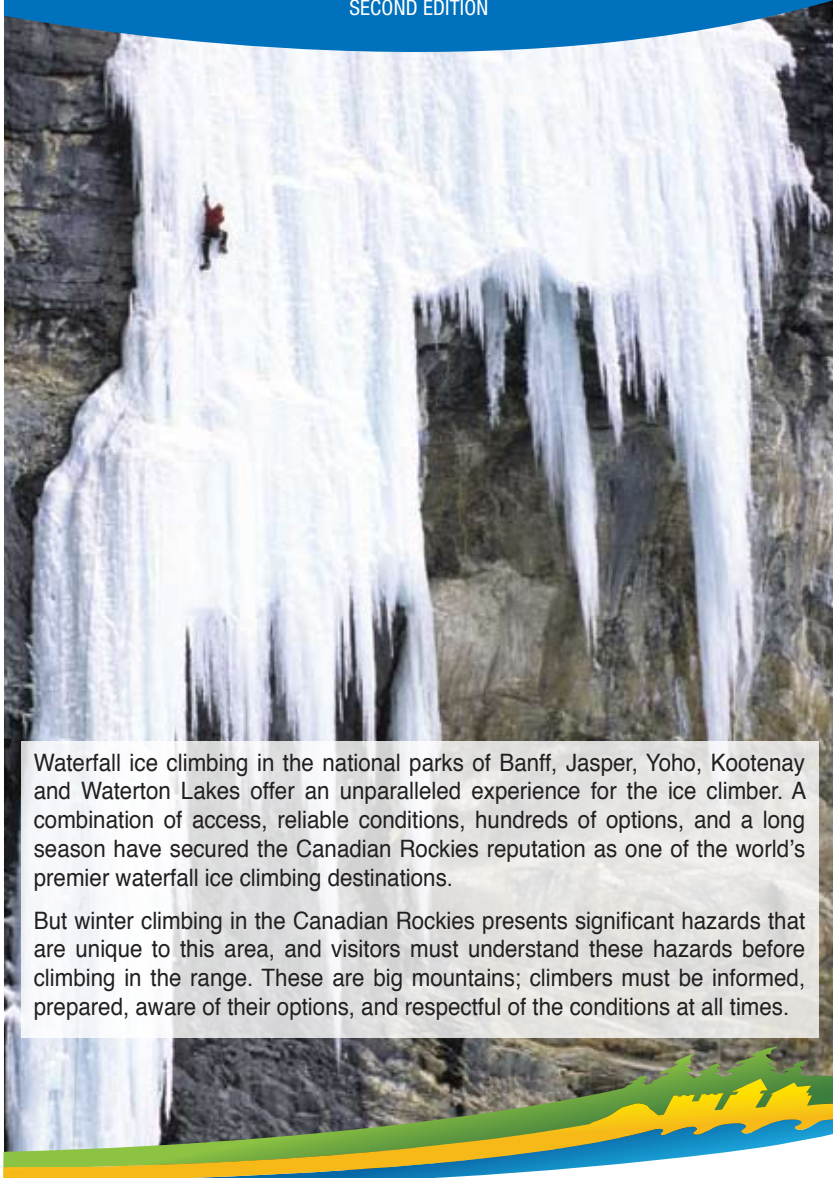




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Waterfall Ice Climbing and Avalanches in Canada's Mountain National Parks

SECOND EDITION



Waterfall ice climbing in the national parks of Banff, Jasper, Yoho, Kootenay and Waterton Lakes offer an unparalleled experience for the ice climber. A combination of access, reliable conditions, hundreds of options, and a long season have secured the Canadian Rockies reputation as one of the world's premier waterfall ice climbing destinations.

But winter climbing in the Canadian Rockies presents significant hazards that are unique to this area, and visitors must understand these hazards before climbing in the range. These are big mountains; climbers must be informed, prepared, aware of their options, and respectful of the conditions at all times.

photo: Andrew Querner

Avalanche Hazard

Avalanche hazard is the most significant threat to ice climbers in the Canadian Rockies. The vast majority of routes are exposed to avalanche hazard - often for extended periods. The simple fact that water flows and freezes in gullies makes ice climbing routes natural terrain traps. Some of the avalanche related challenges facing the Rockies ice climber include:

- Complicated approach terrain requiring early starts
- Long exposure times climbing waterfalls threatened by overhead hazard
- Potentially different snow and weather conditions affecting avalanche terrain above the route
- Climbing above cliffs, or between steep pitches on avalanche prone terrain
- Rapid temperature changes that trigger avalanches and topple waterfalls
- Shallow and weak snowpack conditions that prevail most of the winter

However, not all waterfall climbs are fraught with avalanche hazards – it is the ice climber's challenge to determine where to climb on their chosen day. The information included here will help climbers to make informed choices, matching their exposure to avalanches with the ever-changing avalanche conditions.

Avalanche Terrain Exposure Scale (ATES)

Traditional models used for rating avalanche danger are based on the stability of the snow, which changes regularly with the weather – from day to day, or even hour to hour. Terrain however, doesn't change with the weather. The ATES is designed to categorize avalanche terrain based on unchanging characteristics. By using the ATES, climbers will get a sense of the type of avalanche terrain threatening their proposed route and its approach.

**AVALANCHE TERRAIN RATINGS AND DAILY
AVALANCHE BULLETINS MUST BE USED IN
COMBINATION FOR EVALUATING HAZARDS
AND SELECTING ICE CLIMBING LOCATIONS.**

Avalanche Bulletins

Avalanche bulletins are produced for all of the Mountain Parks, and are updated daily (twice weekly in Waterton Lakes) from November to April. Information is provided regarding the current and forecast avalanche conditions as well as danger ratings for alpine, treeline and below treeline regions. Conditions change regularly – ice climbers should check this bulletin as part of their daily routine.

Avalanche bulletins are available at Park Information Centres, **1 800 667 1105**, or at www.avalanche.ca. Additional information is available at www.parksmountainsafety.ca.

Using the ATES ratings

The following list of rated climbs represents a selection of the most popular routes in the Mountain National Parks – there are many others that are not listed here. These ratings are intended to supplement pre-trip planning material, and should be used in combination with other resources to get a good sense of your proposed climbing route. The ATES describes avalanche terrain only and does not represent the difficulty of the climbing in any way. The best resource for waterfall climbers (in 2010) is the following guidebook:

Waterfall Ice, Climbs in the Canadian Rockies (fourth edition, 2002) – by Joe Josephson

This publication is available at local mountain specialty stores.

Avalanche Terrain Exposure Scale (ATES) v.1/04

Description	Class	Terrain Criteria for Waterfall Ice Climbing Routes
Simple	1	Routes surrounded by low angle or primarily forested terrain; possible brief exposure time to infrequent avalanches.
Challenging	2	Routes with brief exposure to starting zones or terrain traps, or long exposure time in the runout zones of infrequent avalanches.
Complex	3	Routes with frequent exposure to multiple overlapping avalanche paths or large expanses of steep, open terrain; multiple avalanche starting zones and terrain traps or cliffs below.



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Experience and Training

Ice climbing in the Rockies demands avalanche skills. Take a recreational avalanche course, carry appropriate rescue equipment, climb with solid partners, and recognize the limitations of your knowledge. If you and your partner’s understanding of avalanches is minimal, limit yourself to Simple (Class 1) terrain.

Qualified instruction and guidance can be obtained from a professional Mountain Guide who is certified by the Association of Canadian Mountain Guides, and permitted to guide in the National Parks.

General Advice

- Conditions can vary significantly from east to west across the range – eastern regions are generally drier, except following upslope storms which deposit more snow on the eastern slopes.
- Areas to the east of the National Parks offer additional options for climbs free from avalanche hazards, and a drier climate - check the guidebook.
- Avalanche bulletins cover large regions and describe the general conditions. Local variation is common and climbers must remain vigilant in their analysis of the immediate conditions while climbing.
- Temperature inversions, rain and sun exposure can rapidly change conditions and trigger avalanches - snow loses strength as its warms.
- Predicting the stability of free hanging ice is dubious. A rule of thumb is that large temperature changes within a short time frame will stress the ice and cause collapse.
- Climbing below other parties can be dangerous - consider your exposure to falling ice.
- Alpine waterfall routes (eg. Slipstream, Gimme Shelter) present additional hazards of crevasses, cornices and seracs, and may only be considered reasonable objectives during very short windows.
- “Fixation” on specific routes can lead to trouble – be open minded, well researched with options, and willing to retreat to try again another day.
- Please respect other park users in popular locations such as Johnston and Maligne Canyons. Keep the snow surface clean and pack out all litter.

SIMPLE – CLASS 1

* Denotes routes not exposed to avalanche hazards

Banff National Park

- Bearspirit *
- Johnston Canyon *
- Louise Falls
- Balfour Wall
- Panther Falls
- Mixed Master
- Lower Weeping Wall
- Malignant Mushroom
- Wicked Wanda
- Aquarius
- Fearful Symmetry
- Rainbow Serpent

Kootenay National Park

- Haffner Creek*
- Marble Canyon*

Yoho National Park

- Iron Curtain

Jasper National Park

- Tangle Falls *
- Meltout
- Maligne Canyon Ice Climbs *
- Edge of the World *
- WAD Valley
- Sunwapta Falls

CHALLENGING – CLASS 2

Banff National Park

- Professor Falls (without last pitch)
- Rogan’s Gully
- Orion Falls
- Bow Falls
- Murchison Falls
- Virtual Reality
- Upper Weeping Wall
- Lacy Gibbot

Kootenay National Park

- Helmet Falls
- Red Commie Star

Yoho National Park

- Betty’s Pillar

Jasper National Park

- Shades of Beauty
- Curtain Call
- Kerkeslin Falls
- The Wings and the Stage
- Wildfire

Waterton Lakes National Park

- Compound Gullies
- Quick and Dirty
- Expert’s Choice
- Lineham Cliff Waterfall
- Sullivan Falls

COMPLEX – CLASS 3

Banff National Park

- The Terminator
- Sea of Vapours
- The Replicant
- La Goutte
- Sacre Blue
- Spray River Falls
- Cascade Waterfall
- The Urs Hole
- Bourgeau Right-Hand
- Bourgeau Left-Hand
- Linda Ice Nine
- Gimme Shelter
- Riptide
- Transparent Fool (approach)
- Whoa Whoa Capitaine
- Mt. Wilson Routes
- Ice Nine
- Polar Circus
- Professor Falls (last pitch)
- Seven Pillars of Wisdom
- Cadeau Cache
- The Silver Lining
- Pointless/Aimless Gullies
- Cosmic Messenger

Kootenay National Park

- Nemesis
- The French Reality
- Acid Howl
- Suffer Machine
- Killer Pillar
- Birthday Present
- Storm Creek routes

Yoho National Park

- Sad and Beautiful World
- Takkakaw Falls
- Silk Tassel
- Twisted
- Super Bock
- Extra Lite
- Cool Spring
- Massey’s
- Pilsner Pillar

- Carlsberg Column
- Guinness Gully
- Cold Choice
- Blessed Rage

Jasper National Park

- Slipstream
- Echo Madness
- Schism Game

photo: Brad White



Avalanche over Bourgeau Right-Hand

Disclaimer

There are inherent risks in ice climbing, and most of the climbs described here will at times be unsafe due to potential snow avalanches. The Parks Canada Agency has done its best to provide accurate information and to describe the avalanche terrain characteristics typical of each climb. However, it is up to the users of this information to learn the necessary skills for ice climbing, access additional trip planning materials, and to exercise caution while travelling in the backcountry of any national park.

Users of this information do so entirely at their own risk, and the Parks Canada Agency disclaims any liability for injury, injury resulting in death or damage to anyone undertaking to climb any of the routes described. This information is no substitute for experience and good judgement.