Boulder Mountain Avalanche
1 Year Later

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Tomm
Executive Director

IKAR-CISA 2011    Åre, Sweden - October 19, 2011
Accident Overview

- Group of ~ 200 snowmobilers
- Size 3 avalanche, hit group of ~100
- >30 injured, 1 seriously (quadriplegic)
- 2 fatalities
- > 50 professional rescuers
- 12 helicopters involved (small and medium)
- 3 day rescue and recovery effort

- Largest recreational avalanche accident in Canadian history
- Total cost of SAR >CAN$1million
- Significant media interest, political involvement
Fallout…

- Criminal investigation
  - Criminal negligence causing death – against organizers
  - Child endangerment – against parents with children at event
  - All charges dropped

- Coroner Investigation
  - Ignoring avalanche conditions & special warning
  - Role of government (land manager)
  - Role of snowmobile club
  - Drug use evidence in deceased (cocaine and oxycodone)
  - Companion rescue works, organized rescue minimized harm
Snowmobile Fatalities in 2008-09

- 19 snowmobile avalanche fatalities
- Report containing 15 recommendations focused on prevention

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Conditions for significant public pressure

- Boulder Mountain Accident (2010)
- Few snowmobiling stakeholders engaged in avalanche safety
  - Local, provincial and national snowmobile clubs
  - Snowmobile Manufacturers
  - Snowmobile Retail Shops
- Key snowmobile stakeholders actively minimizing avalanche issue

Change was mandatory – the future of snowmobiling threatened.
So what?

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Successes – Awareness & Education

- Awareness and Education (DRP #3 and #4)
  - Avalanche Safety Brochure to all registered snowmobiles in western provinces
  - Direct marketing to over 50,000 snowmobilers via brochure to start October 2011
    - Use the avalanche forecasts
    - Take a course from an approved provider
    - Get the equipment (shovel/beacon/probe) and an Airbag.
If an avalanche accident happens...

**IT’S UP TO YOU.**

You don’t have time to go for help.

Every person in your party needs to have the right rescue equipment and know how to use it. Learn more about avalanche self-rescue. Take a course or check out at www.avalanche.ca.

**ESSENTIAL EQUIPMENT**

Every person in your group needs to have a beacon, probe and shovel and everyone needs to take the time to practice searching.

Consider buying an avalanche befoon pack. If you’re caught in an avalanche, triggering the avalanche to inflate will help you stay on top of the snow. An international study shows the system is the most effective single device for surviving an avalanche.

Common Avalanche Misconceptions.

**"My Friends will dig me out."

Maybe, but they’ve got to be alive and able to find you.

**"I’m following tracks, so it must be ok."

First tracks may not rule a slide, and the conditions may have changed since those tracks were made. Besides, you might be following a complete idiot.

**"But, I’ve got a beacon on me."

A beacon is not a force field—it doesn’t protect you from avalanches. Beacons improve your chances of survival, but only about a third of completely buried people are found alive. They do make body recovery easier though.

**"I’ve ridden this slope for years."

Don’t kid yourself. Slope stability changes—day to day, hour to hour.

**Become Avalanche Trained.**

If you ride in the back country, you need to be trained.

Prepare before. Because after, it’s too late.
Successes - Training

(5) Develop materials to better educate what basic avalanche training is (and is not)
- New lesson plans for instructors and brochure

(6) Create a dedicated Companion Rescue Course
- 1 day rescue course (organization, transceivers, shoveling)
- >200 instructors already approved
- Targeted towards snowmobilers and skiers

Some snowmobile clubs making avalanche training mandatory
Success – Forecasts and Warnings

(#7) Expand *distribution* of avalanche bulletin

- Website (specific website for snowmobilers)
- RSS feeds
- Email broadcasting
- Media ‘push’ campaigns
- iPhone Application increases bulletin use by over 20%
  - Skiers use iPhone
  - Snowmobilers use Android – need Android apps
Successes - Highway Signage (#11)

- 22 signs on key highways used to access snowmobiling areas
- Up to 50 more planned
- Public presence of the importance of avalanche safety and snowmobiling

www.avalanche.ca
Successes – Avalanche Terrain Ratings (#13)

- Special project to rate avalanche terrain at all 79 managed snowmobile areas (88 trail systems) in the Province of BC
  - Largest known avalanche terrain rating project ever undertaken for recreational reasons
  - Uses Parks Canada’s Avalanche Terrain Exposure Scale (ATES)

- Trail head signs, maps and brochures produced for every area.

- Completion of project – March 2014
1. What type of terrain are you heading into?

AVALANCHE TERRAIN RATINGS

- SIMPLE
  - Exposure to low angle or primarily forested terrain.
  - Some terrain mapping may involve the cross-cutting of snow avalanche channels.
  - Fewer options to reduce or eliminate exposure. No glacier travel.

- CHALLENGING
  - Exposure to well-defined avalanche paths or natural slopes.
  - Many options to reduce or eliminate exposure with careful route finding.
  - Glacier travel is straightforward but crevasse hazard may exist.

- COMPLEX
  - Exposure to multiple overlapping avalanche paths or large expanses of steep, open terrain.
  - Multiple avalanche starting zones or terrain traps below, minimal options to reduce exposure.
  - Complicated glacier travel with extensive crevasse barriers or instability.

2. What is the Avalanche Danger Rating today?

3. What does the Avaluator recommend?

   - Have you told a responsible person your trip plans?
   - Ke people in your group properly dressed and equipped with a transceiver, probe and shovel?
   - Do you have a basic knowledge of avalanche awareness training?
   - For more information go to www avalanche.ca
Welcome to the Trip planner - select your trip type and ATES rating to matching routes.
Successes – Snowmobile Committee (#15)

- CAC formed a committee involving key snowmobile stakeholders
  - All provincial snowmobile club organizations
  - Key snowmobile avalanche educators
  - Commercial snowmobile operators (rentals)

- Currently the most active and productive committee of the CAC.
Expansion of Forecast Regions (#8)

- 44% of fatalities occurring in regions without a public bulletin
- Coroner calls for expansion of forecast regions, all regions in BC should have a forecast
- Problem – no data
- CAN$1m to CAN$1.5m/year in additional funding needed
  - Starting implementation this winter
  - Big expansion planned for 2011-12 winter if $$ raised
  - Paid observer network combined with volunteer observers
    - iPhone and Android App (pictures, conditions with GPS locations)
Other initiatives

- Media work
  - 30 second ‘Public Service Announcements’ on Radio
  - CAC promoting snowmobiling in media as a safe and enjoyable way to explore BC backcountry***.
- Research: CAN$1 million/3 year special project funded by Canadian Government
  - Social sciences study – who are snowmobilers and how do they think?
  - Promote professional avalanche standards through training
- TV Show & Educational Online Video Series

www.avalanche.ca
Changes by Manufacturers

- Partnering with CAC though sponsorship and co-marketing
- Marketing messaging's moving to ‘responsibility’ messaging
- Promoting awareness seminars

Yamaha/ArticCat – mountain sleds come with BCA
2011-12 Canadian Avalanche Centre Events
Check out an avalanche awareness event near you. Visit avalanche.ca for up-to-date info.

Backcountry Avalanche Workshops – Northern Circuit
November 13: Prince George, BC - PGSC Clubhouse (ski and sled)
November 14: Smithers, BC – The Old Church (ski)
November 16: Smithers, BC – The Old Church (sled)
November 19: Chetwynd, BC – TBD (sled)
November 21: Grand Prairie, AB - Stojan’s (sled)
November 23: Jasper, AB - Jasper Activity Centre (ski)

Backcountry Avalanche Workshops – Southern Circuit
November 25: Kamloops, BC - Thompson Rivers University (ski and sled)
November 28: Kelowna, BC - Union Cycle (ski)
November 30: Nelson, BC - LV Rogers Secondary (ski)
December 1: Rossland, BC - RSS Auditorium (ski and sled combined)
December 4: Fernie, BC - Fernie Alpine Resort (ski)
December 5: Lethbridge, AB - TBD (sled)
December 7: Calgary, AB - Albert Park (sled)
December 8: Canmore, AB - TBD (ski)

Backcountry Avalanche Workshops – MEC Circuit
October 21: Edmonton, AB
October 17: Vancouver, BC
November 15: Victoria, BC
December 6: Calgary, AB
December 7: North Vancouver, BC

Staying Alive Series
TBD: Revelstoke, BC - Revelstoke Mountain Resort (check www.avalanche.ca)
TBD: Lake Louise, AB - TBD (check www.avalanche.ca)
November 17: Jasper, AB - D’ed Dog Pub
December 8: Golden, BC - Senior’s Centre

Other Events
November 12: North Vancouver, BC – MEC Snowfest
November 26: Calgary, AB - MEC Snowfest
November 26: Vancouver, BC - MEC Snowfest

Avalanche Awareness Days

Passionate about youth avalanche awareness?
Contact Youth Education Coordinator Bridget Daughney for more information on youth avalanche education, starting a youth avalanche awareness program, borrowing avalanche gear to use with your students, or to share your ideas: bdaughney@avalanche.ca. Check out http://www.avalanche.ca/cac/community/educators for more information.

2011-12 Snowmobile Avalanche Awareness Events
Visit avalanche.ca for up-to-date info.

Sled Shows
October 21-23: Edmonton, AB - Northlands Expo Centre
November 4-6: Saskatchewan, SK - Fairview Exhibition Centre
November 12: Vernon, BC - Vernon Recreation Complex

Patterns to Prevention Avalanche Awareness Workshops
October 24: Edmonton, AB
November 5: Saskatchewan, SK
November 6: Edmonton, AB
November 9: Red Deer, AB
November 10: Calgary, AB
November 14: Grindstone, AB
November 17: Fort McMurray, AB
December 7: Lloydminster, SK
February 3: Grand Prairie, AB
Contact Liz Zacaruk for more information: info@zacstacs.com

Yamaha Avalanche Awareness Seminars
October 24: Salmon Arm, BC
October 25: Kamloops, BC
October 26: Kelowna, BC
October 27: Vernon, BC
November 13: Calgary, BC
November 16: Cranbrook, BC
November 17: Fruitvale, BC
Contact Amber Wood for more information: amberwood@trigger-point.ca

BRP Avalanche Awareness Seminars
October 14: Kamloops, BC - RTR Performance
October 17: Lethbridge, AB - Mr. R’s
October 18: Brooks, AB - A&E RV Sales & Service
October 19: Calgary, AB - Bow Cycle South
October 20: Cochrane, AB - Bow Ridge Sports
October 24: Edson, AB - Riderz
October 25: St. Albert, AB - Riverside Honda and Ski-Doo Sales
October 26: Edmonton, AB - Martin Motorsports
October 27: St. Paul, AB - Power Merchants Ltd.
November 9: Crescent Valley, BC - Playmor Power Products Ltd.
November 9: Kelowna, BC - Banner Recreational
November 10: Vernon, BC - Banner Recreational
November 11: Tulameen, BC - Reichert Sales & Service
November 12: Tulameen, BC - Reichert Sales & Service
November 13: Squamish, BC - No Limits Motorsports
November 16: Langley, BC - Ski and Snowmobile Powersports Ltd.
November 17: Chilliwack, BC - Greater Vancouver Powersports
November 18: Surrey, BC - Greater Vancouver Powersports
November 22: 100 Mile House, BC - Performance All Terrain and Rentals
November 23: Prince George, BC - Forest Power Sports
Contact Carole Savage for more information: snowmobile@avalanche.ca
Summary…

- Snowmobilers are taking responsibility and working hard
  - only 10% of snowmobilers belong to organized groups

- CAC is coordinating all efforts for snowmobiling prevention projects

- Significant increase in funding;
  - Government funding increases (>2x) + projects
  - Trail Pass Funding - $1/trail pass sold to CAC (~$40,000/yr and growing)

Snowmobilers exceeding skiers 3:1 in private avalanche donations
Thanks for your attention.

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IKAR-CISA 2011 Åre, Sweden – October 21, 2011