

TO: All Regional Directors  
All Avalanche Technician Supervisors  
All Avalanche Technicians

**SUBJECT:**

Weather Forecast Requirements for Snow Avalanche Forecasting.

**PURPOSE:**

To clarify the requirements for weather forecast information in support of Snow Avalanche Forecasting for regional and district operations.

**BACKGROUND:**

Avalanche Forecasting refers to the prediction of current and future snow stability through the synthesis of large amounts of information relating to past and present snowpack structure, recent avalanche activity, and weather conditions. Weather forecasts are applied in the process of extrapolating current avalanche conditions and stability trends into the short term future.

Over the past fifteen years, the Ministry has installed and maintained a network of electronic weather stations primarily to support avalanche operations but also more recently to support Road Maintenance Operations. These electronic weather stations provide more timely weather observations, and enable increased automation of the data transfer processes. The Ministry now has a substantial network of these stations, providing access to current atmospheric conditions at or near all critical avalanche hazard areas.

In the winter of 1994, Snow Avalanche Programs undertook an evaluation of weather services (Walker, 1995; Mellor et al., 1996) plus additional local program trials of various alternative weather services and forecast delivery mechanisms. This review process included trials of the operational use of publicly available weather forecast products (from public broadcast services and the internet). These trials proved that there is sufficient publicly available weather information (used in combination with timely and reliable weather observations, and other factors) to conduct Avalanche Forecasting for Highways Operations and Public Safety.

**NEW POLICY:**

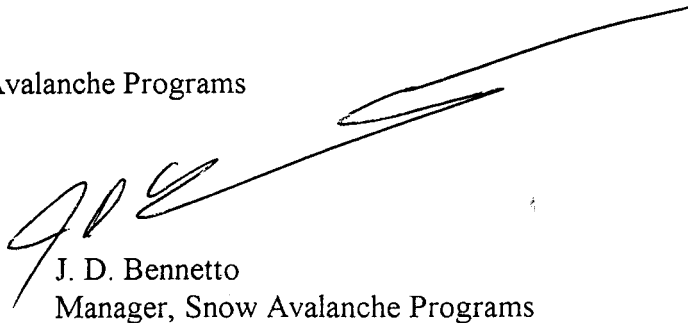
As a result of the weather service evaluations, the increased number of electronic weather stations, and the improved access to weather forecast information via the internet, a decision was made by the Ministry's Avalanche Technicians in the Spring of 1998 to rely on weather information from publicly available sources. For daily operational decision making, each program will gather and assimilate a combination of the following information:

- synoptic weather charts (analyses and prognoses)
- animations of satellite imagery,
- output from Doppler radar where applicable
- public forecast information
- output from research in numerical weather prediction

Avalanche Technicians are also expected to make use of meteorological consultation services as and when required by winter operations.

**CONTACT:**

Jack Bennetto, Manager, Snow Avalanche Programs



J. D. Bennetto  
Manager, Snow Avalanche Programs

**REFERENCES:**

- Mellor, T, E.J. Weick and A. McClean, 1996, Evaluation of Weather Forecast Products: World Weather Watch's Mountain Forecast and Road Maintenance Forecast; Northwest Avalanche Center's Mountain Forecast and Environment Canada's Mountain Forecast and Road Maintenance Forecast, BC Ministry of Transportation and Highways, 56pg.
- Walker, S.J., 1995, Weather Observation and Forecasting Network, Review of Weather Forecasting and Recommendations for the Future, BC Ministry Of Transportation and Highways, 38pg.

See Distribution List

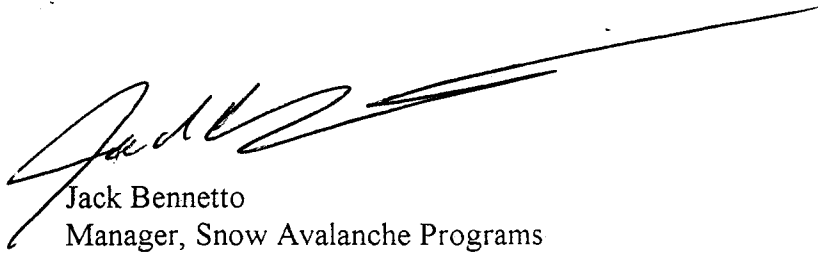
December 2, 1998  
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**Re: Weather Forecast Requirements for Snow Avalanche Forecasting**

Find attached technical circular T6/98 defining use of weather information for snow avalanche hazard forecasting.

This policy has been developed for a number of reasons, primarily motivated by changing technology. Electronic weather stations provide more immediate and real-time access to weather conditions and electronically available weather forecast products through public venues provide new options for avalanche forecasting.

These changes in technology have prompted changes in the traditional approach to the acquisition of weather forecasts and integration of weather data for the development of snow avalanche forecasts. This circular defines the adjustment in the processes of assimilating weather information to produce snow avalanche forecasts.



Jack Bennetto  
Manager, Snow Avalanche Programs  
Snow Avalanche Programs

JDB/cam  
Attachment

cc: Rodney Chapman, Director, Construction/Maintenance Branch  
John Shaw, Manager, Operations Policy, Construction/Maintenance Branch

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Printed By:  
To: Glen Roberts@HENG DESIGN  
From: John Shaw@MAINTENANCE  
Cc:  
Bcc:  
Subject: re: T-Cir T6-98 TC for Accident Scenes  
Attachment:  
Date: 9/14/98 9:16 AM

Glen:

Ok. Let me know when you are going to issue and I will provide a new number.

John Shaw

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Original text

From: Glen Roberts@HENG DESIGN@TH\_OPS\_PROFSERV, on 9/14/98 9:03 AM:  
To: John Shaw@MAINTENANCE@TH\_OPS\_PROFSERV

John:

Looks like we're not going to issue this one right away - should we can the number?

Regards,

Glen Roberts  
Sr. Traffic Standards Technologist  
Ministry of Transportation & Highways  
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