Avalanche Terrain Exposure Scale

**Simple — Class 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.

- Chester Lake Trail
- Fox Creek
- Galatea Creek to Lillian Lake
- Hidden Lake
- Marushka Lake
- Ribbon Creek to Ribbon Falls
- Rummel Lake
- Skogan Pass
- Upper Lake Circuit
- Watridge Lake
- Rawson Trail to Lake

**Challenging — Class 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.

- Aster Lake
- Birdwood Pass
- Black Prince Telemark Slopes
- Buller Pass
- Burstall Pass
- Burstall Pass Commonwealth Circuit
- Commonwealth Lake Circuit
- Commonwealth Ridge
- Dog Leg Slide Path
- French Creek to Toe of Glacier
- Gypsum Quarry
- Haig Glacier
- Headwall Creek to First Lake
- Heros Nob
- Mount Allan
- Mount Sparrowhawk
- Murray Creek
- North Kananaskis Pass
- Pocaterra Ridge
- Ptarmigan Cirque
- Rummel Pass
- Smuts Fist Col
- Smuts Pass
- Snow Peak
- Superslope
- Tent Ridge
- Three Isle Lake
- Tryst Lake

**Complex — Class 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.

- Beatty Glacier
- French Glacier
- Marushka Valley to Fist / Smuts Col
- Mount James Walker
- Mount Joffre
- Mount Nestor
- North Over Glacier to Aster Lake
- Old Goat Glacier
- Rae Glacier
- Robertson Glacier
- Spray Range Traverse
When should I use this system?
These ratings are intended to supplement pre-trip planning material. This means reading guidebooks, studying maps and photos, talking to friends, checking weather and avalanche conditions, and referring to the ATES ratings while planning the trip. All these resources together will give you a better sense of the route you are choosing.

How do I use the scale?
The list of rated trips represents the most common destinations in Kananaskis Country. Don’t use this scale alone — you’ll need additional material to learn about the trip you are proposing.

Do I still need to pay attention to the daily avalanche bulletins?
Absolutely — terrain is only part of the picture. When the avalanche conditions are rated “poor”, you should select very conservative terrain. Alternatively, when the avalanche conditions are rated “good”, this might be the time to consider that next level of terrain you’ve been contemplating. The two must be used together for understanding the big picture of how to manage your risk in the backcountry. Daily bulletins are available at Visitor Information Centres, and on the Web: www.cd.gov.ab.ca/parks/kananaskis or www.avalanche.ca

How much experience do I need for these trips?
Simple — Class 1 terrain requires common sense, proper equipment, first aid skills, and the discipline to respect avalanche warnings. Simple terrain is usually low avalanche risk, ideal for novices gaining backcountry experience. These trips may not be entirely free from avalanche hazards, and on days when the Backcountry Avalanche Bulletin is rated “high or extreme”, you may want to re-think any backcountry travel that has exposure to avalanches — stick to groomed cross-country trails.

Challenging — Class 2 terrain requires skills to recognize and avoid avalanche prone terrain — big slopes exist on these trips. You must also know how to understand the Backcountry Avalanche Bulletin, perform avalanche self rescue, basic first aid, and be confident in your routefinding skills. You should take a Recreational Avalanche Course (RAC) prior to travelling in this type of terrain. If you are unsure of your own, or your group’s ability to navigate through avalanche terrain then consider hiring a professional, ACMG certified guide.

Complex — Class 3 terrain demands a strong group with years of critical decision making experience in avalanche terrain. There can be no safe options on these trips, forcing exposure to big slopes. As a minimum, you or someone in your group must have taken an Advanced Recreational Avalanche Course (ARAC) and have several years of backcountry experience. Be prepared! Check the Backcountry Avalanche Bulletin regularly, and ensure everyone in your group is up for the task and aware of the risk. This is serious country — not a place to consider unless you’re confident in the skills of your group. If you’re uncertain then consider hiring a professional, ACMG certified guide.

For Further Information

<table>
<thead>
<tr>
<th>Location</th>
<th>Contact Details</th>
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</thead>
<tbody>
<tr>
<td>Peter Lougheed Park Visitor Centre</td>
<td>(403) 591-6322</td>
</tr>
<tr>
<td>Barrier Information Visitor Centre</td>
<td>(403) 673-3985</td>
</tr>
<tr>
<td>Canadian Avalanche Association:</td>
<td><a href="http://www.avalanche.ca">www.avalanche.ca</a></td>
</tr>
<tr>
<td>Emergency 24/7:</td>
<td>(403) 591-7767</td>
</tr>
</tbody>
</table>

To report on conditions and avalanche observations, or incidents you may observe in Kananaskis Country please contact: Avalanche.Safety@gov.ab.ca


Traditional models for rating avalanche danger are based on the stability of snow, which changes regularly with the weather — from day to day, or even hour to hour. Terrain however, doesn’t change much. The angle and shape of the ground, or the number of established avalanche paths won’t vary from day to day. By using the Avalanche Terrain Exposure Scale (ATES), you can begin to measure your skills, experience and risk tolerance against the landscapes through which you choose to travel.

Important Notice

Snowpack structure and stability information is determined from field analysis specific to snow study plot sites. Snowpack structure and stability will vary as you travel throughout mountainous terrain. It is, therefore, the responsibility of the backcountry traveller to be self-sufficient in being able to perform self-rescue should you, the traveller, be involved in an accident. Also, backcountry travellers are responsible for obtaining their own information concerning current weather conditions, snow, winds, snowfall, etc. and are responsible for educating themselves to the best possible awareness level.
**About this scale:**
Any given piece of mountain terrain may have elements that will fit into multiple classes. Applying a terrain exposure rating involves considering all of the variables described above, with some default priorities.

Terrain that qualifies under an **italicized bold** descriptor automatically defaults into that or a higher terrain class. Non-italicized descriptors carry less weight and will not trigger a default, but must be considered in combination with the other factors.

*Adapted from Parks Canada’s Document: “Technical Model (V. 1-04)”*

<table>
<thead>
<tr>
<th>Simple — Class 1</th>
<th>Challenging — Class 2</th>
<th>Complex — Class 3</th>
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<tbody>
<tr>
<td><strong>Slope angle</strong></td>
<td>Angles generally &lt; 30°</td>
<td>Mostly low angle, isolated slopes &gt;35°</td>
</tr>
<tr>
<td></td>
<td>Uniform</td>
<td>Some convexities</td>
</tr>
<tr>
<td><strong>Slope shape</strong></td>
<td>Primarily treed with some forest openings</td>
<td>Mixed trees and open terrain</td>
</tr>
<tr>
<td><strong>Forest density</strong></td>
<td>Minimal, some creek slopes or cutbanks</td>
<td>Some depressions, gullies and/or overhead avalanche terrain</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1:3 for &lt; size 2</td>
</tr>
<tr>
<td><strong>Terrain traps</strong></td>
<td></td>
<td>1:3 for ≥ size 2</td>
</tr>
<tr>
<td><strong>Avalanche frequency</strong></td>
<td>1:30 ≥ size 2</td>
<td>Some open terrain, isolated avalanche paths leading to valley bottom</td>
</tr>
<tr>
<td>(events:years)</td>
<td></td>
<td>Abrupt transitions or depressions with deep deposits</td>
</tr>
<tr>
<td><strong>Start zone density</strong></td>
<td>Limited open terrain</td>
<td>Single path or paths with separation</td>
</tr>
<tr>
<td></td>
<td>Solitary, well defined areas, smooth transitions, spread deposits</td>
<td>A selection of choices of varying exposure, options to avoid avalanche paths</td>
</tr>
<tr>
<td><strong>Runout zone characteristics</strong></td>
<td>Runout zones only</td>
<td>Isolated exposure to start zones and tracks</td>
</tr>
<tr>
<td><strong>Interaction with avalanche paths</strong></td>
<td>Numerous, terrain allows multiple choices</td>
<td>Generally smooth with isolated bands of crevasses</td>
</tr>
<tr>
<td><strong>Route options</strong></td>
<td>None, or limited exposure crossing runouts only</td>
<td></td>
</tr>
<tr>
<td><strong>Exposure time</strong></td>
<td>None</td>
<td></td>
</tr>
<tr>
<td><strong>Glaciation</strong></td>
<td>None</td>
<td></td>
</tr>
<tr>
<td><strong>Variable with large &gt;35°</strong></td>
<td>Convoluted</td>
<td>Large expanses of open terrain. Multiple avalanche paths leading to valley bottom</td>
</tr>
<tr>
<td><strong>Many depressions, gullies, cliffs, hidden slopes above gullies cornices</strong></td>
<td>Large expanses of open terrain. Multiple avalanche paths leading to valley bottom</td>
<td></td>
</tr>
<tr>
<td><strong>1:1 &lt; size 3</strong></td>
<td>1:1 ≥ size 3</td>
<td>Multiple converging runout zones, confine deposition area, steep tracks overhead</td>
</tr>
<tr>
<td><strong>Numerous and overlapping paths</strong></td>
<td>Limited chances to reduce exposure, avoidance not possible</td>
<td>Frequent exposure to start zones and tracks</td>
</tr>
<tr>
<td><strong>Broken or steep sections of crevasse icefalls or serac exposure</strong></td>
<td>Isolated exposure to start zones and tracks</td>
<td>Generally smooth with isolated bands of crevasses</td>
</tr>
</tbody>
</table>
Avalanche Terrain Exposure Scale

**Simple — Class 1**
Routes surrounded by low angle or primarily forested terrain, possible brief exposure time to infrequent avalanches.

**Eastern Region**
- Pitches of Eastwick
- PCP
- Blue Russian
- Marilyn Cross
- The Missing Piece
- Brewers Droop
- Betty Davis’ Sneezes
- A Wizard Prang

**Western Region**
- Amadeus
- Troll Falls
- Chantilly Falls
- Snow Line
- 2 Low for Zero
- Wedge Smear
- Glossolalia
- Solid Cold
- Dodge Ram
- The Blue Door
- Whitemans Falls
- Red Man Soars
- King Creek
- Trick or Treat
- Adraines Thread

**Ghost Region**
- Black Rock Falls
- Bloody Mary
- Sunset Falls
- The Ribbon
- The Good, the Bad & the Ugly
- Silver Tongue Devil
- Dead Bird
- Yellow Bird
- Seaull
- Albatros
- The Eagle
- The Raven
- Cuckoo Falls
- Snipe Falls
- The Unforgiven
- Phantom Falls
- Dirty Harry
- This House of Sky
- Burning in Water,
- Drowning in Flame
- The Silver Valley of Sun
- French Technique
- Going to the Sun HWY
- Beowulf
- Devils Punchbowl
- Wee Wolf
- Fur Face
- Sitkas Slides
- Keso Curtain
- Tuk Taku
- The Lost Moose
- Nonatak
- Husky Howl
- Lupine Lunge
- Fang and Fist
- Chilkoot Passage
- Taiga Trot
- Werewolf Waltz
- Idle Incisor
- Venus
- Caroline Falls
- Marion Falls
- Kemosabe
- The Ice Funnel
- The Indian Scalp

**Challenging — Class 2**
Routes with brief exposure to starting zones or terrain traps, or long exposure time in the runout zones or infrequent avalanches.

**Western Region**
- Lifes Spindrift
- Mountain Dew
- Sinatra Falls
- Tasting Fear
- Wherefore and Why
- The Fantastic Exploding Alternative
- A Bridge too Far
- Bring out the Gimp
- Cryogenics
- Good Host
- Jungle Warfare
- Kindergarten
- Moonsnigh Gully
- Palm Sunday
- Public Enemy of the State
- Ribbon of Darkness
- Saddams Insane
- The Wreck of Glen Fitzgerald
- Upper Level Skyway
- Waxy Referendum
- Zoe
- Cobra Verde
- The Hoser
- Spite
- Winter Solstice
- The Wild Bunch

**Ghost Region**
- The Sorceror
- The Real Big Drip
- Hydrophobia
- Big Dipper
- Little Dipper
- Mouse Trap
- City Lights

**Complex — Class 3**
Routes with frequent exposure to multiple overlapping avalanche or large expanses of steep, open terrain; multiple avalanche starting zones and terrain traps of cliffs below.

**Western Region**
- Sandblaster
- Dr Evil
- Marshall Arts
- Drip at the Centre of the Universe
- Buffalo Head
- Takonka
- Cabrio
- Centaur
- Charlie and the Blade
- Lone Ranger
- Mt. Kidd Bowl
- Kidd Falls
- Coffee Suckin’ do Nothin’
- Parallel Falls
- First Blood
- Long Enough
- Trolls Route
- Auto de Feu
- Saki
- Tax Collecta
- No Doughnut
- Burning Man
- Recession Dodgers
- Kings Breath
- Dropout
- Vsop
- Squid Does Courvoisier
- Reids Tower Route
- The Maui
- Klatu Verata
- Balzout Direct
- Cursed Goddess