



## **CASARA Electronic SAR Specialist**

*First on the Scene . . .*

## **EMERGENCY SCENE MANAGEMENT: Basic Guidelines for CASARA ESS Teams**

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**NOTE:**

This guide briefly outlines the tasks and techniques involved in managing a small- to medium-sized aircraft accident scene, presenting them in approximate chronological order.

As every accident scene is unique, the method and sequence of the SAR response will also be unique. CASARA team members arriving first on the scene must therefore draw upon their training and experience to respond in the most appropriate manner, and within the limits of their capabilities.

In addition to the basic training and equipment due diligence demands, regular practice through exercises and mock scenarios will build the confidence, capability, and judgment needed of volunteers to carry out an effective response.

**LIST OF ACRONYMS USED IN THIS DOCUMENT:**

a/c	aircraft
CASARA	Civil Air Search and Rescue Association
CC-130	military designator for the Hercules, a 4-engine high wing turboprop aircraft
CH-149	military designator for the Cormorant, a medium-to-heavy lift rescue helicopter
ELT	Emergency Locator Transmitter
EPIRB	Emergency Position-Indicating Radio Beacon
GPS	global positioning system
ID	identification
JRCC	Joint Rescue Coordination Centre (SAR coordination centre - e.g. Trenton, Ont.)
LKP	last known position
LZ	landing zone
NOCL	Notice of Crash/Casualty Location
PLB	Personal Locator Beacon
SAR	search and rescue
SAR Tech	Search and Rescue Technician (Military SAR Specialist)



## 1.0 INTRODUCTION

The majority of search and rescue taskings received by CASARA Electronic SAR (ESS) teams are resolved as false alarms, where an emergency beacon – such as an emergency locator transmitter (ELT), an emergency position-indicating radio beacon (EPIRB), or a personal locator beacon (PLB) -- has been inadvertently activated. There are occasions, however, where a team will home an emergency signal to the scene of an accident. The incident could be relatively minor, perhaps a precautionary landing made on a rough airstrip; or it could be major, involving a badly damaged aircraft and dead or injured people.

If your CASARA ESS team has been dispatched along with military, police, or Coast Guard personnel, these individuals will assume the lead role and manage the accident scene. Follow their direction and be of assistance however you can. Don't be afraid to make suggestions, or volunteer to undertake a specific task. If the police officers or search and rescue technicians (SAR Techs) have never worked with you before, they may not be aware of the skills and resources you can contribute.

But what if your CASARA team happens to be working alone on the ground? If your team reaches an accident scene first, you are responsible for managing the situation until outside help arrives. It is probable that you will be in communication with other CASARA or military SAR resources by radio, telephone, or via an overflying aircraft. These people will provide you with support and direction. You will, however, be required to make immediate on-scene decisions and take whatever action is necessary within the limits of your training to assist survivors until other resources arrive.

This document provides basic guidance in emergency scene management for CASARA ESS teams who find themselves first on the scene of an aircraft accident.

## 2.0 CONFIRM ROLES AND RESPONSIBILITIES

### 2.1 Identify Roles and Delegate Responsibilities

To increase efficiency and minimize uncertainty once you arrive on scene, each team member's strengths and key roles should be discussed and delegated in advance. This should be done at the dispatch point while the team is being assembled for the ground homing mission, and confirmed enroute. Key roles include:

- § First Aid and survivor support
- § hazard assessment (incl. aircraft systems knowledge)
- § communications (to base, and ground-to-air)
- § land navigation including GPS
- § survival support (building fires, shelters)
- § note-taking/documentation.

As your team may be as small as three members, more than one role will likely be assumed by each member. The most experienced person should take the lead in decision-making, but with input from the others. The importance of good teamwork from this point onwards cannot be overemphasized.

#### **Documentation**

Throughout your team's response, it is critical that brief but factual notes are taken. Being the first on the scene, you will be asked to provide an account of what happened from the moment you arrived, to the moment you left. Carry a small notebook and pens (notes in pencil may be deemed inadmissible if being collected for a court case or coroner's inquest). Number your pages consecutively. Notes should include, for example:

- § names of persons your team, and who you are receiving direction from (e.g. a CASARA Search Coordinator or JRCC Controller)
- § a log of key events and times (e.g. time on duty; arrival on scene; arrival of rescue resources; time of hand-off to responsible authorities, etc.)
- § observations of the location and condition of the aircraft and its occupants
- § names of persons on board, and any next-of-kin information provided
- § any action that required repositioning of aircraft parts or control settings
- § comments made by survivors about what happened before you arrived
- § First Aid treatment given, and any changes in condition

Your first priority is to attend to survivors and manage the scene, but ensure this basic information is also documented as soon as practicable.

## **3.0 APPROACH AND ASSESS HAZARDS**

### **3.1 Approach with Caution**

Immediately upon arriving at an accident scene, the urge may be to rush in and see what has happened, and what can be done. Your safety comes first, because if you become injured, at the very least your effectiveness as a responder will be reduced. At the very worst, you might add yourself to the list of accident victims. Approach the scene with caution. Remember that in some accidents, the aircraft may not have come to rest in one place, but may have left a trail of debris in one or more directions.

### **3.2 Assess Potential Hazards**

Depending on the type and size of the aircraft involved, and how soon you arrive after the incident, hazards may include:

- fire and smoke, risk of explosion
- jagged metal and plastic
- carbon fibres from composite or high-performance aircraft (similar health risks as asbestos fibres)
- unstable aircraft structure, with risk of collapse
- spilled or leaking fuel, hydraulic oil, battery fluids (can burn or irritate skin)
- pressurized gas cylinders (e.g. “Halon” fire extinguishers, oxygen)
- spilled hazardous materials or cargo carried on board the aircraft
- biological hazards
- live wires from severed land power lines.

Additional caution should be used when assessing hazards during hours of darkness or when visibility is poor (e.g. fog, blowing snow).

### **3.3 Identify Yourself**

Even if you do not see anyone immediately, call out and identify yourself as you approach, advising whoever might be nearby that you are on your way and not to move. For example:

*“Hello! Hello! Is anyone there? We’re a rescue team, and we’re here to help. Stay where you are, we’re on our way over to you.”*

You may or may not get a response, but listen carefully for one. If you do get a response, continue to reassure the survivors to stay calm and not to move, and that help is on the way.

## 4.0 ALERT SAR AUTHORITIES

### 4.1 Prepare and Send a NOCL Message

Upon discovering the accident scene, the controlling SAR agency should be alerted immediately. The standard message format for reporting a crash site to the Joint Rescue Coordination Centre or any other military SAR unit is the Notice of Crash/Casualty Location, or NOCL. The team member responsible for communications can make the call while the other members continue to approach the scene. Remember that communications are not secure. This includes most cellular phones as well as VHF radio transmissions. Keep this in mind throughout the operation.

If working with military SAR aircraft, the VHF aeronautical frequency most likely to be in use is 123.10 MHz, although due to operational requirements another may be assigned by the aircrew.

If you are relaying communications via an agency that does not normally use the NOCL format (e.g. police), ask the dispatcher to copy the information and relay the full NOCL message to the Joint Rescue Coordination Centre. At this time, the NOCL format is the only coded means by which CASARA can relay comprehensive and sensitive information on the status of the aircraft and its occupants.

#### **Important Note on Reporting the Condition of Casualties in the NOCL:**

When using the NOCL, the condition of the aircraft occupants – using the colour codes in the “Charlie” statement -- is usually transmitted only after they have been examined by a SAR Tech or similar person with advanced medical training (e.g. a civilian paramedic or doctor).

However, if a CASARA team is first on the scene, providing an assessment of the casualties’ condition will give the JRCC Controller a better sense of what rescue resources are required. If the aircraft occupants are largely uninjured and are boiling water for a pot of coffee when you arrive, this will require a different rescue response and level of urgency than occupants who are gravely injured and slipping in and out of consciousness.

CASARA members who estimate a casualty’s condition in the Charlie statement should note this in the remarks section (Foxtrot). For example, “*Foxtrot: Charlies were assessed by First Aiders*”.

**NOTICE OF CRASH/CASUALTY LOCATION (NOCL) MESSAGE FORMAT**

<b>ALPHA</b>	<b>Affirmative</b>	Positive identification of the search object (e.g. aircraft registration can be read, or the pilot is responsive)
	<b>Negative</b>	Unable to positively determine that the object sighted is the search object (most often the case from the air)
<b>BRAVO</b>	<b>d-d-m-m-<u>d</u>-d-d-m-m</b>	A 9-digit group denoting position (Latitude & Longitude in degrees + minutes) without “North” or “West” being spoken. The underlined degree will be “0” east of 100° W (e.g. 075 °W). Often read as 3 groups of three digits.
<b>CHARLIE</b>	<b>Negative</b>	No survivors or casualties can be seen ( <i>often the case when viewing from a search aircraft</i> )
	<b># Undetermined</b>	Number of casualties/survivors seen, but whose status cannot be determined ( <i>e.g. as seen from a search aircraft</i> )
	<b># Red</b>	Number of casualties/survivors requiring <u>immediate</u> treatment and evacuation (Priority 1)
	<b># Yellow</b>	Number of casualties/survivors requiring <u>early</u> treatment and evacuation (Priority 2)
	<b># Green</b>	Number of casualties/survivors requiring <u>routine</u> treatment and evacuation (Priority 3)
	<b># Blue</b>	Number of casualties/survivors requiring <u>deferred</u> treatment and evacuation (Priority 4)
	<b># White</b>	Number of <u>uninjured</u> persons ( <i>remember that any person involved in a crash will ultimately require a medical check</i> )
	<b># Grey</b>	Number of persons <u>missing/unaccounted for</u>
	<b># Black</b>	# of dead ( <i>generally reserved for rescue specialists’ use</i> )
<b>DELTA</b>	<b>One N / S / E / W</b>	Side of <u>hill</u> plus indicate north, south, east, or west
	<b>Two N / S / E / W</b>	In <u>valley</u> plus indicate north, south, east, or west side.
	<b>Three</b>	In <u>level country</u>
	<b>Four</b>	<u>Heavily wooded</u> area (can be used with Delta One, Two or Three).
	<b>Five Alpha / Bravo</b>	In <u>water</u> plus indicate Alpha – <u>near shore</u> ; Bravo – <u>well off shore</u>
<b>ECHO</b>	<b>One</b>	<i>Not for CASARA use – refers to SAR Tech deployment</i>
	<b>Two</b>	A <u>helicopter</u> will be required
	<b>Three</b>	A <u>ground party</u> could reach the location in good time.
	<b>Four</b>	A <u>rescue boat</u> will be required.
	<b>Five</b>	<i>Not for CASARA use – refers to request for Coroner</i>
<b>FOXTROT</b>	<i>remarks</i>	Briefly provide any detail which will help the JRCC Controller or SAR authority plan the response, bearing in mind that the transmission is not secure.

### **Alerting of SAR Authorities: Example of a NOCL**

A CASARA Ground Team has homed an ELT to the site of a light aircraft crash at position N 49°15' W 090°02'. The aircraft has been positively identified as the search object from the registration on the tail, and it is located on the north side of a hill in a heavily wooded area. There are forestry access roads nearby but the closest is about 1 km distant from the crash site. Of the four (4) passengers known to be on board, two (2) are in serious condition, one (1) appears lightly injured; and one (1) is reported to have been disoriented and may have wandered off to look for help.

If a military or CASARA aircraft is in the area, an air band radio tuned to 123.10 MHz, or an alternative frequency identified by the aircraft, may be used to send the Notice of Crash/Casualty Location (NOCL) message. Or, a cellular phone, satellite phone, amateur radio, or any other form of available communication may be used. The following provides an example of how a CASARA team would relay a NOCL to an overflying military aircraft:

*CASARA Ground: "Rescue three-zero-five, this is CASARA Ground with a November Oscar Charlie Lima; are you ready to copy?"*

*Rescue 305: "CASARA Ground, go ahead with your NOCL."*

*CASARA Ground: "Roger, Rescue three-zero-five: Alpha affirmative. Bravo four-nine-one, five-zero-nine, zero-zero-two. Charlie two red, one green, one grey. Delta one north four. Echo two. Foxtrot: Forest access road within 1 km of site but terrain is rough; Charlies assessed by First Aiders."*

*Rescue 305: "CASARA Ground, we copy your NOCL as follows . . ."  
[aircrew member reads back message correctly]*

*CASARA Ground: "Rescue three-zero-five, roger."*

Once the Search Master or JRCC Controller receives this information, he/she will have a clear knowledge of the location of the crash site, the severity of the incident, and the number of people requiring medical attention or evacuation, and what resources will likely be required to accomplish this. He/she will also be aware that additional resources will be needed to conduct a secondary search for the missing occupant – i.e. "Charlie one grey".

## **5.0 MAKE THE SCENE SAFE**

### **5.1 Manage Immediate Safety Hazards**

Take whatever action is needed – and possible -- to make the scene safe for the team to move into. Again, this will depend a great deal on where you are, the type of aircraft involved, and the time that has elapsed since the accident occurred. In the majority of cases involving light aircraft, little will probably be required other than avoiding sharp metal edges and leaking fuel.

If you do take any action in the interest of safety, such as closing a fuel valve, turning off an electrical master switch, or repositioning any other aircraft controls, tell another member of the team what you are doing. You must make a note of these actions, as it will be important to the subsequent accident investigation.

### **5.2 Protect Against Biohazards**

Body fluids, including blood, are considered potential biological hazards. Contact should be avoided. When administering First Aid, team members should wear disposable gloves for their own protection. These should be available at all times in the unit's ESS First Aid kits. If you've just emerged from a hike through the bush, chances are your hands aren't too clean either. Using gloves when handling sterile dressings, etc. will reduce the risk of infection for the injured person, too.

#### **Turn off the beacon?**

Do not turn off the aircraft's Emergency Locator Transmitter or an occupant's Personal Locator Beacon unless specifically instructed to do so by the lead SAR agency (JRCC controller, Searchmaster, or police acting under the direction of JRCC).

Why? Other incoming rescue resources may be using the 121.5 MHz homing signal to locate the crash site, especially in darkness or reduced visibility.

## **6.0 SURVIVOR CARE**

The care and support of survivors is now your primary objective. Figuring out what went wrong, and why, must be left for the investigators who will come later. Your priority attention to survivors begins when you arrive on scene, and ends only when they are transported from the site and into the care of others, as applicable.

### **6.1 Positively Identify the Aircraft and Occupants**

If you have conscious survivor(s), the ability to communicate is a great advantage, and it also gives you a good indication of their physical condition.

First of all:

- tell them who you are; that you are here to help; and that more help is on the way;
- ask them their name(s), and if time permits, next-of-kin information;
- establish how many were on board, and if everyone is accounted for; and
- reassure them that things will be getting better now.

The type and number of questions you ask at this first stage will depend greatly on their condition, whether they are adults or children, and if they are passengers or crew members. As you are speaking with them, observe whether they are coherent and aware of their surroundings. Follow standard First Aid/medical protocols with respect to other communications regarding injuries and existing medical conditions, medications, etc.

If not already done, one team member should attempt to positively identify the aircraft/wreckage from the type, colour, and the registration markings that may appear on the tail, underside of the wing, and/or the cockpit, if safe to do so. This may also be required if there are no survivors, or if they are unable to communicate. Do not move wreckage unless absolutely necessary. If applicable, the NOCL may now be confirmed with this information – i.e. “Alpha Affirmative”.

### **6.2 Administer Medical Aid / First Aid**

Assess survivors and administer medical aid within the limits of your training. If the survivors are conscious, obtain their consent first. If there are several injured people, you may have to institute a triage system to identify and prioritize each casualty’s need for care.

If survivors are not conscious, or it is suspected that they may have sustained a spinal cord injury (common for a “mechanism of injury” such as an airplane crash), apply the necessary precautions and do not move them – unless a life-threatening hazard exists. Such hazards may include risk of fire or explosion; unstable or sinking wreckage; or undue exposure to conditions that could lead to hypothermia, etc.

Consult your First Aid manual and/or trainer for more information on emergency First Aid techniques, including multiple-casualty management and how to care for persons with suspected spinal cord injuries.

### **6.3 Create a Safe Zone**

If it is obvious that the survivors can be moved without risk of further injury, it may be possible to establish a suitable place a short distance from the wreckage where they can be treated in greater comfort. If circumstances permit, constructing a small fire can provide warmth and lift spirits, and may also be helpful in marking your position for incoming rescuers. In sub-zero temperatures, protecting survivors – and you team – from hypothermia will be important. Any fires must be constructed with due regard for spilled fuel and fumes, and should ideally be located above and crosswind from the aircraft wreckage, to avoid risk of uncontrolled fire or explosion.

Shelters should be constructed as necessary to protect survivors from sun, wind, cold, or precipitation. You may also need to provide shelter for your team, if weather conditions are, or are expected to become adverse while waiting for outside resources to arrive.

### **6.4 Conduct a Limited Search for Missing Occupants (if applicable)**

If you cannot account for the whereabouts of one or more of the persons reported to be on board, a limited search of the immediate area can be conducted after emergency First Aid is provided to the known survivors. If you have a three-person team, one should search in a close radius of the crash site and/or debris trail, while two remain at the scene. The searcher should not go beyond visual or voice range of the scene at any time.

If the search is unsuccessful, do not extend the search area. Your first priority is to take care of the known survivors. Relay information on any unaccounted/missing persons to the SAR authorities (e.g. “Charlie Grey” reported in NOCL), so that additional resources may be sent to search for the missing person.

### **6.5 Deal with the Deceased**

It is never easy to come upon a person who has died, particularly as the result of an accident. If there are survivors, focus your thoughts and energies on them. If the sight of a deceased person is distressing to survivors, cover the deceased respectfully with a spare blanket, jacket, or other item. Document this action, as it may be relevant to the subsequent investigation. If there are no survivors, the team should keep busy securing the scene, documenting all relevant information, staying in contact with the controlling SAR agency, and taking care of their own warmth and shelter needs.

Once any/all survivors are rescued, the scene will be turned over to the local authorities. Canadian Forces SAR squadrons are not responsible for the removal of bodies, as their primary duty is to rescue the living. Any unnatural or accidental death will be subject to the investigation of a coroner, and/or the police agency having jurisdiction. Preservation of the death scene is therefore important to this investigation. Do not move or reposition the deceased person unless absolutely necessary (e.g. to extricate survivors or if there is a risk of fire consuming the body). Do not search the deceased for personal effects in an attempt to identify them, unless instructed to do so by the controlling SAR agency. If such a request is received, two team members should perform this task.

## **7.0 SECURE AND MAINTAIN THE SCENE**

While awaiting the arrival of rescue services, continue to manage the scene by carrying out the following tasks:

### **7.1 Secure the Scene**

The measures required to secure the scene will vary widely depending upon its location. A road-accessible area with a higher probability of passers-by will require more control than a remote bush location. Establish a perimeter with flagging tape if necessary.

Qualified passers-by may be a useful resource; accept their help as appropriate but advise them of any hazards and instruct them not to disturb anything. Document the names and titles of anyone entering the scene. Insist on them surrendering their identification to you, if they are not readily identifiable (i.e. in uniform, or known to you).

Be aware that members of the media may attempt to enter the scene if they can; but they may not do so unless escorted by the police. CASARA members do not have the authority to grant media access to an accident scene.

### **7.2 Maintain Communication**

Establish and maintain regular contact with the controlling SAR agency, and advise of any expected deviations from established procedures. Provide updates on significant changes in weather or casualty condition.

### **7.3 Provide Ongoing Casualty Care & Survival Support**

Continuously monitor injured persons as per standard First Aid protocols, or within the limits of your training. If weather conditions are adverse, or are expected to become so, both the rescuers and the survivors will benefit from fire and shelter. An adequate supply of firewood should be gathered, especially if it is getting dark. Any open flame, including fires, flares, and cigarettes must be kept a safe distance from spilled fuel, fumes, and fuel tanks. As noted in Section 6.3, this should be up-slope from the crash site and not downwind.

Even if things may not be going to plan, or you have serious concerns about a survivor's condition, or if weather is delaying the arrival of rescue services, remain calm and positive. Avoid discussing your concerns within earshot of survivors, as additional stress and anxiety could be very detrimental to their condition.

### **Leave the Scene . . . ?**

If a CASARA Ground Team is first on the scene, it is expected that it will remain there at least until the police arrive. Securing the accident scene is not part of the SAR Techs role; they will normally accompany survivors during their extrication and transport back to the airport or hospital. The CASARA team may therefore need to assist in the response by remaining on scene until the police arrive.

Even if there are no survivors, maintaining the integrity of the accident scene is important until it can be handed off to the appropriate authorities. Although military rescue resources may have attended the scene, it is the local police and coroner that will normally assume responsibility for the removal of deceased persons. The ground team may be able to guide these local authorities to the scene.

Any questions regarding the handling of survivors and management of the accident scene should be directed to the controlling SAR agency. If an aircraft has landed on or immediately adjacent to a road, it is possible that a CASARA Ground Team may be able to transport uninjured occupants to help, if the JRCC Controller/CASARA Search Coordinator agrees. Transport of injured persons should not generally be undertaken by CASARA crews, except when a life-threatening situation exists, or if the crew is specially trained or equipped for this role. Similarly, in rough terrain, no independent attempt should be made by a CASARA crew to transport injured persons out of the bush, as it may result in further complications and injury to both parties. *A minimum of six persons* is recommended for the overland transportation of stretcher cases (ref: *National SAR Manual, Annex 4E, Ground Search Parties*). Again, the controlling SAR agency should be consulted for direction.

If outside communication is lost, however, you are entitled to take whatever actions you feel are necessary to preserve and save lives.

As a general rule, however,  
**NEVER LEAVE AN ACCIDENT SCENE UNATTENDED.**

## 8.0 PREPARE FOR THE ARRIVAL OF SAR RESOURCES

If time and workload permit, your team can assist rescue personnel in locating the site and evacuating survivors. The preparations that can be made will vary, depending on where the site is located, how rescuers are likely to arrive, and how soon they are expected.

Some general suggestions:

- § If the site is difficult to find, have a signal fire ready to light crosswind of the scene; or have other signalling devices (mirror, strobes) ready.
- § Anchor brightly-coloured panels, clothing, or other objects to the ground to help mark your location.
- § Prepare survivors for transport, bearing in mind that SAR Techs or other medical personnel arriving on scene will probably want to examine them first.
- § During night operations, crews may be using night vision goggles. Do not shine flashlights at aircraft or light flares when they are approaching.

### 8.1 Air Rescue – helicopter landing

If a suitable landing zone can be located nearby, a rescue helicopter may be able to land and evacuate survivors. Pass this information along to the controlling SAR agency. If you are advised that a helicopter is enroute to attempt a landing, consider the following preparations if time and site conditions permit:

- If possible, define a landing zone (LZ) with conspicuous markings. Ensure the materials used are well anchored to prevent them from being swept into the rotors. In winter, firmly anchored markers are important in assisting depth perception, particularly on featureless snow-covered terrain or ice.
- If it is windy, small smoke flares or lengths of flagging tape tied securely to branches or makeshift poles near the landing zone can help indicate wind direction for the pilots.
- If you are in radio contact with the crew, advise them of any potential hazards (trees, wires, tree stumps or fence posts hidden by long grass) that may be difficult to see on the approach.
- Keep everyone clear of the landing zone; secure loose objects, clothing, hats, etc. If one of your team members is familiar with helicopter operations and marshalling signals, only he/she should be in the LZ.
- The pilot should be briefed as to the existence of deep snow or other soft terrain that could cause the helicopter to settle upon landing. If this is the only option for a landing zone, efforts should be made to compact or reinforce the landing surface prior to the helicopter's arrival. Personnel should not approach the helicopter until it has stabilized on the landing surface.

Remember that best approach for a helicopter into a landing zone is usually one which provides a run-in path, as opposed to a vertical descent. The ideal landing zone is a flat

strip 100 feet (approx. 30 metres) wide and 300 feet (approx. 90 metres) long. Wind direction should also be considered, as an optimal LZ will allow the helicopter to land and take off again into the wind. Don't be surprised if, after overflying the site, the pilot chooses a different approach path or even a different landing area than the one your crew selected.

During approach and landing, the following general rules should be applied:

- Watch for instructions from the flight crew; provide guidance over the radio if the crew requests it. Study and carry with you a card of approved marshalling signals.
- Do not approach the helicopter unless you are signalled to do so by the crew.
- If you have to approach the helicopter, always remain within sight of the pilot.
- Do not approach from the rear; approach from the side if possible.
- If the helicopter has landed on a slope, approach and depart from the downhill side only.
- Stay clear of the helicopter during start-up and shut down, as main rotor blades may droop when they are operating at slow speeds.

## **8.2 Air Rescue – helicopter hovering**

If there is no suitable landing site, a helicopter may be able to hover and lower rescue specialists (e.g. SAR Techs) on a hoist. Survivors may also be evacuated this way. Due to terrain, tree cover, and position of the wreckage and survivors, the hoist zone may be positioned a few metres or a few hundred metres from the crash site. Be ready to help clear a path from the scene to the hoist zone, if circumstances permit.

The downdraft from any hovering helicopter can be surprisingly strong. Secure all people and loose objects. The force of the downdraft will typically increase with the size of the helicopter, so be particularly vigilant when working around a large hovering helicopter such as the CH-149 Cormorant. Remember to look up as well as down and around you for items that could be thrown around or dislodged by the helicopter downwash (i.e. dead tree tops, snags, snow or ice cornices, loose rock). These hazards may not be obvious to the helicopter crew.

Be aware of the position of your survivors relative to any fire you may have burning; as downwash from rotors may scatter burning wood and embers. Similarly, a hoist zone near water may produce a significant spray. Protect your casualties as best as possible from these conditions.

Check with the helicopter rescue specialist (e.g. SAR Tech) before taking any action intended to help. Follow the specialist's direction at all times. During hoisting operations, keep alert for guide ropes and tag lines, and avoid getting caught up in them.

## **8.3 Ground Rescue – crews arriving by foot or vehicle**

If the accident site is located in close proximity to a road or trail, or if air evacuation is not possible for some reason, rescue crews may arrive by ground.

If you have communications with the inbound rescuers, advise them of the general route your team took into the site, and any rough terrain or other special conditions that were encountered (e.g. loose rock or snow, wire fences, sharp drop-offs or gullies). This is particularly important information to share if the ground party is coming in under poor light or visibility conditions.

As applicable, advise them of the colour of the flagging tape that you used to mark your route in, and the type and colour of any vehicle(s) you may have left parked along access roads.

If it is only a short distance to the access point and conditions are suitable, a CASARA member can return to guide rescuers in.

#### **8.4 Water Rescue – crews arriving by boat**

If the accident site is on or near the shore of a lake/river, a rescue boat may be dispatched to the scene if it represents the best transport option to medical aid.

If appropriate, light a signal fire crosswind of the accident scene to make your position more conspicuous from the water, and/or use a conspicuity panel or other brightly-coloured object to signal your location.

Scout a good landing site for the boat, and assist the crew in coming ashore. Be vigilant for slippery rocks or soft sediment, and alert the crew to any hazards.

## **9.0 HAND-OFF SCENE TO AUTHORITIES**

### **9.1 Provide a Briefing**

Once civil or military authorities arrive, they will assume control of the accident scene. The people in charge will identify themselves and may ask you a number of questions, depending upon the time and circumstances at hand. You may also wish to volunteer the following information, if appropriate:

Immediately:

- Any imminently threatening situations or hazards (i.e. fire; person trapped in wreckage, etc.)
- Number, identity, and medical condition of survivors; identify priority cases
- Any persons reported to be on board who have not yet been accounted for
- Number, identity (if known), and location of deceased persons
- Location of the ELT

After survivors are evacuated:

- The identity of CASARA personnel on scene, and your contact information
- The identity of any other persons who are or were assisting on scene (e.g. passers-by who volunteered their help)
- Location of any fires you lit, or prepared for lighting
- The approximate limits of the debris area.

### **9.2 Document Key Details**

Make a note of the name, affiliation (e.g. police force) and contact information of the person who you briefed, and who assumed control of the scene. Ensure this information is also communicated to the CASARA Search Coordinator and/or JRCC Controller.

## **10.0 RETURN TO BASE**

Once your team has been asked to stand down, you will likely be returning to base to attend an informal debriefing with the CASARA Search Coordinator and/or support team, and to hand in your gear, notebooks, etc. Depending upon the nature of the incident and the level of your involvement, a formal debriefing may be deferred until you have time to rest and gather your thoughts.

### **10.1 Check Gear and Supplies**

Before leaving the scene, check that you have collected all CASARA equipment and personal gear you brought in. If time permits, make a brief note of any supplies that were consumed and need to be restocked (e.g. First Aid materials, flares).

### **10.2 Ensure Ongoing Safety of Team**

If you and your team have been on scene for several hours and have a considerable distance to travel back to base, do not undertake the return trip if you are excessively fatigued. CASARA can dispatch a vehicle and extra driver to collect your team; or you may wish to plan a stop for a meal and time to relax. Make sure the CASARA Search Coordinator knows what your plans are, however, including your estimated time of return.

### **10.3 Manage Encounters with Media or Next-of-Kin**

If you encounter members of the media, public, or next-of-kin as you are departing the scene, be courteous but refrain from making any detailed statements or comments. Refer them instead to the lead agency that now has control of the scene. If you are contacted after-the-fact by the media, check first with your Unit Director/Zone Commander before accepting an interview.

### **10.4 Safeguard Documentation**

The police and/or any other official agency (e.g. Coroner, Transportation Safety Board), may interview your team as part of their investigation. This may happen the next day, or even a few years later, if there is an inquiry, inquest, or court case resulting from the accident. All documentation must therefore be filed securely at the CASARA base; and, be sure to keep a copy of your own notes. Even if the police do not take a statement from you, it is worthwhile to write a detailed, chronological account of what you remember for your own records, as your memory of the event will be affected by the passage of time.

**A word on Critical Incident Stress:**

After responding to an aircraft accident, you may well have experienced a very stressful and traumatic situation. You may feel the effects of it immediately after, or it may come upon you days, weeks, or even months later. It can be subtle, or very obvious. The term commonly applied to this condition is “Critical Incident Stress”, and it is an acknowledged occupational hazard to those working in the emergency services field. Symptoms may include one or more physical, emotional, cognitive, or behavioural changes.

There is no “right” way to feel after attending an accident scene, nor is there any “right” way to deal with how you’re feeling. Some people find that talking to a group of SAR colleagues who have gone through similar incidents is helpful; others prefer to confide only in close friends and family.

Talking to a counsellor trained in Critical Incident Stress can also be a very effective way of working through the experience. You may well emerge even better equipped to deal with stressful incidents in the future. CASARA will happily and confidentially arrange these counselling services if you wish, including a debriefing session for your team.

Whatever the case, recognize that you have been through a difficult situation, and that it’s both normal and important to allow yourself some time to recover.

## 11.0 NEXT STEPS

Managing any accident scene can be a challenging task. But managing it well can improve the odds of a positive outcome for survivors, and can aid the work of the investigators who will come later. Outside help may arrive within a matter of minutes, or it could take hours depending on the weather, your location, and the time of day. Similarly, the tasks ahead of you and the time required to complete each will vary, depending on the nature of the accident, the type of aircraft involved, and the number of persons on board and their condition.

It can be difficult to predict what you might encounter – but you can prepare by keeping your First Aid skills current; familiarizing yourself with the basic procedures for managing an emergency scene; and practicing them whenever possible.

Some final thoughts about being first on the scene of an accident:

- Document as much as you can; accidents produce many people with many questions.
- Don't disturb anything at an accident scene except for the purpose of lifesaving.
- Have confidence in yourself. You know what to do, and are capable of doing it.
- Take things one logical step at a time. Don't get overwhelmed by the "big picture".
- Treat others as you would like to be treated, and you can't go far wrong.
- Being part of a successful search and rescue effort can be a very rewarding experience.

And last but not least, remember why we do what we do:

"So That Others May Live"