canadianavalanchecentre

2005-2006 Annual Report

Photo: Peter Buchholz

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EXECUTIVE SUMMARY

The Canadian Avalanche Centre (CAC) is a non-government, not-for-profit organization with a mandate from the government of Canada and the provinces of British Columbia and Alberta to deliver public avalanche safety programs and services. The CAC is governed by a board of directors composed of directors of stakeholder agencies in public avalanche safety in Canada and elected members of the CAC. The CAC receives advice from the Canadian Avalanche Roundtable, a panel composed of parties who maintain an interest in public avalanche safety. The CAC is independent of, but works closely with the Canadian Avalanche Association (CAA), sharing premises and resources. 2005/06 was the first year of full CAC operational independence from the CAA.

Canadian Avalanche Centre Vision:

To be a world leader in avalanche awareness, education and safety services.

Canadian Avalanche Centre Mission:

To serve as Canada's national public avalanche safety organization by:

- Coordinating public avalanche safety programming;
- Providing public avalanche safety warnings;
- Delivering public avalanche awareness and education;
- Providing avalanche training for non-professional winter recreation;
- Serving as point of contact for public, private and government avalanche information; and,
- Encouraging avalanche research

2005-06 Highlights

- Inaugural year for snowmobile champion program–outreach activities substantially increased in Alberta
- New avalanche information regions: Bighorn Country AB and expanded South Rockies (AB/BC) forecast area.
- Recreational avalanche course program integrated into CAC.
- Stabilizing public funding continues to challenge the CAC. Three-year funding agreement with Meteorological Service of Canada is now expired.

The CAC clients should see the 2005-06 as a year of initiation. Now that all public services formerly delivered by the CAA have been structurally integrated into the CAC, we can look forward to refining and delivering programs as our main objective for the 2006/07 fiscal year. We will focus on putting "*rubber on the road*" and *continuing service enhancement based on careful analysis.* This means in the coming year, the CAC will concentrate on product delivery and prioritization of programs.

2005/06 Financial Report

Revenue for the CAC for the 2005-2006 year totalled $628,448 (Figure 1). The highlight for the year included important new funding from the province of Alberta in the amount of $100,000. Other public funding sources included federal partners, Parks Canada Agency (PCA), the BC Provincial Emergency Program (BCPEP), and the Meteorological Service of Canada (MSC).

The Canadian Avalanche Foundation (CAF) continued to provide generous charitable support of the bulletin and other public avalanche programs, increasing their contribution to nearly $50,000.

The remaining revenue was self-generated by the CAC, including funding from sponsors and material sales. See Appendix A for a list of sponsors, supporters and partners.

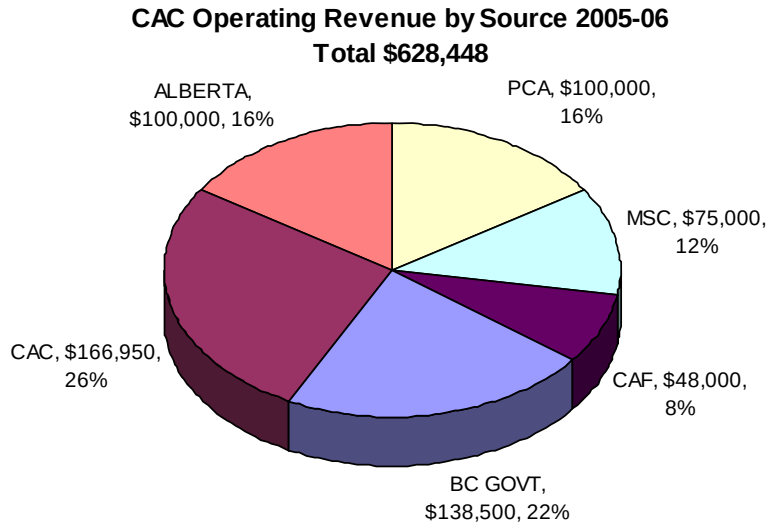


Figure 1: CAC Operating Revenue by Source

Program expenditures for the 2005-2006 season totalled $625,124. (Figure 2). The business of the CAC is delivered through two cost centres: National Public Services (NPS) and Public Avalanche Bulletin (PAB).

The PAB cost centre consists of all expenses and revenues associated with the production and distribution of warnings regarding avalanche conditions (forecasts, information reports and special avalanche warnings). The NPS cost centre consists of programs that address the following CAC goals:

- Coordination of public avalanche safety program
- Avalanche awareness and education (Avalanche Awareness Days, Backcountry Avalanche Workshop, Outreach programs)

- Provides avalanche-related training to amateur backcountry recreationists (Recreational Avalanche Courses)
- Point of contact for public avalanche information
- Cooperation with avalanche research

Expenditures in the CAC are roughly split between the NPS and PAB. In Figure 2 it can be seen that the primary expenditure is in payroll. The CAC is a service delivery organization and investment in skilled personnel is a natural consequence of that mandate.

A total net operating surplus for the CAC was $3324, which is essentially a balanced budget.

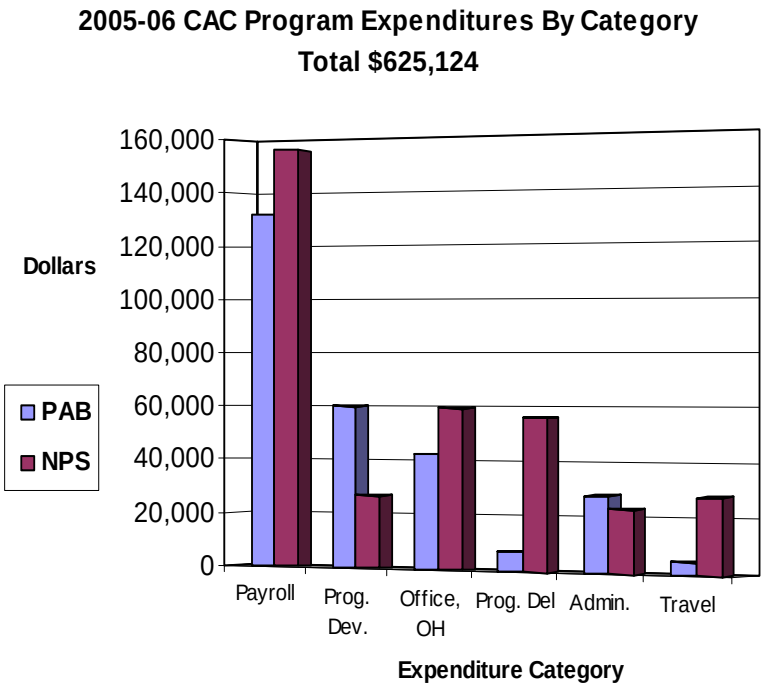


Figure 2: CAC Program Expenditures

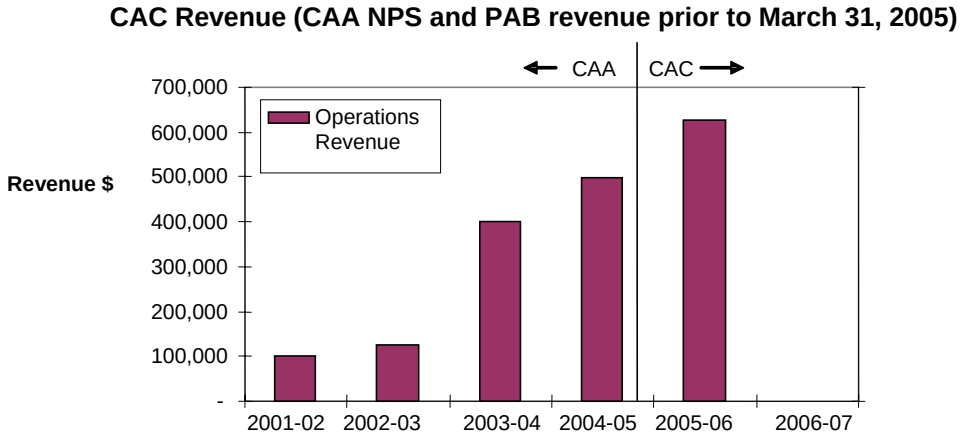


Figure 3: CAC Revenue, Six-Year Comparison

Quick analysis of the financial position of the CAC during 2005/06 (Figure 3) shows substantial growth in revenues for public avalanche safety activities over the past five years. It should be noted that the CAC has only existed as a separate financial entity since April 1, 2005. Prior to this date, public safety revenues from the relevant cost centres of the CAA are shown.

During 2005/06, the CAC's operating revenues were approximately $628,000, a 28% growth from the previous year. Operating revenues for this fiscal year have attained the level proposed in the "Option 2" model of the June, 2003 British Columbia Public Avalanche Safety Review. This document was a landmark in the genesis of the CAC, and achieving this level of funding is a significant milestone well worth noting.

Figure 4 below shows CAC funding sources for 2005/06. The strongest growth in funding is through self-generated income from CAC activities such as retail sales and sponsorship. It should be noted that this funding is coupled with increased costs such as marketing and cost of sales.

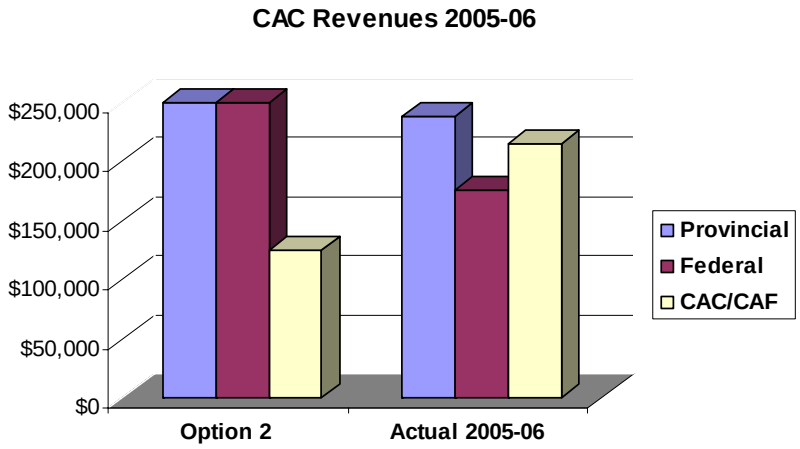


Figure 4: CAC Revenues, Actual Versus Option 2(British Columbia Public Avalanche Safety Review, 2003)

2005/06 CAC Organization

CAC Governance

- Eight person Board of Directors (Elected at AGM on May 2, 2006)
    - President, Vice-President, Secretary Treasurer, and two other members from CAA board
    - One CAC board member from the Canadian Avalanche Foundation board of directors
    - One CAC board member elected by CAC Supporter members
    - One CAC board member elected by CAC Friends members
- Public accountability and reporting through the Canadian Avalanche Roundtable (stakeholder input and advice)

CAC Staff

- CAC Executive Director shared 50/50 with CAA
- CAC staff dedicated to public service programs. CAA staff support for CAC programs through transparent processes, contracts and agreements
- CAC Operations Manager, John Kelly, hired August 2005
- CAC Program Services Coordinator, Jennifer George, hired September 2005
- CAC Avalanche Forecasters, 1.5 person years.

None of the staff members work full-time. They are all hired on either a seasonal basis, or part-time throughout the year.

CAC Contractors

- Snowmobile outreach champions contracted, Lori Zacaruk, Amber Wood
- Forecasters contracted, Evan Manners, Tom Chalmers

Season Two: Summary of Statistics

Avalanche Accidents in Canada, Winter 2005-06

The winter of 2005-06 saw a return to much better snow conditions for Western Canada than the previous few years, thanks partly to a relentless series of storms from late December through early February. Although most areas were dealing with deep instability problems for the first part of the season, this problem gradually decreased as the snow depth increased. In essence, we had a reasonably good snowpack with a limited number of persistent weak layers. This, combined with improving public avalanche warning services, yielded the third season in a row of a decreasing avalanche fatality trend in Canada.

As of the end of May, there were a total of eight people killed in seven avalanche accidents in Canada. The first avalanche-related fatality of the season occurred January 7 and the last of the season was April 21. Seven of theses fatalities were in British Columbia; one was in Alberta. Appendix B provides a summary of the 2005-06 avalanche fatalities.

In terms of statistics, this season's eight fatalities are below the average of 12 per year observed between 1984 and 2006. There were 265 avalanche fatalities recorded during this period. Figure 6 shows the trend in avalanche fatalities for the period of 1984 to 2006, including a three-year running average trend. It can be observed that both the average number of fatalities and the 10-year trend has been decreasing the past three seasons, with the obvious peak during the season of 2002-03.

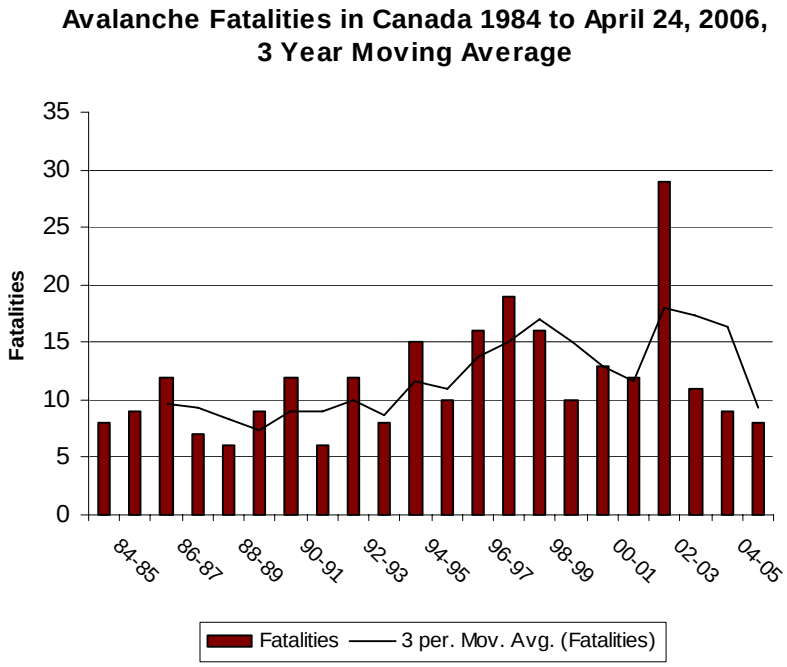


Figure 5: Avalanche Fatalities in Canada: 1984-85 to April 24, 2006 with three-year running average

Also improved this past season was avalanche accident reporting to the CAC for non-fatal accidents. The CAC avalanche forecasters have access to information about avalanche accidents that occur within the professional avalanche industry thanks to continuing access to CAA InfoEx data. However, past reporting of avalanche incidents and accidents involving the public has been sporadic. This is very important information since the public often travel in different backcountry areas and have different usage patterns than professionals.

The CAC forecasting team observed a markedly increased number of public avalanche accident reports this season compared with previous years (i.e. an increase of more than 20 reports). This could be at least partly attributed to increased, pro-active solicitation of public avalanche and accident information using methods such as e-mail links and online accident forms. Also, the recently improved accident database will help archiving and future research of accidents.

Making it easier for the public to report accidents to the CAC will continue to improve the products our forecast team provides and improve our public messaging. In turn,

hopefully our improved ability to report both fatal accidents and less serious, but still important, non-fatal accidents to the public will help them make good decisions in the backcountry. Our products will only continue to improve as we can incorporate more and better information from a variety of sources. Hopefully this will translate into a continued downward trend in avalanche accidents, despite increasing backcountry usage.

Provide Public Avalanche Warnings

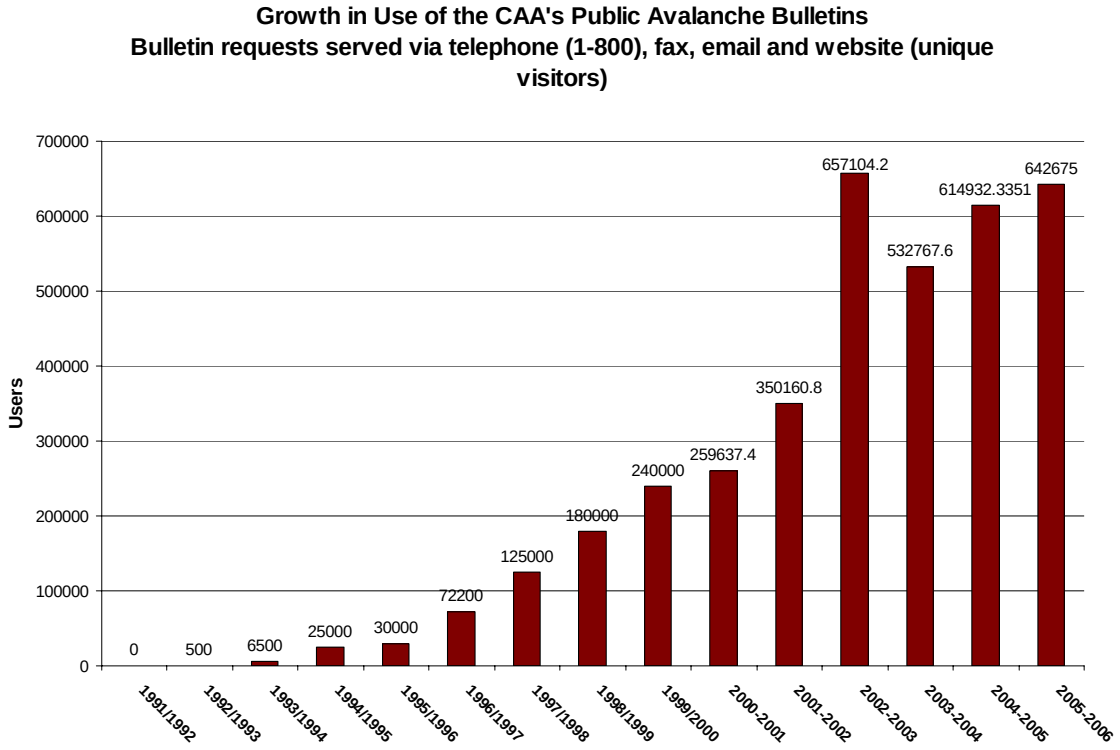


Figure 7: Growth in Use of CAC Public Avalanche Bulletins

2005/06 Forecasts, Special Warnings and Reports

The CAC public avalanche warning program consists of an array of information products distributed via the Web and direct electronic transmission. These products offer an ongoing picture of avalanche hazard in eight regions of British Columbia and Alberta.

In addition, the CAC coordinates the delivery of avalanche warnings from the following partners by presenting a one-stop portal for information at www.avalanche.ca:

Parks Canada

- Jasper National Park
- Banff/Yoho/Kootenay National Parks
- Glacier National Park
- Waterton Lakes National Park

North Shore Avalanche Advisory

- North Shore (Vancouver)

Whistler/Blackcomb

- Whistler Backcountry

Alberta Community Development
- Kananaskis Country

Centre d'avalanche de la Haute Gaspesie
- Monts Chic Chocs

Figure 8: Avalanche Information Regions in Western Canada 2005-06

The CAC public avalanche warning program continues to be a strength of the organization. With the addition of the Bighorn Region avalanche information report, and the expansion of the South Rockies forecast, the reach of our warning products was extended to important recreational areas of Alberta during 2005-06. The frequency of warning products also improved during 2005-06 with the total number of forecasts issued increasing from 454 to 486 and the total number of information reports increasing from 21 to 43. Use of public avalanche bulletins continues to grow. In 2005-06 642,000 bulletins were delivered through avalanche.ca.

Products: Avalanche Information Reports and Forecasts

Regularly scheduled CAC bulletin products are divided into two main categories: information reports and forecasts. An Avalanche Information Report is a "nowcast" as opposed to a forecast. Information from the region about snowpack structure, avalanche activity, and the affects of recent weather are compiled from observers in different parts of the region. No prediction about how avalanche danger will evolve is made.

An Avalanche Information Report is a little less formal than an Avalanche Forecast. Information sources vary from week to week. Reports contain professional observations coming from commercial snowcat and heli-ski operations, public agencies such as the Ministry of Transportation and Highways, and qualified individuals. They may also

assimilate comments from the CAC discussion forum, and e-mail feedback from backcountry users to forecaster@avalanche.ca.

An avalanche forecast needs a steady stream of input from reliable professional sources. Inputs include information on snowpack and avalanches as well as current real-time observations of weather (wind, precipitation, temperature). This data is analysed in order to predict how avalanche conditions will evolve under the influence of forecast weather. The forecasts generated are subsequently evaluated against the same data sources to ensure good quality control. Where the data network is sparse or incomplete it becomes difficult to predict the evolution of avalanche danger, and impossible to look back and evaluate the quality of the observations.

Public avalanche information products at the CAC are based on the four-level target audience model as outlined in the 2004-2005 CAC annual report. (http://avalancheinfo.net/CAC/Canadian%20Avalanche%20Centre%20Annual%20Report%202004-2005.pdf). This expert-developed model divides the audience for public avalanche information into levels that reflect different abilities to understand and use avalanche safety information.

Stage of Mastery	**Target Product**	**Distribution**
Level 1: Untrained and unaware, general public	Backcountry Avalanche Advisory Special Avalanche Warning	MSC portal CAC press release
Level 2: Completion of Introductory Recreational Avalanche Course (two-day) or equivalent training or experience	Public Avalanche Forecasts Public Avalanche Information Reports Special Avalanche Warning	Avalanche.ca Avalanche.ca CAC press release
Level 3: Advanced recreationists	Links to advanced external products Discussion groups	Avalanche.ca Avalanche.ca
Level 4: Professionals	No CAC products are targeted at professionals	

Empirical inspection of accident data, close-call reports and survey of stakeholders continues to identify that the at-risk backcountry users are heavily weighted toward the level 1 and level 2 groups. Developing a more detailed understanding of who is at risk, based on detailed analysis rather than empirical information will be a major new goal of the CAC.

Other PAB Milestones 2005-06

- All Western-Canada reporting agencies using Backcountry Avalanche Advisory daily.
- Backcountry Avalanche Advisory being used on a trial basis in Sweden.
- Regional avalanche forecasting trial in South Rockies region initiated.

- Forecasting team expanded, four additional forecasters received training at the CAC and contributed to the production of bulletins.
- Ongoing independent research (University of Calgary) continues to verify the accuracy of warning products and supply insight into needed improvements.

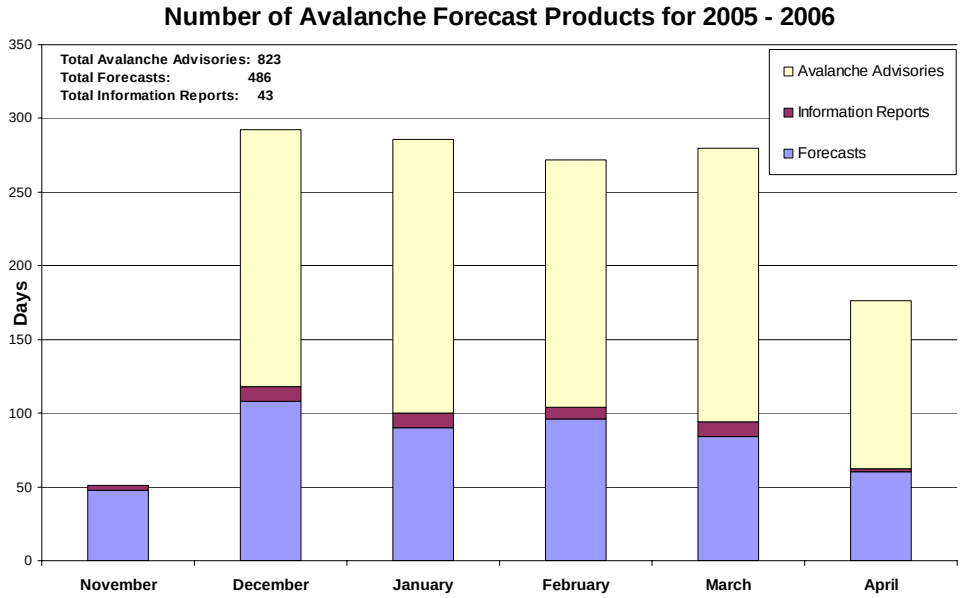


Figure 6: Number of Avalanche Forecast Products for 2005-06

Coordination of Public Avalanche Safety Programs

Many Canadian agencies offer public avalanche safety programs in Canada. The CAC serves as a hub of coordination for public avalanche safety programs in Canada, maintaining excellent relationships with the full spectrum of the avalanche safety service providers.

The development of the Backcountry Avalanche Advisory (BAA) program is a good example of our role as coordinator. The BAA was developed in partnership with Parks Canada Agency, and in 2005/06 the CAC has successfully encouraged its use in Kananaskis Country (Alberta), the North Shore (BC), and Whistler Backcountry (BC) in addition to all forecast regions of the CAC and Parks Canada Agency. All producers of public avalanche information in Western Canada now produce BAA icons daily where appropriate. The CAC has also encouraged the use of the BAA icon program internationally through contacts with Sweden and the United States.

The CAC enjoys a close relationship with the centre d'avalanche de la Haute Gaspesie (CAHG). In 2005-06 we continued to jointly present the case for public funding of avalanche safety initiatives in Canada to federal government agencies. Collaboration with the CAHG occurred in ministerial-level communication with Environment Canada and

Public Safety and Emergency Preparedness Canada, and department-level interaction with Natural Resources Canada and Industry Canada. Consultation also occurred on CAHG interaction with provincial government ministries in Quebec.

Additional CAC/CAHG coordinated activities:

- Mentorship/exchange with CAHG staff,
  - Dominic Boucher at CAC December 9-16, 2005
  - Avalanche Awareness Days assistance, including coordination of visit by Justin Trudeau during Avalanche Awareness Days 2006
  - John Kelly in Haute-Gaspesie March 16-24, 2005
  - CAC presentation to VIP group at Haute-Gaspesie Avalanche Awareness Days 2006

British Columbia PEP – SAW Program

We continue to feel that Special Avalanche Warnings (SAW) may be one of our most effective tools for avalanche accident prevention. This program is a result of cooperation between the CAC and the British Columbia Provincial Emergency Preparedness program and has now completed its third year. During 2005-06, three special warnings were issued during periods when the avalanche forecast team felt there was an increased risk of avalanche accidents. These periods are frequently not concurrent with peaks in avalanche activity; rather, they follow a rhythm that has more to do with behavioural factors than the state of the snowpack. A special avalanche warning consists of:

- Notification of partner agencies;
- Press release;
- Targeted media campaign;
- Extra avalanche forecast, report, or warning product as required;
- Availability of forecasters for media and public enquiries.

See Appendix C for examples of Special Avalanche Warning products.

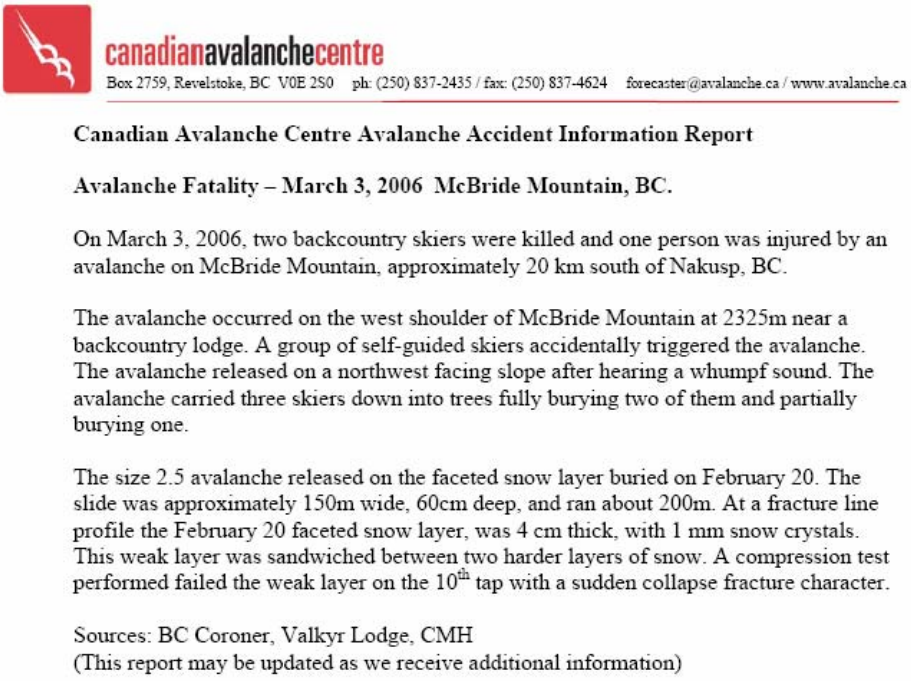
Bulletin Writers Workshop

On May 2, 2006 the CAC and Parks Canada hosted a half-day workshop for public avalanche bulletin writers at the CAA/CAC spring meetings in Penticton. Approximately 45 forecasters attended this meeting, including representatives from every operation in Canada producing avalanche bulletins for the public. Operation representatives in attendance included the CAC, Parks Canada, Kananaskis Country, North Shore Avalanche Advisory, and several BC ski resorts providing public avalanche information as well as other special invited guests.

This workshop turned out to be an excellent forum for bulletin writers to meet each other, discuss important topics, and present new ideas or new ways of doing old things. It also served as an excellent way of bringing old dogs together with younger forecasters, and helping transfer knowledge throughout our industry.

Avalanche Accident Reporting

One significant change that occurred at the CAC this past season was the continued improvement of timely reporting of fatal avalanche accidents. As soon as possible following a report of a fatal avalanche accident, the CAC forecasters coordinate basic, factual information from a variety of sources and transmit it the public in order to help prevent similar accidents. This type of reporting exists among professionals (i.e. InfoEx), but in the past, public information regarding accidents has often been lacking and left to the media for reporting.



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Canadian Avalanche Centre Avalanche Accident Information Report

Avalanche Fatality – March 3, 2006 McBride Mountain, BC.

On March 3, 2006, two backcountry skiers were killed and one person was injured by an avalanche on McBride Mountain, approximately 20 km south of Nakusp, BC.

The avalanche occurred on the west shoulder of McBride Mountain at 2325m near a backcountry lodge. A group of self-guided skiers accidentally triggered the avalanche. The avalanche released on a northwest facing slope after hearing a whumpf sound. The avalanche carried three skiers down into trees fully burying two of them and partially burying one.

The size 2.5 avalanche released on the faceted snow layer buried on February 20. The slide was approximately 150m wide, 60cm deep, and ran about 200m. At a fracture line profile the February 20 faceted snow layer, was 4 cm thick, with 1 mm snow crystals. This weak layer was sandwiched between two harder layers of snow. A compression test performed failed the weak layer on the 10th tap with a sudden collapse fracture character.

Sources: BC Coroner, Valkyr Lodge, CMH
(This report may be updated as we receive additional information)

Figure 7: Example of an avalanche accident summary for the Mt McBride accident

In order to improve this situation, the CAC now obtains factual, verifiable information from credible sources, including the BC Coroners Service, RCMP, BC Provincial Emergency Program, avalanche operations, and CAA professionals. The CAC avalanche forecasters produce a summary report of these facts and provide this information to the public as soon as possible. Information is posted to the CAA/CAC website, updated as required, and archived for future reference.

Other coordination activities included:

- Collaborative accident prevention programs delivery
  - AdventureSmart: participation of AdventureSmart teams in Avalanche Awareness days activities
  - SnowSmart
  - Staying Alive program (Parks Canada Agency), CAC participation in Staying alive in Golden and Lake Louise (presentation, booth)
- Liaison and avalanche issue resolution, federal and provincial agencies, NGO's – ongoing

- Work with Canadian, US experts and organizations in international Avalanche Danger Scale revision

Deliver Public Avalanche Awareness and Education

A major goal of the CAC is to understand the needs for avalanche safety products and services in Canada. To this end we have engaged in or supported a variety of interactions with the public, stakeholders and avalanche experts. Together, our aim is to collect data on who is at risk from avalanches, and why, so we can better target our avalanche awareness and education activities. Results from some of the surveys are presented below.

Understanding patterns of backcountry use

- Risk Propensity – From the Avalanche Decision Framework for Amateur Recreationists (ADFAR)
  - Snowmobilers are by far the most conservative user group
  - Backcountry skiers/boarders are more likely to take risks
  - Up to 15% of out-of-bounds skiers perceive the risk of being injured or killed in an avalanche as an acceptable outcome of their activity

Use of backcountry

- From ADFAR surveys:
  - The area in Western Canada with the strongest relative growth in backcountry use is south eastern British Columbia.
  - Out-of-bounds skiing seems to be the non-commercial backcountry segment with the highest growth rate followed by snowmobile riding.
  - Currently, snowmobile riders seem to be the largest backcountry user group.

Characteristic	Back country skiers	Out-of-bounds skiers	Snowmobilers
Age	**Younger**	**Younger**	**Older**
Education	**University or post-graduate degree**	**University or trades training**	**Trades certificate or diploma**
Household Income	↓	↓	↑
Employment	**Student, seasonal, full time**	**Seasonal or full time**	**Full time**
Years experience in sport	**Middle**	**Least**	**Most**
Day/year spent recreating	**Most**	**Middle**	**Least**

Figure 8: Categories of backcountry winter recreationists from ADFAR study results.

Other surveys completed:

- Recreational avalanche course student survey (see below under RAC programs)
- Bulletin subscribers survey
- Snowmobile user group survey

Photo: Mary Clayton

Avalanche Awareness Days – Big White

The Avalanche Awareness Days (AAD) events were very successful this year and we are learning more and more about the close relationship between AAD and the Recreational Avalanche Course program (RAC). AAD events target our message to the backcountry and out-of bounds skiers, making this a prime venue for reaching a critical target market for introductory RAC courses. With no additional promotion, RAC providers managed to sign up more than 60 students over two days simply through sign-up sheets at the CAC tradeshow booth at Big White. We intend to specifically promote RAC as our theme for next year's Avalanche Awareness Days.

At Big White, and at the 30 venues such as ski resorts and snowmobile clubs around BC and Alberta, we had a variety of on-hill events including mock rescues and dog searches as well as snowpit demos and beacon searches. This year at Big White we teamed up with AdventureSmart to conduct a Snow Safety Education Program to the school at Big White for grades 4-6. We had media coverage from both national and local media at our National Event at Big White. Larger satellite AAD venues also had media attendance from local print and CBC radio coverage. Canadian Pacific Railway continues to be our presenting partner for Avalanche Awareness Days supplying vital financial support that makes the event possible.

Justin Trudeau and the Canadian Avalanche Foundation continue to be strong champions of AAD activities. Mr Trudeau attended the AAD events at Big White as well as in the parc nationale de la Gaspesie (AAD is held on Easter weekend in Quebec), providing inspirational messages, keynote addresses and taking part in activities.

CAC Snowmobile Champion - Winter 2005/06
Snowmobilers account for 24% of all avalanche fatalities in Canada. This compares favourably with our neighbours to the south where snowmobile accidents have been increasing rapidly. Since 1996, snowmobilers account for more than half of the US avalanche accidents yearly. In order to prevent a similar trend in Canada, the CAC will need to be proactive in reaching Canadian snowmobilers with avalanche safety messaging.

Our first year of the CAC Snowmobile Champion program represents an exciting new departure for avalanche safety activities. The CAC contracted two qualified, high-profile members of the snowmobile community to present avalanche safety messages directly to their peers. The goals of the Snowmobile Champion program were:

- To promote awareness of avalanche risks during mountain snowmobiling activities
- To raise awareness of CAC avalanche safety materials and programs
- To encourage the use of avalanche safety information and promote avalanche awareness training

CAC snowmobile champions focused their efforts on several activities. Achievements included:

- Delivery of ten community-based avalanche workshops
- Visiting 27 snowmobile dealers to recruit them as important allies in the distribution of avalanche safety information, education and equipment.
- Attending meetings at 12 snowmobile clubs to promote workshops
- Participating in major snowmobile events, running beacon and avalanche safety equipment demonstrations.

Edmonton and Calgary Snowmobile Shows
The CAC participated in both the Edmonton and Calgary snowmobile shows. These events are opportunities to interact with a large number of mountain snowmobile enthusiasts. Visitation to the CAC booth was estimated to be 200 people per day over six days of shows and we were impressed with the high level of interest and enthusiasm with which we were received.

Big Iron Shootout
Possibly the biggest single backcountry event in Canada is the Big Iron Shootout. Held on April 14-16, this year close to 4000 riders converged on Revelstoke, BC to participate in hill climbing, high-marking and general backcountry exuberance. The main participation event seemed to be watching and pointing. The CAC's interest and presence

centred on the rare opportunity to interact with a concentrated group of snowmobilers from all over Western Canada and beyond. A team of five CAC staff and volunteers were onsite to do beacon clinics, search and rescue exercises, perform user group surveys and hand out avalanche safety material.

The Big Iron Shootout *Photo: Alan Jones*

Youth Programs Coordination

The BC Provincial Emergency Program's AdventureSmart, Smartrisk, Canadian Ski Patrol System, Canadian Avalanche Association, Whistler-Blackcomb, Canada West Ski Areas Association, and other organizations have developed various snow-sports safety materials for age groups from elementary school through young adult. A CAC initiative is to serve as a central access point for these youth-oriented snow safety programs.

This year, we prepared a sponsorship package for youth programs. Next season we will create a "Youth Programs" menu on our website with descriptions of these programs, which will allow the user to download some of the supporting material from the web. The AdventureSmart initiative of the BC Provincial Emergency Preparedness program is a major CAC partner in youth programs delivery in BC.

Published Articles for Community Awareness

In the interest of building community awareness and encouraging education, a number of articles were written this winter for smaller, weekly newspapers. This outreach began when a particular weak layer existed in the snowpack throughout the Rockies and the eastern slopes of the Cariboos and Purcells. We wrote a story describing, in layman's terms, the nature of the hazard and gave some general advice on how to manage that particular risk. The article was published in some 20 newspapers in the affected area, as far north as the Robson Valley Times and south to the Pincher Creek Echo.

From that initiative in mid-January, the Fernie Free Press requested a weekly column for the remainder of the winter from our office. We were already providing a bi-weekly column for the Revelstoke Times Review at this point. Through these two outlets, we were able to provide basic summaries of the snowpack's evolution throughout the winter, as well as some more general education for people who may not otherwise access our services.

Other Avalanche Awareness and Education Activities

- Distributed safety materials & messages at Edmonton and Calgary snowmobile shows, Banff Mtn. Film Festival, Staying Alive (Golden)
- Produced four issues of *Avalanche News* containing the latest Canadian and international avalanche safety information
- Distributed avalanche information brochures to AdventureSmart, Alberta Snowmobile Association, CSPS etc.
- Partner with MEC to update "Mountain Safety Series" for web-based delivery
- Public and technical sessions at the CAA-CAC AGM

Provide Avalanche Related Training to Amateur Backcountry Recreationists

Backcountry Avalanche Workshops

Full-day avalanche safety seminars were presented in Vancouver, BC and Calgary, AB in late November. The Backcountry Avalanche Workshop (BAW) program targets active winter recreationists with some avalanche training – at least a Recreational Avalanche Course and possibly much more. This event is sponsored by Columbia Brewery.

Typically participants are backcountry skiers and boarders. We encourage college and university student attendance through discount ticket pricing, and often these people are “out-of-bounders” or are just discovering the backcountry. The ideal participant is a dynamic trendsetter who broadcasts the messages, and influences their friends.

The BAWs provide early season avalanche safety primers that help people start their winter right. They are opportunities for backcountry enthusiasts to get together with avalanche experts who share insights, introduce new ideas, tools and techniques, and educate through informative commentaries. In the end, the BAW helps participants better manage their risks.

Recreational Avalanche Course (RAC) Program

The RAC program was integrated into the CAC during the 2005/06 season. Delivery of recreational avalanche courses in Canada through the RAC program is a collaborative effort between the CAC and a wide spectrum of private-enterprise course providers. The role of the CAC in recreational avalanche courses is to develop and maintain course materials, and to promote avalanche education at all levels. Course delivery is performed by private individuals or businesses that satisfy the requirements of the RAC provider agreement. The CAC RAC program is sponsored by Mountain Equipment Co-op, which provides important financial support and offers material and in-kind support to both instructors and students in the RAC program.

For 2005/06 season, the RAC program was administered by the new Program Services position. Below are the RAC Provider statistics for 2005/06:

- Total RAC Providers: 278
- Total with signed provider agreements for 2005-06: 163
- New RAC Providers in 05/06: 50

The RAC providers taught over 3000 RAC students in a combination of RAC and ARAC courses. (Figure 12).

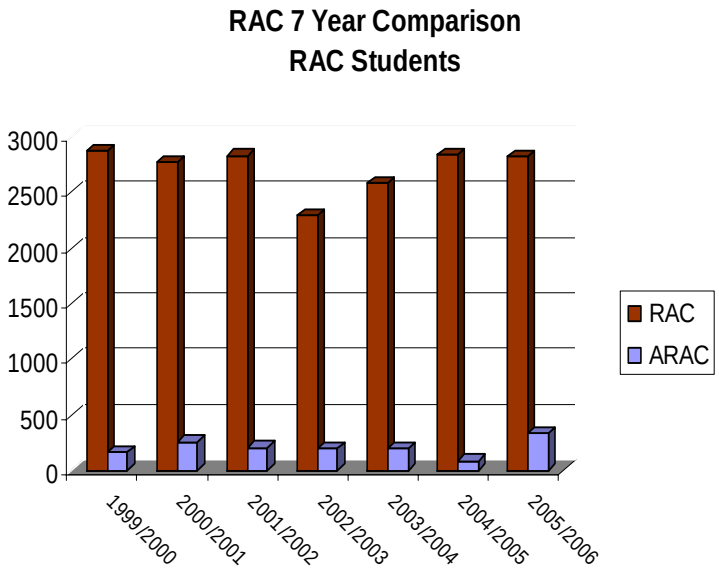


Figure 9: RAC Student 7 year comparison: Note: 2004-05 totals estimated based on book sales, not actual students enrolled.

Other highlights of the 2005/06 RAC program were:

- CAC provided early season RAC Provider training – ITP, BAW & Level I Refresher
- Introduction of new supporting materials
  - Two new DVD's
  - Pop & Drops CD
  - Slides in PowerPoint
- Continuation of Mountain Equipment Coop sponsorship commitment
- Introduction and distribution of a new RAC Provider newsletter
- Creation and distribution of RAC Student Survey to capture demographic and recreational habits of the RAC audience
- CAC increased promotion of the RAC program through outreach programs

RAC Student Surveys - Sampling of Data Collected

Please see Appendix D for charts of key findings of the RAC Student Survey. The survey results are based on the following data:

- Sampling of 390 completed surveys
- Two Advanced RAC classes surveyed; remainder were Introductory RAC
- ~ 60 RAC providers participated
- Questions based on demographic, recreation habits, curriculum

Key findings included:

- 63% of the respondents answered that they enrolled in RAC courses for their own personal safety.
- 67% of the respondents answered "Yes" to the question of whether they were planning on taking another course. Of the 67% that answered "Yes", 45% of them indicated the next course they planned to take was an Advanced RAC Course (ARAC).
- When asked how they found out about the RAC course, 34% indicated that they received information about the course through a friend. The "Other" category was checked by 31%, which, when broken down, indicated that approximately one-third of them found the course through work (Ski Patrol, Parks etc.).
- It is important to note that 30% of the students first learned about the CAC PAB in their RAC class and 30% check the PAB every time they are planning their winter recreation.
- When asked whether the course content on terrain and route selection met their expectations, 59% strongly agreed and 28% agreed.
- When asked whether the course content on search and rescue met their expectations, 66% strongly agreed and 24% agreed. A large majority answer in the strongly agree and agree category could indicate that students are expecting to learn how to dig out their travel companions in the event of an avalanche versus expecting to learn how to prevent an incident from occurring.

Point of Contact for Public, Private and Government Avalanche Information

Interacting with the media on matters relating to avalanche safety is a CAC priority. It is the goal of the CAC to be a credible source of information about avalanche conditions and to use the media to promote avalanche safety. Responding to media enquiries, especially during periods of intense avalanche activity or after an avalanche fatality, can be a major undertaking. During the course of 2005-06 over 200 media interviews on public avalanche safety were conducted with CAC staff.

In October 2005, the CAC developed a coordinated communications strategy in cooperation with the CAA. This document supplies guidance to staff and management of the CAC that:

- Details roles and authorities in communication with the media
- Outlines key common media messages

- Provides background information on CAC policy and how it relates to CAC programs and services
- Is a quick reference on Canadian accident information and statistics

Further to this strategy the CAC has standing key promotional messages that are part of every media communication by public safety staff.

- Get educated (RAC course)
- Get the proper safety gear (beacon, probe and shovel)
- Get the current avalanche info (avalanche.ca)

During the course of the avalanche season we also develop period communication strategies as changing avalanche conditions require. See Appendix E for examples of these communication strategies.

Public Safety Communication

- 142 media interviews logged by CAC forecasters between December and April
- Approximately 50 interviews not logged (prior to December)
- Approximately 10 media contacts by ED and CD
- Total media contacts: 200+
- Six press releases (See Appendix F for sample press releases)

National Disaster Mitigation Strategy

- Prepared submission to Public Safety and Emergency Preparedness Canada on avalanches as a natural hazard (see *Avalanche News* vol.: 77)

Canadian Avalanche Roundtable

The Canadian Avalanche Roundtable is a unique stakeholder body that brings together interested parties in public avalanche safety from all levels of government as well as non-profit agencies, backcountry user groups and private enterprise. Many of them have a financial investment in the CAC, or share a vital interest in avalanche safety. Through the roundtable structure these stakeholders are given an opportunity to comment on public avalanche safety programming delivered through the CAC.

This year's roundtable activity included distribution of the public avalanche safety program plan for stakeholder review in October, 2005. The roundtable meeting on May 2, 2006, is where we provided executive and operational reviews of the previous year's activities.

Encourage Avalanche Research

The Canadian Avalanche Centre supports avalanche research through direct funding support of the chair in Applied Avalanche Research at the University of Calgary.

During the 2005-06 season the CAC did a pilot test of the Slab Avalanche Weak Layer Evolution Model developed by the Applied Snow Avalanche Consortium at the

University of Calgary. This model attempts to forecast the stability index of facet layers and surface hoar layers based on meteorological and snowpack inputs. With this tool we hope to gain a better understanding of the timing of avalanches associated with persistent weak layers in the snowpack.

The CAC also cooperated with the University of Calgary in an ongoing project to verify the accuracy of avalanche bulletins in Western Canada. This work will hopefully help us improve our warning products, and determine whether we will be more effective by producing more frequent bulletins, or issuing the same number of forecasts for more, and smaller, regions.

Charles Fiertz of the Swiss Federal Institute for Avalanche Research presented a seminar on the Swiss snowpack modelling initiatives currently underway in Europe, to forecast staff and guests on March 14, 2006.

Avalanche News

Avalanche News (subscription information: publish@avalanche.ca) continues to be an excellent vehicle for the publication of avalanche related research. In 2005-06, 10 research articles were published in the four editions covering topics ranging from human factors in decision-making, to improved assessment of manual snow profiles.

Avalanche News is a singular combination of newsletter and journal that brings accessible and useful information about avalanche safety directly to a targeted audience of public and professionals alike. The CAC supports half the costs for the production of *Avalanche News.*

Avalanche lexicon

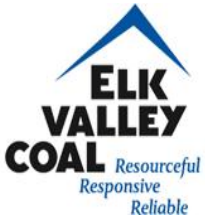
The Canadian French/English Avalanche bulletin lexicon is a research effort in cooperation with Parks Canada Agency. The CAC participated on the lexicon panel during weekly meetings between November and April and provided materials and coordination support. The lexicon has been in use since January in the translation of Parks Canada Agency bulletins and has received international attention as a translation resource for avalanche related topics. A current copy of the lexicon can be viewed online at:
http://www.translationbureau.gc.ca/pwgsc_internet/fr/publications/gratuit_free/voc_avalanche_e.htm.

Reviewers in Europe and Canada have heralded the lexicon as an important advance in translation capability for avalanche-related terminology.

APPENDIX A

CANADIAN AVALANCHE CENTRE SPONSORS SUPPORTERS & PARTNERS

We gratefully acknowledge the following sponsors for their financial support



We wish to thank these organizations for their contributions to public avalanche safety in Canada

80+ professional avalanche safety operations across western Canada that provide daily snow, weather and avalanche InfoEx data used to produce public bulletins. The value of this data is estimated to exceed $2 million annually.

SEARCH AND RESCUE / RECHERCHE ET SAUVETAGE

Parks Canada / Parcs Canada

MSC Meteorological Service of Canada

Canadian Avalanche Foundation / Fondation Canadienne des Avalanches

NSERC CRSNG

Royal Canadian Mounted Police / Gendarmerie royale du Canada

Alberta Government of Alberta

Canadian Ski Patrol / Patrouille canadienne de ski

Forest Service British Columbia

APPENDIX B

2005-06 AVALANCHE FATALITIES

Date	Location	Activity	Fatalities	Summary
Jan. 7, 2006	Kicking Horse Mountain Resort, BC	Out-of-bounds skiing/boarding	1	Lone boarder in permanent closure at ski area. Buried by self-triggered Size 2.
Jan. 14, 2006	Wolverine Bowl, Island Lake, BC	Non-recreation	1	Guide struck by avalanche while making weather/snowpack observations
Feb. 12, 2006	Commonwealth Valley, Kananaskis, AB	Backcountry skiing	1	Skiers triggered size 3.5 avalanche. Two caught, one succumbed to trauma.
Mar. 3, 2006	McBride Mountain, Valkyr Range, BC	Backcountry skiing	2	Self-guided skiers based out of backcountry lodge. Three caught in skier-triggered size 2.5 avalanche, two killed.
Mar. 5, 2006	Fairy Creek, Fernie	Snowmobiling	1	Snowmobiler highmarking triggered avalanche, burying partner below. Rescued later by rescue personnel.
Apr. 20, 2006	Mt. Deltaform, Kootenay National Park, BC	Mountaineering	1	2 climbers on the Supercouloir route, triggered Size 3 avalanche on descent. One fatality, other rescued 3 days later with severe injuries.
Apr. 21, 2006	Nordschaw Drainage, Bella Coola, BC	Snowboarding	1	Professional Austrian snowboarder triggered Size 3 slab during photo shoot, recovered by safety personnel.

APPENDIX C

EXAMPLES OF SPECIAL AVALANCHE WARNING PRODUCTS

A. Special Avalanche Warning Pre-release

Dear Friends and contributors,

The Canadian Avalanche Centre will emit a special public avalanche warning on Friday, February 10, 2005 covering the period Saturday February 11, 2006 to Sunday February 12, 2006. This warning will be narrowly targeted to areas near the Rocky Mountain Trench, that is to say the east slopes of the Purcells from Golden to Cranbrook, parts of the Elk Valley, the east slopes of the Cariboos from south of Valemont to south of Prince George and the BC Rockies.

We are in the process of preparing our communication strategy which will focus on significant warming, clear weather and an expected surge in backcountry use. Our messages will indicate what backcountry users can do to decrease their risk. We are not recommending that people stay out of the mountains, rather they should carefully consider their route and exposure.

This will be the second special avalanche warning of the 2005-06 winter season warning consisting of a targeted press release, a media campaign, and an avalanche forecast and update (as required by changing conditions).

We expect avalanche danger will be Considerable in the alpine of the affected area through the weekend. Here are the key contributing factors to the need to produce this warning in their relative order of importance.

1. The weather will be spectacular for backcountry activities and there is a pent up demand to get out into the terrain. This will place many people on the slopes and there may be several “human factors” that will place people in harm’s way. Scarcity of fresh tracks will push people further and further into the mountains, leaving heavily travelled terrain that is relatively safe owing to well compacted snow layers and heading out to virgin territory where the avalanche danger may be significantly higher.

2. Warming that will bring sun and temperatures well above zero in an elevation band between 1500 and 2500 m in the interior mountain ranges on Saturday.

3. A pre-existing weak layer of facets and surface hoar exists deep within the snowpack and has been responsible for a number of recent large avalanches including some close calls. These avalanches will require something like cornicefall, or a large trigger such as a snowmobile to release, although some thin snowpacks could see skier triggering as well.

We feel that this is a situation where backcountry users will be tempted to go from very cautious use of the backcountry to very bold use of steep alpine terrain too quickly. Unless people are intimately familiar with the terrain, avalanche danger signs and this season’s and long term avalanche history, they should ramp back their expectations and “pull in their horns”. Avalanche danger below treeline is minimal and there are lots of very safe routes and places to go. We are only

worried about large open slopes at treeline and above – or exposure to the same.

Please contact me with your feedback and concerns at 250 837 2748 or to <mailto:forecaster@avalanche.ca> forecaster@avalanche.ca .

John Kelly
Operations Manager
Canadian Avalanche Centre
Box 2735, Revelstoke, BC. V0E 2S0
250-837-2435

B. Special Avalanche Warning Press Release

FOR IMMEDIATE RELEASE
SPECIAL PUBLIC AVALANCHE WARNING

February 10, 2006, Revelstoke, BC: The Canadian Avalanche Centre (CAC) is issuing a special public avalanche warning for the period of Saturday February 11 to Sunday February 12. This warning applies to many of the mountainous areas of the BC interior, specifically the east slopes of the Purcells from Golden to Cranbrook, the east slopes of the Cariboos from Valemont to Prince George, and all the BC Rocky Mountains. The warning is brought about by a combination of factors, both human- and snowpack related.

This coming weekend, much of BC is expecting clear weather and the first blue skies for a number of weeks. This will be an invitation for many backcountry enthusiasts to get above treeline. However, the CAC forecasters want to draw attention to a weak layer deep within the snowpack at that higher elevation. This layer has been responsible for a number of very large avalanches recently, including some close calls.

“There is a lot of pent-up demand to get into the alpine,” explains CAC forecaster Greg Johnson, “but the avalanche conditions there are quite a bit different than at the lower elevations. In the rush to get first tracks, it’s not uncommon for people to lower their guards, or compromise safety protocols. But this is absolutely the wrong time to cut corners, especially if you are in an area that hasn’t been packed down by frequent use. That weak layer is deep and when it fails the resulting avalanches are huge. All it takes is a trigger like a cornice fall, or a snowmobile, or even a person.”

Travelling safely in the alpine this weekend will require familiarity with the terrain, awareness of avalanche danger signs and a thorough knowledge of the area’s snowpack and avalanche history. The CAC urges all those who don’t have those prerequisites to adjust their expectations accordingly. “Avalanche danger below treeline is minimal and

there are lots of safe routes and places to go," says Johnson. "Our only concerns are the large open slopes at treeline and above."

To reduce *your* risk of being involved in an avalanche accident, you need to have at least basic training such as a recreational avalanche course. You also need the appropriate avalanche rescue gear, including an avalanche transceiver and a collapsible probe and shovel, and consult the avalanche and weather conditions before heading out. Public avalanche forecasts and information reports can be obtained at www.avalanche.ca or by phone at 1-800-667-1105. If there is no forecast for your area, local experts and experienced backcountry users can help you find the information you need to manage your risk in the mountains.

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For More Information Contact:
Greg Johnson, Public Avalanche Forecaster (250) 837-2435

C. Media Activity Subsequent to SAW

	Date	Media Outlet	Location	Topic
SAW	06 02 10	Kamloops Radio	Kamloops, BC	
	06 02 10	The Weather Network		SAW
	06 02 10	CBC Calgary		SAW
	06 02 10	CHQR	Calgary, AB	SAW
	06 02 10	Calgary Sun	Calgary, AB	SAW
	06 02 10	CBC provincial		SAW
	06 02 10	Chum.TV, City Tv Calgary	Calgary, AB	SAW
	06 02 10	City TV	Calgary, AB	SAW
	06 02 13	Calgary Herald	Calgary, AB	General interest story/ freelance article
	06 02 13	WBSJ		
	06 02 13	Weather Network		Accident involvement or fatality K Coutry
	06 02 13	CBC Radio French		Accident involvement or fatality K Coutry

APPENDIX D

RAC STUDENT SURVEY RESULTS

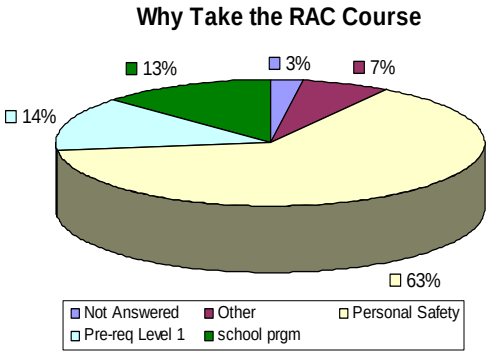

Figure 1. RAC Student Survey: Why Students enroll in a RAC Course

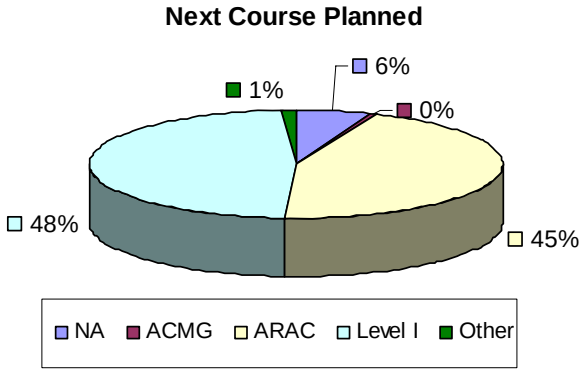

Figure 2. RAC Student Survey: What is the next course RAC students planned to take

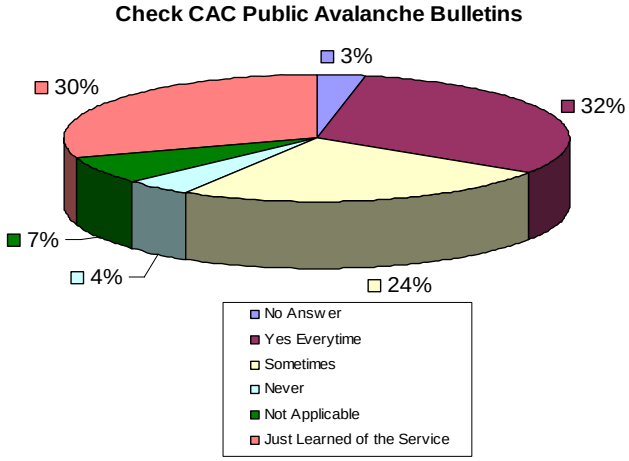

Figure 3. RAC Student Survey: Percentage of RAC students who check the PAB when planning their winter recreation.

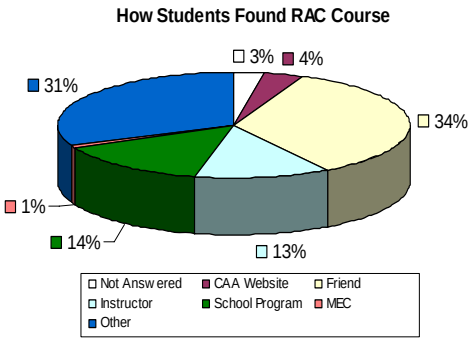

Figure4 . RAC Student Survey: How students found out about the course.

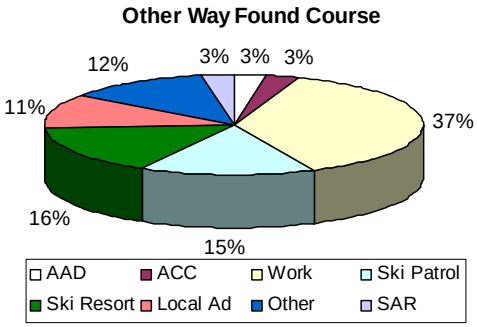

Figure 5. RAC Student Survey: Breakdown of the "Other way they found the course.

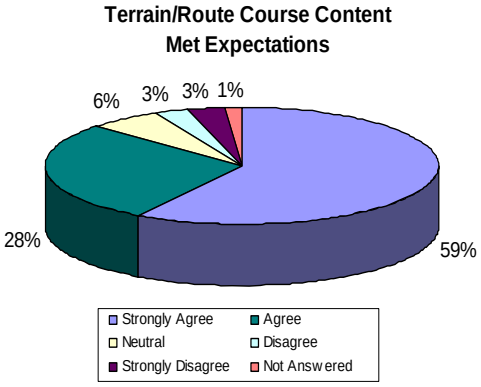

Figure 6. RAC Student Survey: RAC Students answered whether they thought the course content on route and terrain selection met their expectations.

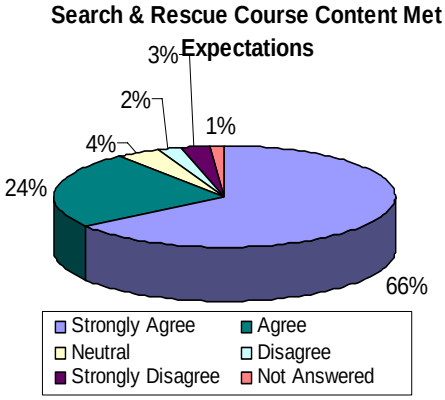

Figure 7. RAC Student Survey: RAC Students answered whether they thought the course content on search & rescue met their expectations.

APPENDIX E

SAMPLES OF COMMUNICATION STRATEGIES

- There are over 1.5 million potentially destructive avalanches each year in Canada. "More than 600 recorded fatalities caused by snow avalanches in Canada" (Source Stethem, Jamieson, Schaerer, Liverman, Germain & Walker 2003; Snow Avalanche Hazard in Canada – A Review. Natural Hazards 28 (2-3), 487-515.

- Avalanches commonly occur in the mountains of western Canada (BC, Alberta and Yukon) and also in Quebec, Newfoundland and Labrador, and Nunavut.

- 1781 – Canada's first recorded avalanche fatalities: 22 killed Inuit near Nain, Labrador when an avalanche overran their winter camp. 9 survived. (Reported in a letter written by a Moravian missionary to Labrador. Source - Geological Survey of Newfoundland and Labrador)

- 1885 – 1910: More than 200 people killed by avalanches hitting trains and workers on the CPR through Rogers Pass

- 1965 - 26 workers killed in an avalanche at Granduc mine in NW BC and 7 more in Ocean Falls.

- Western Canada has the world's best combination of mountains and snow, and avalanches are part of this natural heritage. Since 1975 most avalanche fatalities involve persons involved in winter mountain recreation activities

- In western Canada snow avalanches affect buildings, highways, railways, power lines, forestry and mining operations, and persons involved in private and commercial recreation.

FORECASTING AVALANCHES

- Avalanche forecasting is a skill requiring scientific and technical training, operational experience and knowledge of the area, and is in many respects analogous to forecasting forest fire behavior in the mountains in summer.

- Technical expertise and extensive experience are necessary to understand the complex interrelationships possible when a seasonally and spatially variable material (like forest cover or snow) exists over complex mountain topography.

- Avalanche forecasters rely on comprehensive daily reports of snow, weather and avalanche activity from around their forecast area (e.g.; operational records, InfoEx, remote weather stations, etc) to generate mental models (indices we call stability or danger ratings) of existing conditions. These mental models and indices are a "now-cast".

- Based on their "now-cast", avalanche forecasters use their knowledge of their area and forecast weather, mountain meteorology and snow science to predict avalanche conditions into the future.

- Avalanche forecasts are summaries prepared for a specific operating area or mountain region. As the size (and geographic / topographic complexity) of a forecast area increases, the probability of that avalanche forecast being 100% accurate for any one specific slope decreases.

- The accuracy of an avalanche forecast is directly linked to the accuracy of the weather forecast. As an avalanche forecaster projects further into the future, the probability of error due to unanticipated weather conditions increases. As a result the shelf life of any avalanche forecast is relatively short.

CAC avalanche forecasts and forecasters

- The CAC is proud of its team of highly qualified public avalanche forecasters.
    - Be prepared to discuss your training and experiential credentials
    - Be prepared to discuss the credentials of others on the CAC forecast team

- The CAC is proud of the accuracy of our public avalanche bulletins and warnings.

- Refer to "Comparing regional forecasts of avalanche danger with local "nowcasts" – First results" by Jamieson, Jones and Kelly. Refer to research paper at http://www.eng.ucalgary.ca/Civil/Avalanche/Papers/RegionalVsNowcasts.pdf

NON CAA/CAC OPERATIONS, POST ACCIDENT: Avalanche forecasting & risk management:

- Given the current state of science and operational best practices worldwide, operational avalanche forecasting and risk management is highly reliant on human expertise and judgment.

- Refer to the world class reputation of Canada's avalanche safety operations and the ongoing efforts of the CAA and other industry organizations (BCHSSOA, CWSAA, BLBC, ACMG, CSGA, etc. to promote safe operations. Refer to "WHAT CAA DOES FOR INDUSTRY" for more detail.

- Backcountry / mechanized ski guiding practices in western Canada are among the most advanced in the world.

- It would be unprofessional and inappropriate for the CAA / CAC to comment on specific incidents or events involving commercial operators or other agencies. We simply don't have all the relevant facts.

- Refer all further questions to the relevant industry association websites (BCHSSOA, BLBC, ACMG, CSGA etc.) that publicly post standards for their members. MARY: INSERT CONTACT INFORMATION FOR THESE BELOW

- Refer all further questions to the appropriate operator or agency. Provide contact information if requested.

- **DETAIL: At any given location the snowpack is continually changing over time**.

- Science and experience tells us that at any given location the structure (stability) of the snowpack is constantly changing in response to meteorological influences (past and recent weather). This is called temporal variability.
    - Refer to snow science and avalanche research programs at UBC and U of C.
    - Refer to international collaborations for snow science and avalanche research.

- Precipitation loading, temperature and wind patterns are important weather factors driving changes to the structure and stability of the snowpack. Refer to the importance of MSC collaborations for accurate weather forecasts.

- Seasonal weather patterns determine the strength and stability of the base layers in snowpack.
    - Refer to this year's early season weather resulting in the existing base condition.
    - Recent weather determines the strength and stability of the surface snow layers and bonds to the pre-existing snow surface.

- Avalanche professionals track temporal variability within their operating areas by observing the evolving characteristics of base and surface snow layers at designated snow study sites on a regular basis throughout the winter season.

- **DETAIL: At any given time the snowpack structure in the mountains varies from place to place**.

APPENDIX F

SAMPLE PRESS RELEASES

For Immediate Release

Focus of Avalanche Awareness Days Sadly Confirmed by Avalanche Death

Spotlight on Youth and Out-of-Bound Areas

January 9, 2006, REVELSTOKE, BC – The news of Canada's first avalanche death this season is never welcome, but for the forecasters at the Canadian Avalanche Centre, it's a sad confirmation of a growing trend. And this coming weekend, Avalanche Awareness Days will be focusing on the same factors that contributed to the death of a young snowboarder in a closed area of Kicking Horse Mountain Resort on Saturday.

"So many of these young skiers and boarders are performing their sport at an exceptional level and they're looking out-of-bounds or in closed areas for more challenges," says John Kelly, Operations Manager at the Canadian Avalanche Centre. "But that uncontrolled terrain demands an additional skill set – avalanche terrain recognition, snow stability analysis, and rescue techniques. Essentially, you need at least the same level of proficiency in avalanche training and education as you have in your sport."

The National Event of Avalanche Awareness Days will be held at Big White Village in Kelowna BC on Friday January 13. The area was chosen in part for its exploding population of young skiers and boarders. One of the highlights of the weekend will be an avalanche education session at Big White High School with Canadian Avalanche Foundation Director Justin Trudeau, which the media is invited to attend.

Other media events include an avalanche control demonstration by the Big White snow safety personnel, and an avalanche rescue dog demonstration. For more information about Avalanche Awareness Days and how to confirm your participation in the events, please contact the Canadian Avalanche Centre.

For more information please contact

Mary Clayton
Communications Director
250.837.2435
mary@avalanche.ca

Canadian Avalanche Centre Avalanche Accident Information Report

January 20, 2006
Source: BC Coroners Service

Date: January 14, 2006 Time: 0710 Location: Island Lake Resort

Elevation: approx 7500 ft Size: 3.5 Type: Slab
Length: 1000 m Width: 300 m Slab Thickness: 200 – 300 cm
Aspect: Northeast Slope Angle: greater than 40 degrees
Slope Configuration: Start Zone – rocky cliffbands with pockets of snow. Track – a talus fan leading into rolling terrain.

Detail of Accident: Guide in training was struck and buried by a maximum avalanche while doing the morning reading at the Sunnyside Manual Weather Station

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Avalanche Fatality – January 14, 2006, Wolverine Bowl, British Columbia
On January 14, 2006, at approximately 7:15 am, an avalanche worker was killed by an avalanche near Island Lake Lodge, approximately 12 km northwest of Fernie, BC. The avalanche occurred while the worker was checking a weather station 1.5 km north-northwest of the lodge near the base of Mount Baldy, near an area called Wolverine Bowl. The avalanche was triggered naturally, and descended below treeline to the weather station. The avalanche was rated Size 3.5, and was reported to have run beyond known limits in the trees. The worker was conducting routine weather observations when buried by the avalanche. At approximately 7:15 am Island Lake Lodge staff attempted to contact the worker by radio, and were unsuccessful. A search party, consisting of staff from Island Lake Lodge and a rescue dog was dispatched minutes later. Upon arrival at the weather station the staff members, using search equipment, located the missing worker approximately 1.5 m deep in an avalanche debris field. The worker was evacuated by helicopter to a hospital in Fernie, where the resuscitation attempts were unsuccessful. The RCMP and the BC Coroner's Office are conducting the initial avalanche investigation. Further details will be provided as information becomes available.

Source: Island Lake Resort Group
Box 2759, Revelstoke, BC V0E 2S0 ph: (250) 837-2435 / fax: (250) 837-4624
canav@avalanche.ca / www.avalanche.ca
Alberta address: P.O. Box 70136, Bowness RPO, Calgary, AB T3B

Canadian Avalanche Centre Avalanche Accident Information Report Avalanche Fatality – February 12, 2006 Commonwealth Valley, Alberta

On February 12, 2006 at approximately 12:45 pm (MST), a backcountry skier was killed by an avalanche in the Commonwealth Valley, Kananaskis Country, approximately 50 km south of Canmore, Alberta.

The accident site was located between Mt. Smuts and The Fist in the Commonwealth Creek valley. A group of two skiers were on the slope, when one of the skiers triggered an avalanche on a cross-loaded area with a thin snowpack. One skier was carried through trees in the path, suffered extreme trauma from impacting trees, and was partially buried. The second skier was also caught by the avalanche, but managed to ski out. The second skier provided initial first aid, and then left the scene to obtain further assistance from Kananaskis Country emergency personnel. The injured skier succumbed to his trauma injuries. Four snowshoers were nearly hit by the avalanche that reached the valley bottom; these snowshoers were not carrying avalanche safety equipment. Other skiers in the area also came to aid in the accident.

A fracture line profile conducted by Kananaskis Country personnel showed a fracture depth of 40 to 155 cm. The Size 3.5 dry slab avalanche was approximately 400 m wide and 1000 m long, with an average starting zone slope angle of 35-40 degrees. The suspected trigger location for the avalanche was a 40 degree southeast facing slope at 2500 m elevation. The failure layer was likely a layer of depth hoar crystals overlying a crust formed in October.

Source: Kananaskis Country emergency personnel
(This report may be updated as we receive additional information)