

RMBL Winter Travel Safety Plan

2021 Update

Purpose

The purpose of this plan is to identify the hazards associated with winter travel and strategically manage the associated risks where RMBL activity is conducted. A range of winter travel hazards are covered in this plan, but it is important to recognize that avalanche danger is the primary hazard and is given special emphasis in this document. There is always some avalanche hazard whenever snowcover is present but there are times of elevated hazard that require greater focus and more rigorous risk management planning for travel. It is understood that any effective rescue of a person(s) buried by an avalanche must take place within 15-30 minutes of burial and must be accomplished by persons within the travel party. An organized rescue from an outside source is not a reliable option. Much of the emphasis in this plan is on travel along Gothic Road but it also applies to all RMBL-related travel through areas of potential hazardous terrain or conditions. The intent of this plan is to minimize exposure to winter travel hazards regardless of where the travel occurs.

Applicability

This plan applies to:

- RMBL Staff in the course of fulfilling work responsibilities, including staff that are working for a Principal Investigator (PI) under a RMBL-approved research plan.
- Participants in a RMBL-sponsored group activity

This plan does NOT apply to:

- Non-staff scientists (they are covered by their own Winter Safety Plans, submitted as part of their research application)

- The general public renting a cabin (“ski hut”) on a short-term basis. It is customary in Colorado that travelers to backcountry huts assume responsibility for their own safety when travelling to, and recreating from, the ski hut. Such travelers are required to sign standard RMBL liability waivers. In addition, RMBL actively manages hut access and users are not allowed to ski into or out of Gothic during high or extreme avalanche conditions. Under these conditions, or an elevated avalanche danger under which the users are not comfortable traveling the Gothic Road, users are provided a full refund or re-booked in the hut at no extra cost. If the Danger Rating increases while they are in Gothic, they are encouraged to shelter in place at no extra charge and food (cached in Autumn) is available for their use.

General Winter Travel Considerations

Changing weather conditions can present a range of winter travel risks. Cold temperatures, wind, and blowing snow create hazardous conditions that could result in frostbite of exposed skin and the potential of getting lost in whiteout conditions. It is important to be prepared by checking weather forecasts, wearing appropriate clothing, and giving yourself plenty of time to make the journey during daylight hours. In hazardous weather conditions (e.g. poor visibility or extreme cold), travelers will follow the RMBL travel protocol for solo travel under Considerable avalanche danger outlined in Appendix 2 (e.g. consult supervisor, sign in and out, carry emergency contact device). If you are already out and find yourself in hazardous weather conditions, either turnaround and follow your tracks back to a safe location (if possible) or wait until conditions improve and/or proceed cautiously.

Breaking trail after a big storm, whether on skis or snow shoes, increases travel time and exposure to risks related to weather and avalanche hazards. If traveling in a group, take turns breaking trail to save energy and decrease travel time. It is also important to be aware of different technical and physical abilities within the group and adjust roles and pace accordingly to avoid injury and over exhaustion.

Avalanche Danger and RMBL Travel Protocols

The Gothic Road section (Appendix 1) in this plan starts at the gated trailhead parking area (mile 0) and ends north of the East River bridge, south of Gothic - a distance of approximately 3.3 miles or 5.3 km. It is the access corridor to and from Gothic and has varying degrees of avalanche hazard across this 3-mile stretch. The map in Appendix 1 highlights the areas along the road of increased avalanche frequency with red, orange, and green stretches representing higher to lower avalanche frequency respectively. This map is an important guide when traveling the road, particularly under conditions of elevated avalanche danger.

Avalanche season typically starts at the beginning of December and ends in May. Before any travel along Gothic Road or other areas where RMBL activity occurs during avalanche season, it is important to check the avalanche danger scale. The danger scale was established by the American Avalanche Association (AAA) and consists of 5 categories. It is utilized in forecasts by avalanche centers within the United States, including the Colorado Avalanche Information Center (CAIC) and the Crested Butte Avalanche Center (CBAC). Current forecasts for the Crested Butte area are available through the CBAC ([Crested Butte Avalanche Center \(cbavalanchecenter.org\)](http://CrestedButteAvalancheCenter.org)). The CBAC has two forecast zones and Gothic Road is in the Southeast Zone of the CBAC forecast area. Appendix 2 is a summary of the avalanche danger levels and the RMBL travel protocols that apply to RMBL staff and RMBL-sponsored activity for travel on Gothic Road and other areas where RMBL activity occurs.

Additional Travel Protocols for RMBL-sponsored Groups

Occasionally RMBL will host groups on the Gothic townsite for research and/or educational purposes. Given larger group sizes and varying degrees of winter travel experience it is recognized that additional safeguards and procedures are required. These include:

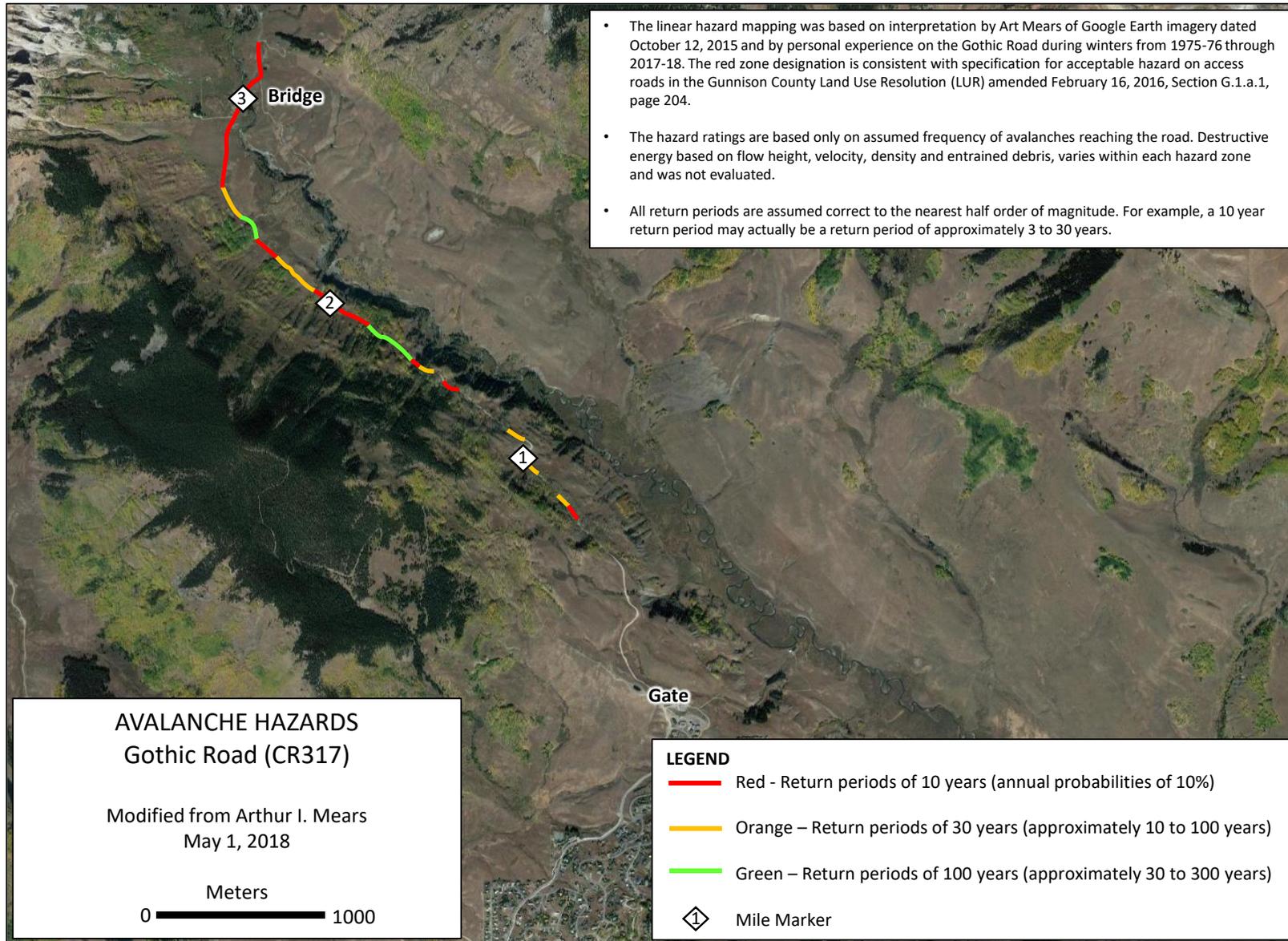
- A RMBL employee will act as Team Leader to lead groups to and from the townsite on Gothic Road.
- All people travelling on the road must wear a modern 3 antenna beacon, carry an avalanche probe and shovel. Beacon checks should be conducted before departure to ensure proper function in both send and search modes.
- Team Leader will contact a RMBL representative at the beginning and end of group travel along Gothic Road to ensure accountability of travel plans.
- Team Leaders will be provided with either a Satellite phone, InReach or similar device to ensure connectivity in the event of unforeseen or emergency situations.
- The Team Leader will hold the following training/certifications:
 - AIARE PRO Level 1
 - IS-700 NIMS, Introduction
 - ICS-100 Introduction to the Incident Command System

- Wilderness First Responder
- It is acceptable to fulfill the avalanche and medical certification using a professional guide. In this case the RMBL employee will act as the Team Leader. Together, the Team Leader and guide(s) are fully empowered to cancel the trip if someone is not prepared, someone is physically unfit or if avalanche risk is unacceptable.
- For travel other than on Gothic Road, trip plans will be designed and approved through RMBL to avoid areas of avalanche danger. For travel on USFS land, the plan will need to meet the requirements outlined in RMBL's winter use permit. If travel through hazardous avalanche terrain is necessary, the group will be accompanied by a RMBL Team Leader at all times. The Team Leader will create and follow a trip plan appropriate for the group, considering current weather, the weather forecast, and the avalanche hazard. The team leader will minimize exposure while travelling near, through, or under avalanche terrain. The Team Leader is fully empowered to modify or cancel trip plans as conditions warrant.
- Group travel to and from Gothic is not permitted during high or extreme avalanche danger.
- During Considerable Avalanche Hazard Team Leaders will need to assess avalanche hazards for individual avalanche paths and create a strategic travel plan through each path looking to minimize exposure. Techniques to minimize exposure should include travelling one at a time or spreading out.
- Recreational skiing, snowboarding or snowshoeing by participants in a RMBL-sponsored group is NOT ALLOWED.

Limitations

This plan recognizes that avalanche danger cannot be precisely forecast even by experienced avalanche technicians and avalanches may reach the road at unexpected times. Furthermore, the plan was developed assuming current levels of backcountry use of the avalanche terrain on the northeast-facing slopes above the Gothic Road. With increasing use along Gothic, it is important that this plan be reviewed and revised as and when use patterns change. To better inform future revisions of the plan, travelers are asked to report any hazardous weather or avalanche incidents and near miss situations to their supervisor.

APPENDIX 1. Avalanche hazard assessment along Gothic Road between Mt. Crested Butte and Gothic.



APPENDIX 2. Avalanche danger ratings and RMBL travel protocol

Danger Level	Likelihood, Size, Distribution and Travel Advice	RMBL Travel Protocol
<p style="text-align: center; color: white; font-weight: bold; font-size: 1.2em;">Low</p>	<p>Natural and human-triggered avalanches unlikely. Small avalanches in isolated areas or extreme terrain. Generally safe avalanche conditions. Watch for unstable snow on isolated terrain features.</p>	<ul style="list-style-type: none"> • No restrictions to the use of the Gothic Road apply. Back country use in the area continues to increase in the slopes above Gothic Road and human-triggered avalanches will be possible on steeper terrain. Though it is unlikely that avalanches will reach the road it is important to be aware of your surroundings and backcountry users above the road.
<p style="text-align: center; color: black; font-weight: bold; font-size: 1.2em;">Moderate</p>	<p>Natural avalanches unlikely and human-triggered avalanches possible. Small avalanches in specific areas or large avalanches in isolated areas. Heightened avalanche conditions on specific terrain features. Evaluate snow and terrain carefully and identify features of concern.</p>	<ul style="list-style-type: none"> • Solo travelers will notify their supervisor or another RMBL staff member via phone, text or email at the start and end of their trip to make sure there is accountability of travel plans. • For RMBL-sponsored groups, see additional protocols in document above.

Danger Level	Likelihood, Size, Distribution and Travel Advice	RMBL Travel Protocol
<p style="text-align: center; font-size: 24pt; font-weight: bold;">Considerable</p>	<p>Natural avalanches possible and human-triggered avalanches likely. Small avalanches in many areas or large avalanches in specific areas or very large avalanches in isolated areas. Dangerous avalanche conditions. Careful snowpack evaluation, cautious route-finding and conservative decision-making essential.</p>	<ul style="list-style-type: none"> • Considerable danger requires extra caution and individuals or groups are under no obligation to travel if they are uncomfortable with the risks or requirements. The decision to travel on Gothic Road and other areas of avalanche hazard should be informed by your understanding of local conditions and careful consideration of the avalanche and weather reports. • All travelers will assess avalanche hazards and be familiar with avalanche paths that can reach the road (refer to map in Appendix 1). • All travelers must carry standard avalanche search and rescue equipment (avalanche rescue transceiver, probes, shovel). • Solo travel is permitted with the following risk mitigations: <ul style="list-style-type: none"> • Travelers will consult with their supervisor prior to travel to discuss travel plans and receive approval. • Travelers will notify their supervisor via phone, text or email at the start and end of their trip to ensure accountability of travel plans. • Traveler will carry a Satellite phone, InReach or similar device to ensure connectivity in the event of unforeseen or emergency situations. • When traveling in groups of two or more, travelers will create a strategic plan through each avalanche path and use techniques to minimize exposure which include travelling one at a time or spreading out.
<p style="text-align: center; font-size: 24pt; font-weight: bold;">High</p>	<p>Natural avalanches likely and human-triggered avalanches very likely. Large avalanches in many areas or very large avalanches in specific areas. Very dangerous avalanche conditions. Travel in avalanche terrain not recommended</p>	<ul style="list-style-type: none"> • During high and extreme danger there will be no use of Gothic Road and no Backcountry Travel for RMBL scientists, research assistants, staff, guests, and others using Laboratory facilities. There will be no exceptions.
<p style="text-align: center; font-size: 24pt; font-weight: bold;">Extreme</p>	<p>Natural and human-triggered avalanches certain. Large to very large avalanches in many areas. Avoid all avalanche terrain.</p>	