



MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE SNOW AVALANCHE

PROGRAMS

RESPONSE TO NON-HIGHWAY AVALANCHE INCIDENT

Prepared by:

Avalanche and Weather Programs July 2009



Ministry of Transportation and Infrastructure Snow Avalanche Programs

Response to Non-Highway Avalanche Incidents

1.0 Introduction

The rising popularity of winter recreational activities has resulted with an increase in backcountry avalanche involvements. Ministry of Transportation and Infrastructure, (MoTI), Avalanche and Weather Programs (AWP) staff have been contacted numerous times by various authorities (ie: Provincial Emergency Programs, RCMP) to coordinate and/or assist with non-highway avalanche related incidents.

With the increasing frequency of these requests it has become necessary to define conditions for MoTI, AWP staff to participate in these types of events. It is also necessary to define levels of responsibilities of involved agencies; MoTI, Provincial Emergency Programs, RCMP and the Coroners Service. This document identifies the conditions for MoTI involvement and the responsibilities of involved agencies.

2.0 Conditions of MoTI Involvement

If Ministry, AWP staff receive a request to become involved in a non-highway avalanche incident, the first consideration must be whether or not their absence will adversely affect avalanche safety to highway segments they are responsible for.

Every backcountry avalanche accident situation will have unique considerations. The backcountry rescue is not the responsibility of the AWP staff. It will be up to the discretion of the Snow Avalanche Technician to either respond or defer a response elsewhere (ie: Canadian Avalanche Centre registry).

Ministry, AWP staff who become involved in a backcountry avalanche rescue effort will be considered as working as a Ministry employee with full coverage, even if the response is made on a scheduled day off.

Ministry, AWP staff must not take on levels of responsibility for which they have insufficient knowledge or training. Ministry, AWP staff with sufficient knowledge and experience may act as technical experts to advise other involved agencies.

Depending on circumstances of the incident, involved participants may also be called upon as a witness in legal proceedings.

3.0 Accident Response Protocol

If a member of the MoTI, AWP accepts responsibility to participate in a backcountry avalanche rescue effort, their primary role is to work in the capacity as a Site Safety Officer and to advise involved agencies on safe, effective and efficient search and rescue techniques. Ministry AWP staff may also (at their discretion) perform explosive control missions in order to ensure safety of rescue personnel.

A PEP task number must be confirmed prior to MoTI involvement in a backcountry avalanche rescue effort. The task number is necessary to identify the rescue effort and to charge expenses related to the rescue. The task number also confirms that participants involved in the rescue are covered by the Emergency Program Act, liability provisions. The ASE number is necessary if any aircraft are used for the rescue effort.

The PEP task number and ASE number can be requested en route to the accident site or by other ministry staff not directly involved in the on-site rescue effort. If necessary call the PEP Emergency Response phone number:

- 1-888-344-5888 (24 hour -7 days/week)

Expenses incurred by the Ministry through the involvement of Snow Avalanche Programs staff and resources will be reimbursed by PEP, by reference of the task number assigned to the rescue effort.

If the call requesting assistance comes directly from PEP the task and ASE numbers will be issued at that time.

Avalanche accidents involving fatalities may result in a request from the Coroners Service for a report from Ministry, Snow Avalanche staff involved in the rescue.

4.0 Responsibilities

Responsibilities of agencies likely to become involved in a non-highway avalanche incident include the following:

4.1 RCMP

- Is the agency responsible for the overall coordination of the rescue effort;
- Likely to be the first agency to receive request for assistance;
- Contacts PEP with preliminary accident particulars;
Contacts Coroners Service if fatalities involved and may be authorized by the coroner to take charge of the avalanche scene.

4.2 PEP

- Provide and/or coordinate resources in support to lead agency;
- Confirm Site Safety Officer is a Canadian Avalanche Association Professional Member;
- Request assistance from Ministry, Snow Avalanche Programs, or other appropriate agencies;
- Issues Task and ASE Numbers, as appropriate;
- Task, or approve the participation, of Search and Rescue (SAR) volunteers/groups;
- Reports fatalities to RCMP via the SAR Volunteers on Site;
- Reimburse authorized eligible cost of the rescue.

4.3 BC Coroners Service

- Investigates all unnatural and unexpected deaths, including avalanche-related deaths and other accidental deaths;
- Has jurisdiction over the deceased's body; the coroner has to provide authorization before the body can be moved/transported;
- Has jurisdiction over the avalanche scene where a death occurred; the coroner may authorize the police to take charge of the avalanche scene;
- May request involvement from Ministry, Snow Avalanche staff, to act as technical experts in assessing scene safety, collecting avalanche /snowpack related information and, in some cases, preparing an accident investigation report;
- Provides avalanche-related information to the Canadian Avalanche Centre.

4.4 MoTI

- Obtains PEP task and ASE numbers provided with initial request to assist in rescue;
- To provide technical avalanche expertise in order to ensure on site safety to surviving victims and all participants in the rescue;
- To provide technical avalanche expertise in search techniques and use of rescue equipment to locate buried victims;
- To provide slope stabilization through explosives control if necessary.

5.0 Insurance and Financial Coverage

Ministry employees who become involved in non-highway avalanche related accidents are protected by all existing provincial government coverage.

There will be no loss of wages for participation in these types of incidents. Wages and overtime benefits apply (as if working for the ministry).

6.0 Liability Coverage

Section 18 of the Emergency Program Act, 1996 (appendix A) states that no person is liable for their actions (or lack of actions) which may cause injury, death or damage, provided they were acting in “good faith”.

7.0 Documentation

The Canadian Avalanche Association avalanche involvement report should be used to document pertinent information. In the urgency of the situation, it is important to take time to briefly record details of the incident as it unfolds.

Ministry, Snow Avalanche staff should be aware that any written notes in field books can be used as evidence in a court case. In consideration of this possibility, it is important to make field notes in accordance with the *CAA, Observation Guidelines and Recording Standards for Weather, Snowpack and Avalanches* (May 1995).

<p>General Occurrence date:..... Time:.....</p> <p>Detailed location:..... Easting:..... Northing:..... UTM zone:..... Map datum: <input type="checkbox"/>Unknown <input type="checkbox"/>NAD27 <input type="checkbox"/>NAD83</p> <p>Group type: <input type="checkbox"/>Commercial, Operation:..... <input type="checkbox"/>Club <input type="checkbox"/>Family/friends <input type="checkbox"/>Other, specify:.....</p> <p># of: Females:..... Males:..... Juveniles (< 18 years old):..... Skiers:..... Snowboarders:..... Snowmobilers:..... Other activity:....., specify:.....</p> <p># of people with: Transceivers:..... Probes:..... Shovels:..... Avalungs:..... Balloon flotation devices:..... RECCO devices:..... Helmets:..... Other safety equipment:....., specify:.....</p> <p>Did you meet any other people on your trip previous to the avalanche? Unknown Yes No <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>Was your group pressured into actively pursuing a stated goal because of time or other constraints? Unknown Yes No <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>How familiar was the group or decision maker with the area you were travelling in? <input type="checkbox"/>Unknown <input type="checkbox"/>Very <input type="checkbox"/>Somewhat <input type="checkbox"/>Not</p> <p>Did your group have a clear, identifiable leader? <input type="checkbox"/>Unknown <input type="checkbox"/>Paid <input type="checkbox"/>Volunteer <input type="checkbox"/>Group member <input type="checkbox"/>No</p>	<p>Reported by:.....</p> <p>Date:.....</p> <p>Address:.....</p> <p>Phone #:.....</p> <p>Email:.....</p> <p>Avalanche training: <input type="checkbox"/> < 2 day course <input type="checkbox"/> 2-3 day course <input type="checkbox"/> 4-5 day course <input type="checkbox"/> > 5 day course <input type="checkbox"/> CAA Level 1 <input type="checkbox"/> CAA Level 2 <input type="checkbox"/> Other, specify:.....</p>
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<p>Avalanche</p> <p>Were you in an obvious avalanche path when the avalanche occurred? Unknown Yes No <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>Was there a terrain trap (e.g. gully, cliff, trees, crevasse) below your route when the avalanche occurred? Unknown Yes No <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>Was your group reducing the risk when the avalanche occurred (e.g. spaced apart)? Unknown Yes No <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p># of people who were: Caught but not buried:..... Partially buried, breathing not impaired:..... Partially buried, breathing impaired:....., length of time buried:.....min, burial depth (face):.....cm Completely buried:....., length of time buried:.....min, burial depth (face):.....cm Injured:....., specify injuries:.....</p> <p>The avalanche (select largest applicable): <input type="checkbox"/>Was relatively harmless to people <input type="checkbox"/>Could bury, injure or kill a person <input type="checkbox"/>Could bury and destroy a car, damage a truck, destroy a wood frame house or break a few trees <input type="checkbox"/>Could destroy a railway car, large truck, several buildings or a forest area up to 4 hectares (~ 10 acres)</p> <p>The avalanche was triggered by: <input type="checkbox"/>Unknown <input type="checkbox"/>A member of our group <input type="checkbox"/>A member of another group <input type="checkbox"/>Several people grouped up <input type="checkbox"/>Another trigger, specify:..... <input type="checkbox"/>No apparent trigger (e.g. spontaneous, naturally occurring avalanche)</p>	<p style="text-align: right;">Unknown Yes No</p> <p style="text-align: right;">Unknown Yes No</p> <p style="text-align: right;">Unknown Yes No</p>
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<p>Snowpack and Weather</p> <p>Were you aware of any whumpfs or cracking on your route within 24 hrs previous to avalanche? Unknown Yes No <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>Were you aware of drifting snow on the avalanche slope within 24 hrs previous to avalanche? Unknown Yes No <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>Were you aware of any avalanche activity in the same mtn. range within 24 hrs previous to avalanche? Unknown Yes No <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>Tracks on slope: <input type="checkbox"/>None <input type="checkbox"/>From same day <input type="checkbox"/>Since last storm <input type="checkbox"/>Old tracks visible <input type="checkbox"/>Unknown</p>	<p style="text-align: right;">Unknown Yes No</p> <p style="text-align: right;">Unknown Yes No</p> <p style="text-align: right;">Unknown Yes No</p>
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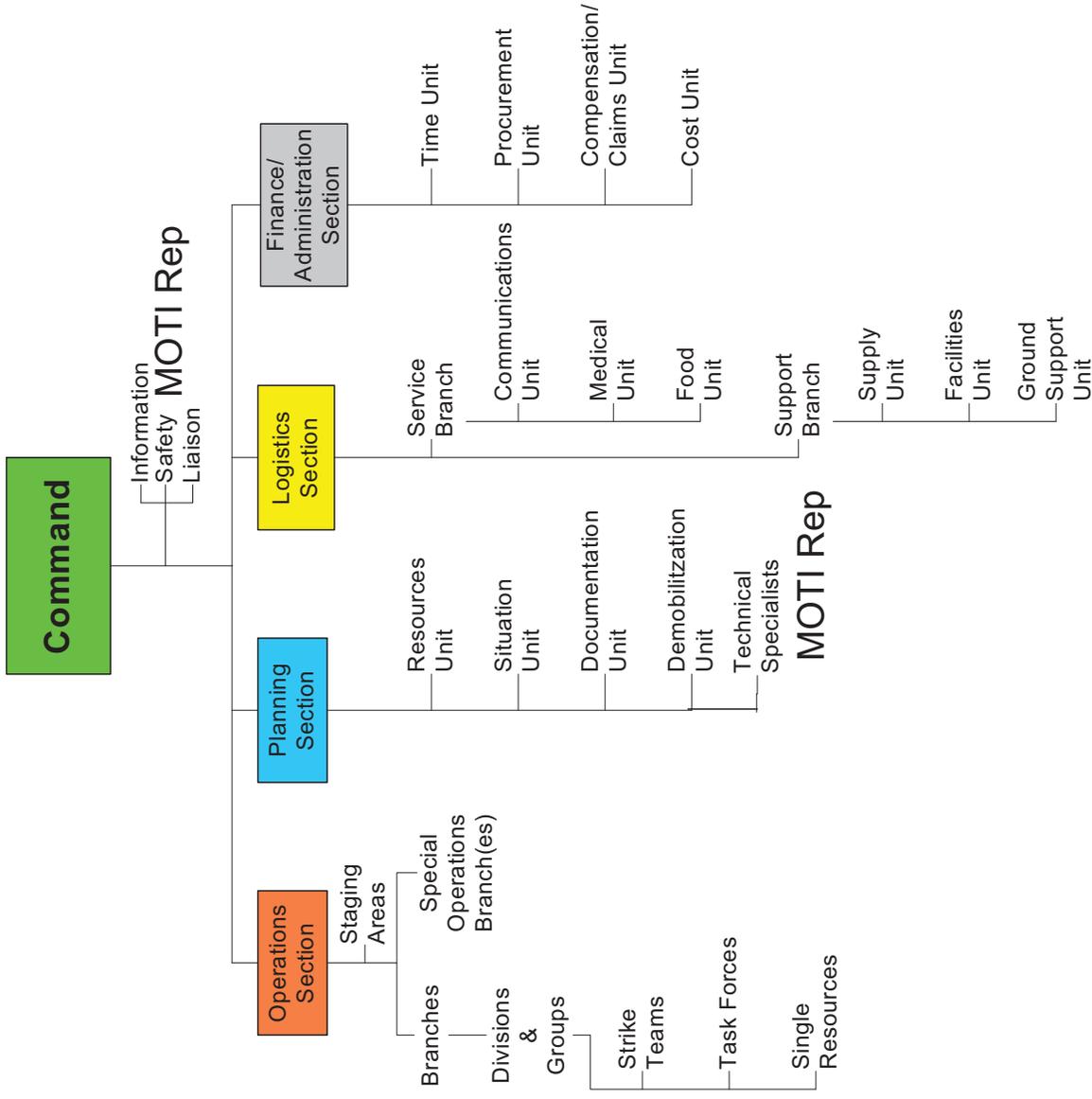
Comments (sequence of events, experience level, etc.):.....

Diagram – use back or blank sheet (include fracture line, deposit outline, significant terrain features, locations of people before and after, etc.)

Attach additional pages as needed (weather history, snowpack test results, snow profiles, etc.)

Note: This information will be used for public education and information. It may be summarized and published by the CAA/CAC. The reporter's name will not be published by the CAA/CAC without his or her written permission.

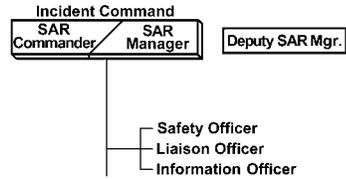
Fully Expanded ICS Organization



COMMAND

IAP:

ICS 202 INCIDENT OBJECTIVES (w/Planning)
ICS 207 ORGANIZATION CHART



OTHER FORMS:

ICS305 SAFETY PLAN
ICS201A RESOURCE STATUS (w/Planning)

TITLE	RESPONSIBILITIES
SAR COMMANDER	Requesting Agencies authorized to function in role of SAR Command: <ul style="list-style-type: none"> • Police - search for lost or missing persons, ground & inland waters • BCAS - pre-hospital care and transportation of injured persons • DND - search and rescue, downed or overdue aircraft • CCG - search and rescue, tidal waters • Parks Canada - search and rescue, National Parks • Coroner - Recovery of human remains <ul style="list-style-type: none"> • Represent Requesting Agency in Incident Command (Unified Command) • Fulfill responsibilities for Public information and Family Liaison
SAR MANAGER	<ul style="list-style-type: none"> • Responsible for all SAR roles & responsibilities unless delegated • Manage the functional aspects of the SAR task • Develop overall objectives (<u>ICS202 INCIDENT OBJECTIVES</u>) • Assign ICS positions (<u>ICS207 ORGANIZATION CHART</u>): Command, Operations, Planning, Logistics, Administration/Finance • Determine Operational Periods • Report to PEP ECC on a regular basis • Update SAR Commander & brief Media Liaison • Review team assignment debriefings & modify overall objectives accordingly • Adequately brief incoming SAR Management team at shift changes
DEPUTY SAR MANAGER	<ul style="list-style-type: none"> • Assist SAR Mgr. with any role delegated • Able to assume role of SAR Mgr. during breaks, etc.
SAFETY OFFICER	<ul style="list-style-type: none"> • Appointed when operating in hazardous environments, the number of agencies warrant it or at the SAR Mgr.'s discretion • Ensure safe practices are being observed • Create & maintain the Safety Plan (<u>ICS305 SAFETY PLAN</u>) • Check skills & equipment of personnel prior to them going in the field, especially if they come from an outside resource not familiar to the managing group • Able to overrule decisions if safe practices are being violated or there is an unacceptable level or risk involved • Positioned at ICP, Staging Area or wherever appropriate. There may also be a Site Safety Officer during high-risk operations such as rope rescue, swift water or avalanche rescue
LIAISON OFFICER	<ul style="list-style-type: none"> • Coordinates with representatives from cooperating and assisting agencies • May contribute to <u>ICS201A RESOURCE STATUS</u> for mutual aid resources • May assist with briefing and liaison with family members
INFORMATION OFFICER	<ul style="list-style-type: none"> • Media & family are responsibility of Requesting Agency (i.e. Police) • Interface with public and media & other agencies requiring information
RECORDER	<ul style="list-style-type: none"> • Log important events, record important information • Ensure all required paperwork is properly filled-in & up-to-date • Organize & file documentation • Delegated wherever needed

SAFETY PLAN	TASK #	DATE PREPARED: TIME PREPARED:
FOR OPERATIONAL PERIOD #	TASK NAME:	PREPARED BY (LOGISTICS):

IDENTIFIED HAZARD #	HAZARD NAME:
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DESCRIPTION:

PRECAUTIONS:

SPECIAL INSTRUCTIONS:

SAFETY EQUIPMENT REQUIRED

ITEM DESCRIPTION	<input type="checkbox"/>	ITEM DESCRIPTION	<input type="checkbox"/>	ITEM DESCRIPTION	<input type="checkbox"/>
CLIMBING HELMET		CLIMBING ROPE(S)		AVALANCHE BEACON	
WORK GLOVES		EDGE ROPES			
LATEX GLOVES		SIT HARNESS			
GOGGLES		CHEST HARNESS			
PARTICLE MASK		FULL-BODY HARNESS			
WHITewater HELMET		PFD			
WHITewater PFD		FLOATER SUIT			

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