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# Avalanche Rescue

~~Boulder Mountain, Selkirk Mountains~~

Canada

March 13-14, 2010



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- They have 2 to 3 inch paddles on the tracks.
- Average sled out of the box is 160 HP
- After modifications, a carbon fiber sled can have almost 500 HP.
- High performance machines one HP per pound
- They can climb vertically







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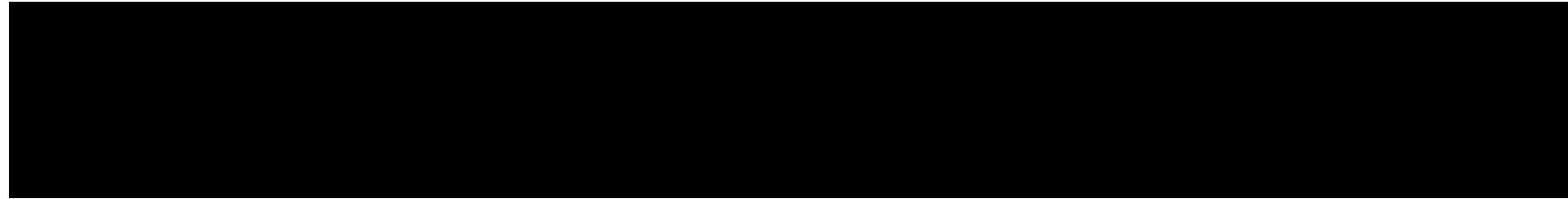


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- THERE HAS BEEN A SLEDDING AVALANCHE ACCIDENT NEAR REVELSTOKE

- THERE MAY BE UP TO 100 PEOPLE INVOLVED

- That was a first for me!





















- Most participants were parked at the bottom in the middle of the runout watching the hill climb
- First slab failed and then the whole face released sympathetically
  - It is still unclear how many people were buried.
- Most people dug out by others because some part was visible.
  - About 90% of people had beacons.
- One witness estimated that only 25% knew how to use them



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- Trying to get a head count was very difficult
  - Beacon search did not work



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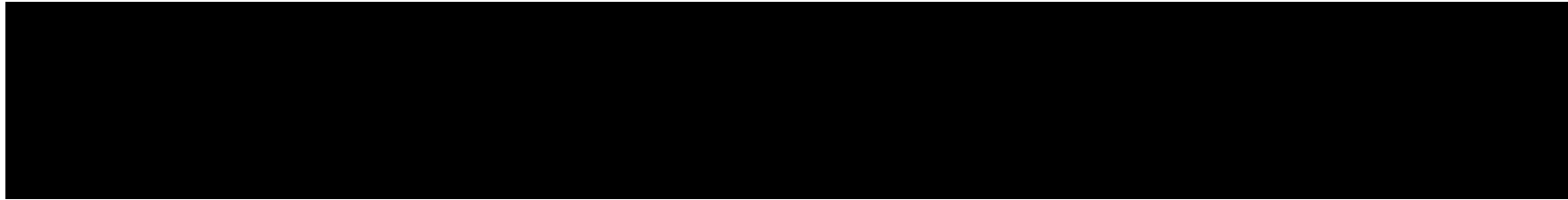


- 12 Helicopters (7 Medium 4 Intermediate)
  - 10 mountain Guides with Selkirk Tangiers heli-ski
    - 20 Mountain Guides with CMH heli-ski
    - Base Support
  - 10 Parks Canada Rescuers
  - 1 Parks Canada Dog, 1 RCMP dog, 4 volunteer dogs
  - 15 Ski Patrollers, 40 volunteers
- All available ambulances





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Only two fatalities

Multiple injuries

On day one, police went to every hotel

Day two search efforts was to confirm that no one  
was still missing







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# Boulder Mountain - Aftermath

Ian Tomm

Canadian Avalanche Centre

Medical – Media – Political - Policy



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# Preconditions

- January 2010 BC Coroners service releases their 'Death Review Panel Report' on the 19 snowmobiling avalanche fatalities of the 2008-09 winter.
  - 15 recommendations to various agencies including government, the Canadian Avalanche Centre and snowmobiling organizations
- Special Public Avalanche Warning issued on March 11
  - 4<sup>th</sup> weekend in a row, unprecedented, wide media coverage
- Ministry of Tourism tries to shut event down before weekend
  - Instructs local club to notify ministry if event occurs
- Local snowmobiling club raises trail head fees \$5 (to \$25/person) in anticipation of higher volume of riders.
  - Claim they did not know event was occurring



# Medical Resources

- Revelstoke Hospital is small – 10 beds, few doctors & nurses
- Initial call triggered largest scale response effort by Hospital – all available resources called in
- Communication with field difficult, did not know how many casualties or what state they may be in





# Lessons Learned - Medical

- Small mountain communities that rely on winter tourism need to consider large scale avalanche accidents in their emergency planning
- Local, regional hospitals do not have sophisticated life support or trauma capabilities
- Only 4 major trauma centres in western Canada



# Timelines – Post Event

- March 13-14 – SAR Rescue (recovery extended to the 16<sup>th</sup>)
- March 14 – Minister of Public Safety & Solicitor General visits Revelstoke and accident site
- March 15 – RCMP moves in Major Crimes Unit, launches criminal investigation
- March 15 – Minister of Environment visits Revelstoke, spends 2 hours at CAC offices talking with forecasters and management
- March 17 – announcement of the revised North American Avalanche Danger Scale with federal Minister of Environment
- March 19 – another large scale snowmobile avalanche accident ‘Eagle Pass’, near Revelstoke, 19 involved, 1 fatality







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# Lessons Learned Media

- Media is not just for information on the accident
- Strategic media plans can help influence public and political opinion on prevention programs
- Don't argue in the media, well thought out messaging can have profound influences behind the scenes
- **RECOMMENDATION** – media plans should include strategic messaging to influence policy – funding, standards, etc





# Criminal Investigation

- Royal Canadian Mounted Police (RCMP) Major Crimes Unit
- Moved 12 investigators into Revelstoke on night of March 14
- First time in BC that major crimes investigated something other than a murder
- Investigation split into 2 primary focuses
  - Criminal negligence causing death – organizer of event
  - Child endangerment – parents of youth on site
- Investigation dropped in June



# Lessons Learned

- Responsibility of organizers of events is considerable
- Mass casualty accidents are not tolerated by society, next time charges may actually be laid
- Things are different when children are involved
- RECOMMENDATION – prevention programs should address these issues in some way.





# Political Reaction

- Provincial and Federal reaction to accidents, calls for change
- April Meetings
  - BC Coroners report 'road map' for change
  - CAC doesn't have the resources to do this alone
  - Snowmobiling organizations still not at the table (risk & issue management mode, not proactive)
- May Meetings
  - Establishment of the Federal-Provincial Avalanche Committee to coordinate government response with CAC
  - Provincial Cabinet level discussion, commitment for additional \$\$
  - Snowmobile stakeholders meet for first time (May 20)
- June – Present: Monthly meetings in addition to weekly phone & conference calls



# Current Status

- Snowmobile stakeholders still slow/reluctant to come to the table
- International Snowmobile Manufacturers Association (ISMA) signed on as CAC sponsor, but at the cost of 2 historical sponsorships (Yamaha and Ski-Doo)
- Momentum building, fundraising and peer pressure for changes in attitude and culture of safety
- Association of BC Snowmobile Clubs (ABCSC) proposes \$1/day trail head fee to support snowmobile avalanche prevention initiatives – blocked by other snowmobile organizations
- BC Government acknowledges merit of \$1/day – institutes policy change late September 2010





# Current Status

- BC Government Funding – increased by 30% on September 8
  - Discussions ongoing about long term, sustainable funding for CAC from BC government – could increase 2-3x short term
- Significant movement on recommendations from BC Corners report
- Some snowmobiling organizations still resistant to change, but that is changing (slowly).



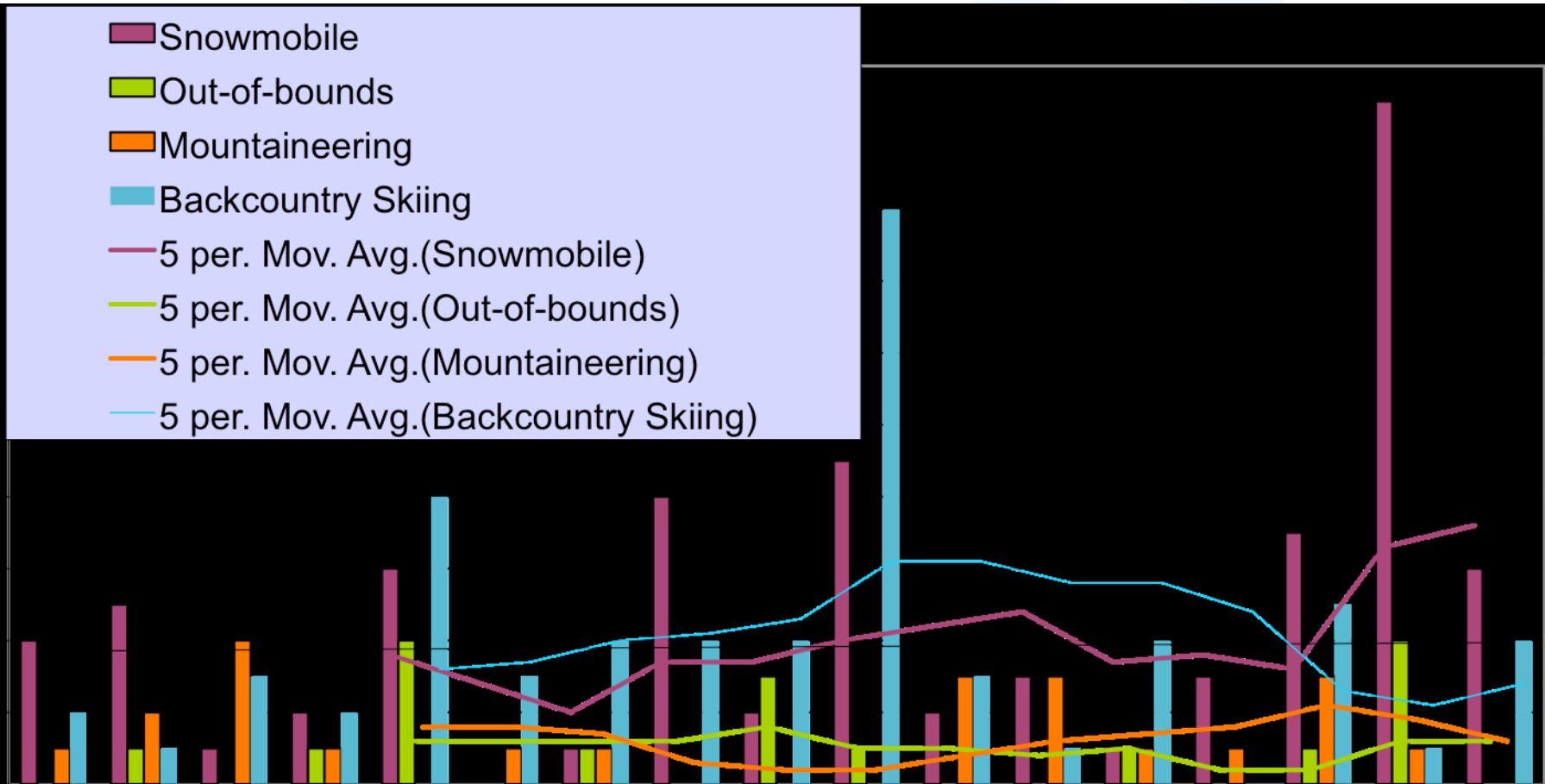
# Boulder was a global scale disaster

- The potential for mass fatalities
- Size of the search and rescue effort
- Media response (national and international)
- Social outcry
- Political interest





# Avalanche Fatality Trends



# Thank You

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