



Travel Guidelines for Avalanche Terrain

Any student travel into avalanche terrain is considered a high risk activity at UVM, must be registered with Risk Management, and be done with significant professional training. Leaders must be prepared to assess and avoid all avalanche hazards. UVM students, staff, or faculty triggering and/or being caught in an avalanche is considered unacceptable. To help the leader assess terrain, we shall use the Avalanche Terrain Exposure Scale - ATES (detailed below), developed by Parcs Canada and Avalanche Canada, sorting terrain into three levels – Simple, Challenging and Complex.

For all remote mountain travel, including non-avalanche terrain, standard risk management practices must be followed:

- 1) Certification in wilderness first aid (WFA, AWFA, WFR, OEC, WEMT)
- 2) travel with a medical kit
- 3) travel with a communication device
- 4) provide complete trip details to a reliable emergency contact that remains available to support in the case of emergency.
- 5) Consider emergency response communications and protocols

Non-Avalanche Terrain requirements: Travel that occurs on uniform, typically forested mountain slopes below 25 degrees that does not have a known history of avalanche activity is permitted without avalanche training. Traveling in non-avalanche terrain travelers should refer instead to winter and mountain protocols.

Simple Avalanche Terrain requirements: Travel that occurs in identified *Simple Terrain*, without encountering *Challenging or Complex Terrain*, is permitted with AAA-approved Recreational Level 1 avalanche training. This level of training equips participants with knowledge to recognize and avoid avalanche hazards. All members will carry rescue gear: beacon, shovel, probe and be instructed in their use. Travel in any *Simple Terrain* will be preceded by beacon function check by all members. Leaders will carry slope inclinometer and continually assess the terrain, snowpack, and weather for changes.

Challenging Avalanche Terrain requirements: Travel that occurs in *Challenging Terrain* must be approved by Risk Management, requiring a minimum of AAA-approved Recreational Level 2 avalanche certification. All members will carry rescue gear: beacon, shovel, probe and be instructed in their use. Travel in any *Challenging Terrain* will be preceded by beacon function check by all members. Leaders will carry slope inclinometer and test pit tools to continually assess the terrain, snowpack, and weather.

Complex Avalanche Terrain requirements: Travel that occurs in *Complex Terrain* is generally discouraged at UVM and must be approved by Risk Management and hold significant importance to the educational mission of UVM. Such travel will require a minimum of AAA-approved Professional Level 1 avalanche certification. All members will carry rescue gear: beacon, shovel, probe and be instructed in their use. Travel in any

Complex Avalanche Terrain will be preceded by beacon function check by all members. Leaders will carry slope inclinometer and test pit tools to continually assess the terrain, snowpack, and weather.

Participant to Leader Ratio 4:1, with options for 6:1 in certain instructional settings (ex: avalanche education classes) with approval from Outdoor Programs or Risk Management.

Additional winter risk management practices should be considered for all groups:

1. Participants will be instructed on strategies for staying warm
2. Fuel and food menus will be increased for additional energy
3. Route planning should be conservative, due to shorter daylength
4. All participants must have appropriate equipment for travel through snow (skis or snowshoes) or ice (crampons or microspikes).
5. Leaders will be skilled and knowledgeable with snow and/or ice traveling equipment and be prepared to assist and instruct participants.
6. Driving hazards increase in winter, and leaders will use conservative driving.
7. Winter foot care is a high priority. Overnight campers will remove wet socks for sleeping and leaders will monitor for cold injuries with visual foot checks.
8. Crossing Frozen lakes and streams is generally not supported by UVM, but is sometimes unavoidable or logistically makes sense to carefully do. On these occasions, thorough inspection and management is required. Crossings should not occur over moving water (frozen rivers), or in warming or unstable conditions.

Terrain Selections Examples:

Non-Avalanche Terrain:

- The Notch Road, (not the steep slopes above) Smuggler's Notch, VT
- "Inbounds" ski touring at patrolled Vermont ski areas

Simple Terrain:

- Bolton-Trapp Trail, VT
- Dewey Woods, Mount Mansfield, VT
- Cotton Brook, Bolton Backcountry, VT
- Brandon Gap RASTA Trails, VT
- Big Jay Peak, VT (with exception of "The Cut", which is illegal and avalanche prone)

Challenging Terrain:

- Cass's Gully, Hidden Gully, Easy Gully and similar chutes in Smugglers Notch, VT
- Angel Slide, Adirondacks
- Hog's Back, Chic Chocs, Quebec

Complex Terrain:

- Tuckerman's Ravine, King's Ravine, Gulf of Slides and others, White Mountains, NH
- Mont Albert chutes, Chic Chocs, Quebec
- Mount Katahdin, ME



Avalanche Terrain Classification

The Avalanche Terrain Exposure Scale (ATES) is a new development from Parks Canada, which offers an avalanche classification system based on the landscape – not the snow. The system presents two models: technical, and public communication.

The technical model has been designed for users trained and skilled in the subtle nuances of avalanche terrain. The public communication model is designed for communicating technical concepts to the public, who is largely unable to comprehend the technical details. Both models represent the same thing – spoken in two languages.

The ATES can be applied at whatever scale is appropriate. Parks Canada has chosen to link with popular guidebooks, and apply ATES ratings to backcountry trips, which are well described in these books. This classification could however, be applied to any given piece of terrain – it is all a question of scale.

This is a brand new concept, and as such it is expected that this scale will evolve over time, as experience with using avalanche terrain ratings grows. This model has a time stamp (v.1-04), and will likely be revisited in the summer of 2005.

Avalanche Terrain Exposure Scale

Public Communication Model (v.1- 04)

Description	Class	Terrain Criteria
Simple	1	Exposure to low angle or primarily forested terrain. Some forest openings may involve the runout zones of infrequent avalanches. Many options to reduce or eliminate exposure. No glacier travel.
Challenging	2	Exposure to well defined avalanche paths, starting zones or terrain traps; options exist to reduce or eliminate exposure with careful route-finding. Glacier travel is straightforward but crevasse hazards may exist.
Complex	3	Exposure to multiple overlapping avalanche paths or large expanses of steep, open terrain; multiple avalanche starting zones and terrain traps below; minimal options to reduce exposure. Complicated glacier travel with extensive crevasse bands or icefalls.