

City of Missoula/Missoula County Urban Avalanche Awareness FAQ (Updated 2/9/23)

The City of Missoula and the Missoula County Office of Emergency Management (OEM) have created an Urban Avalanche Response Team comprised of personnel from the OEM, Missoula Fire Department, Missoula Police Department, Missoula Parks and Recreation, the West Central Montana Avalanche Foundation and others to monitor avalanche conditions on Mount Jumbo and prepare for an emergency response should an avalanche occur.

The Team has informally designated February as “Urban Avalanche Awareness Month” in an effort to educate residents about the risks of urban avalanches and how to protect themselves and their property. This document will be updated periodically as new information becomes available.

1. Why should Missoulians be concerned about urban avalanches?

In 2014, a human-triggered avalanche on the west face of Mount Jumbo reached the Lower Rattlesnake neighborhood, resulting in the death of one resident, injuries to two other residents, the destruction of one home and significant damage to other neighborhood structures. Before that event, no recorded avalanches had reached the valley floor since Missoula was settled in 1860.

The combination of record snowfall amounts in late February and a rare blizzard with high east winds created unusual avalanche conditions on Jumbo’s west face above the Lower Rattlesnake in the 2014 event. With its steep and open terrain features, avalanche experts warn that Mount Jumbo should be considered avalanche terrain when similar conditions occur.

In addition, avalanches in the foothills terrain surrounding Missoula are unusual but not unheard of. In 1993, a 12-year-old boy died in an avalanche in a terrain trap on Mount Jumbo’s east side. During the big snow years of 1997, 2007 and 2010, smaller slab avalanches were observed on the steeper slopes in the North Hills area near Grant Creek and on the steep terrain above I-90. The elk herd on Jumbo has also triggered smaller slab avalanches on the upper reaches of Jumbo in the past.

The [Missoula County Office of Emergency Management](#), City of Missoula and Missoula County are actively working to identify and monitor potential avalanche zones to protect public safety.

2. Isn’t Mount Jumbo closed in the winter?

[Mount Jumbo’s South Zone](#) (reaching from the Lower Rattlesnake to Jumbo’s Saddle Road off Lincoln Hills Drive) is closed to protect wintering elk from December 15 to March 15 or later each year. [The North Zone](#) (all areas north of the Saddle Road) is closed until May 1 or later.

Three trails remain open all year, including the lower “L” trail above the Lower Rattlesnake neighborhood, the US West Trail, which traverses the south face of the mountain, and the Tamarack Trail in the Upper Rattlesnake. These trails may be closed at any time to protect public safety or wildlife.

In 2014, a snowboarder ignored posted closures to venture off-trail, accidentally triggering the fatal avalanche.

3. How does the City enforce the closure?

When an observer reports trespassing on Mount Jumbo to 911, the Missoula Police Department responds to the trailhead and attempts to locate the trespassers through vehicle license plates. Trespassers can be cited.

4. What causes an avalanche?

An avalanche is a rapid flow of snow down a slope, such as a hill or mountain. This only occurs when two factors converge:

1. A large enough amount of accumulated snow
2. Suitable snow conditions to support a slide. Slides can be triggered by humans or wildlife or can be natural (no discrete trigger).

5. What features of Mount Jumbo make it prone to developing avalanche conditions?

Easterly winds in the winter can lead to increased snow accumulation near the summit. Mount Jumbo is also steep on the east and west faces, leading to the potential for an avalanche to potentially reach the valley floor.

6. What are the City and County doing to monitor avalanche conditions on Mount Jumbo?

City and County staff track winter weather patterns to determine the potential for suitable avalanche conditions.

Several times per winter, staff manually assess snow conditions on the mountain by performing a standard avalanche assessment. Staff then discuss findings with [West Central Montana Avalanche Foundation](#) forecasters to determine if observations match those found elsewhere in our region.

7. What should residents do to protect themselves from potential avalanches?

- Sign up for Smart911 for updates (see question 8).
- Report observed winter closure trespassers on Mount Jumbo by calling 911 as individuals trespassing can trigger a potential avalanche on the mountain.
- Obey posted closures.

8. How can I get notifications if avalanche conditions develop?

An emergency alert will be issued through Smart911, Missoula County's emergency alert service, when conditions warrant the issuance of an "Urban Avalanche Warning". This warning is issued in consultation with staff from Missoula County's Office of Emergency Management when unstable snowpack conditions on the local mountains threaten the safety of residents in neighborhoods below. [Smart911](#) is an important service designed to enhance your personal and family emergency preparedness. Missoula County provides Smart911 to all residents at no cost.

[Signing up for Smart911](#) allows you to:

- Opt in to receive emergency alerts on your cell phone via text, email and/or phone call.

- Create a Safety Profile that contains your family's critical care information. Your Safety Profile will pop up on the 9-1-1 dispatchers' screen when you make an emergency call and helps emergency responders help you when you need it most.
- Opt in to share your information with local emergency management officials, so that we can plan ahead for people who may need extra help when a disaster strikes.

9. What steps will emergency managers take if avalanche conditions should develop?

When dangerous avalanche conditions are present on Mount Jumbo, Missoula Emergency Management will work with:

- City Parks and Recreation staff to communicate the risk by placing visible signage at all trailheads to notify the public that ALL trails are closed due to avalanche danger.
- City Fire and Police to ensure agencies are aware of the heightened threat and subsequent trail closures.

Additionally, Missoula Emergency Management will coordinate public information and sharing via:

- Local media outlets to better communicate and inform the public of the increased threat.
- Sending out targeted Emergency Alerts to neighborhoods that may be impacted if an avalanche were to occur.

10. Have the City and County developed an avalanche response plan?

Yes. The Urban Avalanche Response Team worked with representatives from the City of Juneau, Alaska to develop the Missoula plan. The Missoula Fire Department created an Incident Action plan for response to an avalanche largely based on lessons learned in 2014 and best practices.

11. Have local emergency responders undergone avalanche response training?

Following the 2014 event, Missoula Emergency Management brought urban avalanche experts to Missoula to conduct training and discuss response planning best practices.

12. Where can I get more information?

[Missoula County Office of Emergency Management](#)

[Jeff Gicklhorn, Parks and Recreation Conservation Lands Program Manager](#)