

# Organizational Implications of Avalanche Fatalities

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**Abstract:** Avalanche fatalities have far reaching implications beyond the scope of what many individuals and organizations consider. On January 13, 2002 National Park Warden, Mike Wynn succumbed to injuries sustained in an avalanche that buried he and two colleagues. Financial and human costs, media relations, in-house and third party investigations, organizational disruption, psychological follow-up and family considerations are examined.

**Key words:** avalanche, avalanche accidents, fatality, investigations

## 1. Preface

*This paper has been adapted from a presentation first made at the Canadian Avalanche Association general meetings. It attempts to capture the themes of the presentation although the original intent was not for publication in this format.*

On January 12, 2002 three park wardens were conducting routine snow and avalanche observations in the Parker Ridge area near the northern boundary of Banff National Park. At approximately 14:30 Jasper Emergency Dispatch received a broken radio transmission: an avalanche from above had overtaken all three men. The report came from one of the three who was able to free himself from the debris. Immediate companion rescue efforts were initiated. One warden was located in 4-6 minutes and was uncovered, unconscious and not breathing. Immediate AR was able to produce spontaneous breathing. As is often the harsh reality, the search for the final missing person was not to be as fortunate. He was uncovered 25 minutes after the avalanche hit, buried under 1.5 metres of snow. CPR was initiated and an organized rescue response followed. Despite tremendous efforts at the scene and later in hospital he died from his injuries. A husband and father of a two-year-old son, Mike Wynn was 37 years old.

## 2. Introduction

Avalanche fatalities have far reaching implications

beyond what many individuals and organizations consider. Not intended to be a complete list, the following items are presented to provoke thought and to help develop awareness. While it pays to be prepared for the worst, accident prevention must always be the focal point of any organization.

## 3. Considerations

### 3.1 Expense

Direct costs of this avalanche rescue operation with helicopter support, multiple ambulances, investigations and incidentals exceeded \$40k. This figure does not account for wages of employees during the operation or for the weeks of time spent during the subsequent months of related follow-up work.

The actual cost to "replace" a fully trained person in an organization would fall into the \$1-2 million range. The most significant cost however, that being the human cost, is immeasurable.

### 3.2 Media Relations

The death of an employee significantly stresses the capabilities of any organization. The media attention surrounding such an event can easily transform this stressed state to an overwhelmed state. Media attention surrounding the Parker Ridge avalanche encompassed at least 5 on-camera television interviews, 15 newspaper interviews and no less than

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12 radio spots. Follow-up interviews were still taking place the week prior to this paper's original presentation, four months after the incident.

The message regarding the media is simple. Be prepared. Reporters have a job to find stories and present them in a interesting fashion to viewers/listeners/readers. If the story is noteworthy it will receive attention. If your organization is not prepared or willing to deal effectively with the media, they will keep looking. While you do not want to hide the facts regarding an incident you do want to present your perspective on the story. If you fail to satisfy the curiosity of the media by being evasive or not forthcoming with details, they will go elsewhere in search of the story. They may end up finding an alternate perspective that may not portray your operation in a favourable light.

Media relations is a subject of its own worthy of a dedicated paper. There are many training providers available that can assist your organization with a media preparedness plan.

### **3.3 Technical Investigations**

After the field component of the operation has been concluded several levels of investigation take place. The details of the incident are examined in an attempt to answer the question, "why?"

Avalanche professionals from other national parks as well as the Canadian Avalanche Association conducted the technical investigation for the Parker Ridge Avalanche. Fracture line profiles, weather history, a site visit and photographs were used to help determine causative factors.

The investigation revealed the following details regarding the accident:

- ◆ NNE aspect
- ◆ Incline start zone 34-38 degrees
- ◆ Crown width 300 m
- ◆ Crown Depth 30 - 124 (average 60cm)
- ◆ Size 2.5
- ◆ Failure layer: 4F facets size 2
- ◆ Compression test results: H(22)@70 cm
- ◆ Snow Stability Rating: Fair

### **3.4 Labour Canada Investigation**

Various levels of government, depending on jurisdiction, may be called upon to conduct a microscopic analysis of your operation. In the case of the Parker Ridge avalanche **all** documentation regarding the job, operational plans, training records, procedures, protocols and staff orientation materials is being reviewed by Labour Canada. The depth of the review is such that findings are not expected for at least one year's time.

### **3.5 Administrative Review**

An entirely different form of investigation, Jasper National Park performed an "Administrative Review" of the accident. Broad in scope, this amounted to a critical examination of the Park's entire avalanche program.

The Administrative Review was specifically tasked to identify policies, practices or procedures:

- ◆ That contributed to positive outcomes and should be continued.
- ◆ Where modifications may reduce the risk of future incidents.

The scope of the review includes training, certification, equipment, communications, planning, policies for risk operations, employee/survivor support and assistance, etc.

### **3.6 Case Studies**

Following the discovery of the details of the incident the information is then summarized and presented at meetings and workshops and published in reports and books. This information is intended to be used to further our collective knowledge, that is, for us to learn from and to teach to others.

The specifics may read like this when presented as a case study: Three park wardens made a ski ascent in the Parker Ridge area to do snow profile observations adjacent to a highway control path. All carried standard safety equipment including beacon, probe and shovel. One member of the party had received avalanche awareness training while the others had completed the CAA Level 1 and Level 2 respectively.

On their descent the three men traversed a low angled terrace below a steep headwall and above an area of dense forest. At this point an avalanche was triggered and all 3 were caught and buried. One man was able to free himself, he then located the second

man who was almost completely buried, unconscious and non-breathing. Artificial respiration was performed until spontaneous breathing occurred (2 minutes). At this point the search began for the third and final person. On uncovering the final man, CPR was initiated immediately although the awkward position of the subject made chest compressions difficult. Organized rescue efforts followed and the subject was transported to Calgary where he later died from his injuries.

The particulars of the January 12, 2002 Parker Ridge Avalanche:

- ◆ Depth of burial 1.5 metres.
- ◆ Time of burial 25 - 30 minutes.
- ◆ Subject unable to exchange air (no ice mask).
- ◆ No physical trauma.

### 3.7 Workload Disruption

Depending on the circumstances an organized avalanche rescue operation can take anywhere from minutes to days to complete. Many organizations with emergency response mandates can participate in a serious rescue and be ready for another later in the same day. When the incident involves emergency responders a significant portion of your energy and resources will be required to handle the immediate increase in workload. Media relations, investigations, operational debriefings and many other incidental tasks that are direct fall-out from the accident, combine with a net decrease in employee's productivity. Many individuals are simply trying to cope with the stress of the situation, let alone further the goals of the operation.

### 3.8 Psychological Follow-up

This accident affected all of the park employees, some profoundly. The park's avalanche control operations and emergency response duties must be maintained following an incident such as this. Key people within the operations of an organization, many of who were closest to the event, remain the key people and are expected to be ready for further emergencies as they arise.

Management requires some level of assurance that employees are "fit" to return to work. Many individuals need to take time off to rest, reflect and grieve while others prefer to immediately return to work. At one point the question was asked of me, "Is this staff member ready to return to work?" Who is to say I was fit to be at

work let alone evaluate the fitness of others? The use of common sense and good judgement will often lead to appropriate solutions. However, professional consultation must also be considered to guide your approach. Even then, who really knows what course of treatment will best suit each of the individuals involved?

The emergency responders, along with their spouses and families require immediate treatment to protect against Post Traumatic Stress disorders and to safeguard their own long-term health. This combines to insure the overall health of the organization.

A reference document regarding psychological services is being developed for use in future incidents. This document will outline practices intended to safeguard individuals mental and emotional health by summarizing the lessons learned.

### 3.9 Spousal Considerations

Mike is survived by his wife and two-year-old son. They lived in staff accommodation 72 km from town. Mike was the main wage earner in the family and a career warden. The future can only be a frightening and empty place for someone in this situation.

There were several questions left to park managers. What was the park responsible for in terms of housing and relocation and what of future employment opportunities? Thankfully insurance was in place and Worker's Compensation will provide steady income for several years to come. Financial considerations however are only one aspect of the big picture. When does the involvement of the organization constitute an appropriate helping hand and when does it become meddling? It is a fine line indeed when dealing with people's lives and emotional well being. There seems to be more questions than answers when attempting to comfort/console/guide grieving loved ones.

## 4. Summary

Fatal avalanche involvements continue to be a reality in the Canadian avalanche industry. Training courses have and will continue to focus training efforts on developing safe practices and risk management strategies for professionals. Organizations too must develop an awareness of the greater implications of avalanche accidents. The above list attempts to introduce some of the operational implications of

avalanche fatalities. While no organization can ever be fully prepared for avalanche fatalities some basic steps can be taken to help them manage in the event of such a tragic situation.