialists Eric Knoff and Doug Chabot along with John Barkhausen and Cooke City SAR member Ben Zavora. The avalanche path had reloaded and the crown was not visible. The debris was covered with new snow and difficult to locate. The avalanche danger was HIGH during the investigation, making it unsafe to ascend the path to investigate the snowpack, crown or flanks.

Avalanche Advisory: <http://mtavalanche.com/advisory/12/02/22-0>

Direct any questions regarding this report to eknoff@fs.fed.us or dchabot@fs.fed.us or call 406-587-6984

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