# 1

# Search and Rescue Unit (SRU) Performance

*"An effective team, a fit vessel and working equipment all come together to create an effective search and rescue unit. The most important component being the team."*

*The first chapter defines and describes the roles and expectations of the vessel and her crew. Here the actions and strategies used by the experts are described as well as some secrets to survival and success.*

*In order for you and your future crew to survive and perform in extreme conditions you must make the decision to devote your time and energy to becoming not just a mariner but a mariner who can overcome adversity and assist other mariners in distress. This is not an easy task and only the most dedicated are able to join the crew of an auxiliary rescue vessel. Those that take this task lightly will endanger their own lives along with the lives of their crew.*

# Search and Rescue Unit Performance

## Contents

**May Day This is the Responder**

February 1st, 1989 (excerpt taken from the "Victoria Times-Colonist")

"**May Day, May Day**, this is the Rescue Vessel **Responder**"

**Weather for Victoria Waterfront**: Minus 11 Degrees Celsius, snow showers, Winds NE at 20 Gusting 26 knots, Freezing spray Conditions and six-foot breaking seas. Sea smoke and snow showers reducing visibility to near zero.

Two Radio Technicians were stranded on the Chatham Islands due to extreme weather conditions. At 1700 Oak Bay Sea Rescue vessel "**Responder**" was tasked by Victoria Joint Rescue Co-ordination Centre to assess the conditions and attempt the recovery if safe to do so. At 1830, with radar blacked out by snow and all visual references lost in the blizzard the Responder struck a reef. The crew issued a distress and abandoned the vessel as it sank. The three frozen crewmembers swam through the surf and pulled themselves onto a rock only a few feet above the crashing seas. When the spray landed on their floater suits it froze instantly until they were encased in inches of ice.

The coxswain had a head injury and was barely lucid. Bruce Cafferky, one of the crew, chipped the ice away from his pockets and reached into his vest to pull out his flashlight and flares; only two of the six flares worked. Using the last flare to signal for help, the red burning flicker reached the bridge of the **Evco Buccaneer**, a passing tugboat.

The crew of Victoria Coast Guard Auxiliary Unit 35 (a five metre rigid hull inflatable) knew that they would not survive the 4 mile transit to the islands so they enlisted the help of the Victoria Pilot vessel to tow their Zodiac to the scene. At 2022 (almost two hours after the sinking) Coxswain Denis Nyren and crew Alek Bill climbed into the iced up Zodiac and crashed through the six foot breaking sea to attempt to save their friends on the rocks. They managed to retrieve the crew from the rocks and got them on board the Evco Buccaneer for treatment. They all fully recovered.

In a following interview, Bruce Cafferky commented:
"The funny thing about this predicament was that, although I was huddled on a rock freezing to death in the middle of an ice storm, I could look across the channel into the living room of my friend and could see him watching television. I was so close to safety yet so far away."

## 1.0 Introduction to SRU Performance

The crew of the Responder went out into conditions that exceeded the capabilities of the vessel and the crew. Her crew became stranded and fought for survival in the freezing spray. Subsequently, other rescue crews were compelled to go out and retrieve them. Although no lives were lost, the Responder's crew made some crucial mistakes. New auxiliary members should be asking themselves some questions:

- ➜ How can I avoid this situation?
- ➜ How can I, as a crewmember, effect the decisions made during an incident?
- ➜ How can I reduce the risk?

### SRU Vessel and Training

As a Canadian Coast Guard Auxiliary vessel speeds towards the scene of an accident, a number of systems must be functioning in order for that vessel to arrive safely, assess the scene, and resolve the incident. The most important system is the crew system. It is the cumulative thoughts, efforts and concerns that create more than the sum of the individual aspects. A Search and Rescue Unit (SRU) can perform 95% of SAR tasks without a team that works together, without a leader that communicates and encourages excellence and without all the minds on board focused on the mission. Sometimes vessels and crews can function for years without all these things. Yet, an SRU will occasionally face challenges that overwhelm the most experienced mariner. These incidents will put the vessel in extreme danger and the crew's lives in imminent peril. The only way for the SRU to survive and prevail in these conditions is through the joint thought and planned effort of the entire crew.

A leader can only lead a crew out of danger after his or her leadership has developed and grown with the team.

The moment your vessel is steaming along with one crewmember resigned, rebellious, or malicious, the vessel is in danger. It is up to you, the crewmember, to consciously decide to overcome natural responses to conflict and disagreement. Today's rescue vessels are complex, fast moving, and require the utmost vigilance to perform safely.

Take advantage of a fresh start. Now that you are a new member of the Canadian Coast Guard Auxiliary you have an opportunity to focus on your strengths and strive to meet the demands of a new role. You will have the opportunity to help people out from the lips of inconvenience and occasionally snatch them from the jaws of death. In order for you to be a part of a highly effective rescue team you must bring some basic elements to the vessel, as described below. These qualities are never bestowed on you, they are a state of constant learning and effort. With some they will exist only while on board the vessel, but it is on the vessel that matters.

### Individual contributions to the team

The qualities that make a mariner able to survive and overcome:

***Commitment:***

Each crewmember must be committed to the vessel and her crew. One must recognize that only through co-operation, communication, and extraordinary effort is the vessel able to function and perform in the conditions that it may face. Each crewmember must occasionally support the team through plans and actions with which they do not agree. The support and effort must be 100% even in these cases.

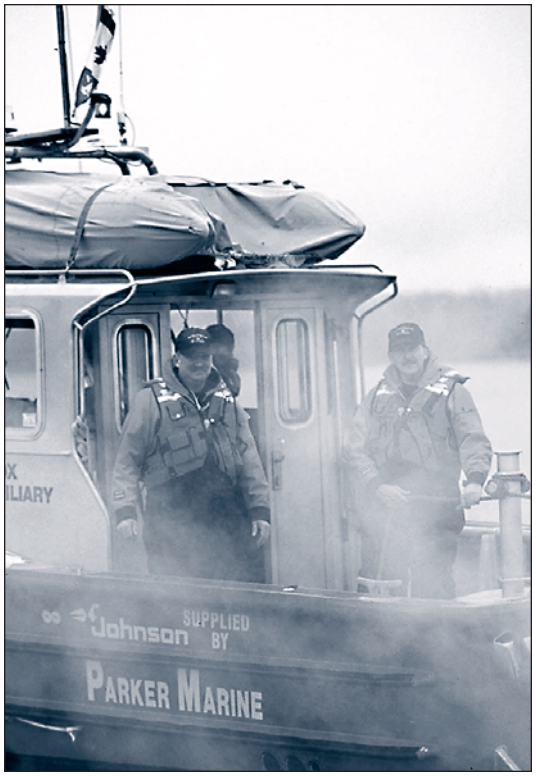
***Diligence:***

When a crewmember steps on-board a vessel his or her habits and personality change to those of a mariner. Mariners are obsessed with order and routine; they clean, organize and inspect the vessel and her gear constantly. Mariners always have one eye on their mate and one eye on their task, ready to jump to assistance in the event of an accident or mishap. A mariner watches the ocean ahead for those tiny dots that become vessels in minutes. A mariner thinks ahead towards the next move anticipating the needs of the vessel and the crew.

***Integrity:***

Integrity means honesty and transparency. Each team member communicates their thoughts and concerns freely and openly. The leader must maintain an encouraging environment for this open communication. Your crewmates know when you are not feeling well or are worried. The confines of a vessel require that each person is honest and trustworthy. Effective team

members do what they say they will do, and admit what they are not able to do. Integrity allows the vessel to prosper from her crew's strengths rather than being crippled by their weaknesses.




Unit 60 Comox SRU Team

***Compassion:***

Canadian Coast Guard Auxiliary vessels only exist because their members recognise the hardship and risks of being on the water. The Rescue Crews know that everyone faces the same risk and at any time we all could be overwhelmed and thrown into distress. Sharing the same state allows us to care and respond when someone is in need of help. In a sense, by coming to aid of other mariners we are making the waters safer for ourselves.

Commitment, Diligence, Integrity and Compassion; these are the traits that allow your vessel to survive through the extreme conditions and unexpected challenges that are characteristic of the business of Search and Rescue.

## 1.1 Team Performance

The team must think of itself as a group working in perfect harmony toward a common goal. Each crewmember must remain focused on that goal while overcoming personal and team obstacles.

### Rescue Team Priorities

The priorities of an effective rescue crew are simple. They are ranked like this:

1 Safety of the Crew
2 Safety of the Auxiliary vessel
3 Safety of the people in need of assistance

You can not put yourself or your vessel in unwarranted risk in any circumstances.

***Effective Leadership***

**Malicious Obedience: the Silent Killer**

Have you ever worked for a controlling manager who needs to change all your decisions and constantly corrects you on small, seemingly irrelevant details? If so, how did you react when he or she did this? What was your coping strategy? When faced with this common dilemma, most people stop trying to make decisions on their own and wait for the next detailed instruction. They follow the directions to the letter regardless of whether it is the right action or even a safe action. At this point all personal stake in the success of the tasks and pride in the outcome disappear. We become maliciously obedient when we state "If this guy knows everything then why should I tell him that the water in this bay is only six feet deep?" Malicious obedience is a passive aggressive state that can slow down productivity in an office or kill a rescue crew.

Two factors encourage malicious obedience. The first is a coxswain or captain that is unable to communicate their expectations, thereby getting frustrated and taking over or micromanaging every action on the vessel. The second is a crewmember who forgets the consequences of this brand of mental resignation and lets his/her attention drift to the conflict and not the vessel's mission.

Vessel operating at peak performance requires an efficient team to maintain safety & overall performance

It takes all the minds on the vessel focused on safety and success before a rescue vessel is functioning well. With small teams, an autocratic leader-

ship style can be dangerous. Each person must feel involved in the decisions and have a stake in the solutions. A coxswain who states "don't think, just do it" will be conning a vessel that is being watched by one mind only: his. This is a crippled resource with a limited response capability.

### *Challenge on Deck*

An alternative to malicious obedience is the challenge. Challenges at the wrong time and for the wrong reasons can prove equally dangerous, but a trusted and experienced crewmember that offers a strong challenge can prevent a catastrophe. As a crewmember you should feel as though you are able to ask questions and make a challenge if you perceive a real danger. Yet a crewmember that repeatedly challenges the coxswain/captain on issues such as efficiency and protocol can be damaging to the team. You should only challenge a coxswain when you perceive a real danger in a developing situation or in the consequences of an order. If the situation is not urgent, then asking questions and making respectful suggestions can be an important dynamic of a healthy team.

Some basic leadership qualities help an individual function in and/or lead a team:

- ⇛ Personal commitment to the team members
- ⇛ Ability to see past conflict and support all team members
- ⇛ Honesty and assertiveness offered at the right times
- ⇛ Clear and consistent communication
- ⇛ Acceptance of input and thoughtful responses
- ⇛ Effective use of short term strategies as needed
- ⇛ Capable of fostering a balance between authority and assertiveness
- ⇛ Ability to stay alert

### *Know your Limitations*

These are other very important factors. You yourself may have the knowledge required for a task, but your boat may not be adequate for the task. For example, you may be an expert in cardiopulmonary resuscitation (CPR), but if your boat does not have enough deck space to perform CPR properly (assuming that you are the only unit present), you cannot help. Alternatively, you may have a large, powerful vessel fully equipped for towing, yet you will be useless again if the water is not deep enough to allow you to reach a grounded vessel.

The same applies to your crew, you may be a very competent and experienced mariner. Once again, search and rescue is a team effort. You cannot expect to do well on any search and rescue mission if you act alone as a unit or alone as an individual. Always remember that many tasks must be performed during a search and rescue mission. If, in a SAR crew, only one person is capable of performing all the tasks, that person will certainly get overwhelmed at some point. If you are an expert in CPR, to use the same example, and also happen to be the only team member capable of piloting your boat, you will have a problem if you happen to be called upon for a cardiac emergency. It is good practice to have some redundancy in the areas of expertise of every crewmember. In other words, at least two persons in your unit should be able to perform any important tasks.

### *Commitment to Training*

Your level of training is very important, since it will determine what you can do to help in a search and rescue mission. The reason for this is obvious: emergency situations are usually not the best place to learn new skills. It is important to know how to perform the necessary tasks, since time is of the essence. In addition, lack of knowledge in an emergency situation can put someone at risk. If you become part of the emergency, you are not helping anybody. When someone (the On-Scene Co-ordinator or the Co-ordinator of the Joint Rescue Co-ordination Centre, for example) gives a unit a specific task, it is essential for that unit to determine whether or not they have the level of knowledge required to carry out the task safely and efficiently. The following questions may help you to assess your ability to perform a task:

- ➜ Do I know exactly what is expected from me?
- ➜ Do I know how to do what is expected of me?
- ➜ Do I know how to deal with any conditions that I may encounter during this task (waves, wind, darkness, currents, injured persons, etc.)?

Do I know exactly what is expected from me?

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Do I know how to deal with any conditions that I may encounter during this task (waves, wind, darkness, currents, injured persons, etc.)?

## 1.1.1 Command Structure

A small vessel's command structure is fairly simple. The captain, a.k.a. Master (for small vessels the title is coxswain) is responsible for the actions, and state of the vessel. He or she is also responsible for the safety and welfare of everyone on-board his or her vessel as well as anyone on-board another vessel that has accepted the assistance of, or is under tow from the rescue vessel. For reasons of safety and welfare of a vessel, each crewmember must follow the instructions/orders of the captain/coxswain unless that crewmember perceives the order will result in the injury or death of a crewmember.

*If you are not ON WATCH then your vessel is in danger.*

## 1.2 On Watch

This manual offers the knowledge and key concepts necessary for training to be ON WATCH. Being ON WATCH is many different things:

- You are ON WATCH when you are responsibly monitoring your assigned taskings along with the safety of the vessel.
- You are ON WATCH when the captain or coxswain can be assured that all aspects of the vessel that are under your control are being monitored and maintained.
- You are ON WATCH when all of the assigned duties and tasks are performed diligently.
- You are ON WATCH when you are alert and vigilantly looking out for unexpected objects, vessels, or targets.
- You are ON WATCH when the captain knows that emergencies and mishaps will be handled and reported competently.

If you are not **ON WATCH** then your vessel is in danger.

## 1.3 Vessel Positions

Each crewmember shall be familiar with the areas of responsibility on the vessel during the different operations. Like an actor studying the many parts during a play, you should be ready to assume all the positions of the crew. During a challenging and potentially dangerous incident, an effective leader will be able to assign you to the role in which you show the most strength, thus ensuring a problem free mission. Yet, when the team is faced with a routine task, the coxswain/captain may assign to you a role in which you are not experienced or sure of. These are the dynamics of a growing and improving SAR team.

There are only a handful of positions you can assume on a small vessel, but without those positions the vessel cannot perform the duties it was intended for. These jobs are the basic areas of responsibility; they do not imply one person per position. A small CCGA vessel on a towing mission may only have two or three crew. In this case, the coxswain may occupy the helm position while an experienced crewmember will be the line handler and the tow watch. Each vessels' coxswain/captain will define these duties as required for a given mission. It is important that the entire crew is familiar with all of the areas of responsibility so that the key elements of safety and effectiveness are not missed on an incident. It is the captain's/coxswain's responsibility to assign the positions to capable individuals, and to ensure that all the tasks are covered.

### 1.3.1 General Duties

The command position holds all responsibility for the vessel's actions and the welfare and safety of her crew.

### 1.3.2 Helm

The helm position (sometimes taken by the coxswain /captain).

#### *General Duties and Responsibilities of Helm*

- Ensuring all on board are equipped, secure and ready to proceed
- Communicating all intentions to manoeuvre the vessel before manoeuvring
- Wearing a Kill switch (if one is present)
- Safe manoeuvring of the vessel through the various evolutions
- Manoeuvring the vessel in the event of a Crew Overboard
- Lookout ahead for traffic, obstacles, objects in the water
- Identifying all navigation aids
- Search spotting duties for the forward sector in a search
- Monitoring of the speed, throttles, engine warnings, gages, pressures, electronics, alarms, power and signalling/horn (smaller vessels 20m and under)
- Listening to engine sounds and machinery space sounds
- Steering a compass course or on a landmark
- Changing the vessel's course smoothly and efficiently
- Observing the SAR operations and watching for hazards

#### *Radio/Communications Watch*

A Radio Watch will be held at all times when a CCGA vessel is underway. Each crewmember shall know all of the duties involved when keeping a radio watch. The radio watch position is in many incidents the most important position on the vessel.

#### *General Duties and Responsibilities of Radio/Communications Watch*

- Testing all communication systems prior to departure
- Activating and using the radios

- ➡ Regularly checking and, testing the status and function of the radio/radios
- ➡ Listening to all designated channels, especially VHF 16, for signs or signals of distress
- ➡ Advise coxswain/captain if overhearing a distress signal or the spoken words **MAY DAY**
- ➡ Notifying the coxswain if overhearing **PAN, PAN, Securité, or a relevant broadcast / radio traffic**
- ➡ Logging all communication relevant to the vessel or the mission
- ➡ Answering and communicating vessel business

- ➡ Relaying messages and instructions to vessel coxswain/captain and crew

### 1.3.3 Navigation Monitor

It can be the crewmembers' responsibility to keep watch over the vessel's position and path. Often the coxswain or navigator will be deciding the route and planning the courses for the transit.

You shall monitor the position of the vessel in relation to the paper chart, electronic chart and radar. You must be aware of the intended path defined by the coxswain/captain and routinely checking that the vessel's position is on that path using all available means (see chapter 7- Navigation for list of available means).

***Crew of the vessel shall STOP the vessel in event of:***

- ⇛ Close proximity to unknown object detected by sight, sound or radar ahead of the beam
- ⇛ A major unexpected departure from the course line
- ⇛ Another vessel turning or veering into your vessel's path.
- ⇛ Uncertainty of your vessel's general position
- ⇛ Impending landmass detected by sight or radar
- ⇛ Close proximity to dangerous submerged objects (rocks, shoals or wrecks) charted or sighted
- ⇛ Depth sounder consistently reading shallow depths
- ⇛ Moving in or near conditions of reduced visibility due to rain, snow, sleet or fog
- ⇛ Whenever you are in doubt of the situation

***You must notify the coxswain if:***

- ⇛ If you are unsure as to the safety of the vessel
- ⇛ There are Aids to Navigation previously unreported
- ⇛ Any new vessel traffic comes into view by sight or radar, or is detected by sound
- ⇛ Any fixed hazards come into view by sight, radar, or electronic chart
- ⇛ There are any differences between what you should see (according to paper/electronic charts) and what you actually see
- ⇛ There is any malfunction of any electronic device
- ⇛ Any information available to you is not fully understood (chart symbol, radar image, GPS data, or instruction or request from the coxswain)

### 1.3.4 Linehandler / Operations

The linehandler and operational positions will vary with the mission requirements but in general this person performs the functional duties required by the mission. The linehandler will ready and prepare any lines or tackle required for the securing and mooring of the vessel or securing of gear on the vessel. The linehandler will ready and prepare any lines or tackle required in the assistance of another vessel. The operational person will identify hazards on deck or related to the operations (e.g. "don't stand in the bight!").

***General Duties and Responsibilities of a Line Handler***

- ✓ Be responsible for crew and deck safety during line handling operations
- ✓ Verify the plan with the captain/coxswain
- ✓ Inspect all lines and equipment to be used for wear or damage prior to starting operations
- ✓ Secure the decks of all gear and lines for getting underway
- ✓ Coil and stow all line hanging or in lockers
- ✓ Secure lines
- ✓ Check the lead of line to make sure crew are clear of the bight and running gear
- ✓ Keep line clear of running gear, especially in the water (stern and propellers)
- ✓ Continuously report progress of line handling operations and the tension state of lines and any other dangers
- ✓ Ready and toss the heaving line

### 1.3.5 Equipment setup and operation

The crew is responsible for knowing the location, setup and operation of all emergency and rescue gear. The only way to get familiar with the setup and operations, the tension in the tow line, and any other dangers. Each vessel will have different types and models of equipment.

Line handling while towing

***Some deck equipment:***

- Salvage and fire pumps
- Hoses and nozzles
- Foam adductors
- Re-boarding device
- Towing lines and tackle
- Fire extinguishers
- Search lights
- Cranes winches or lifting devices
- Davits and vessel recovery systems
- MOB pole or life ring
- Stokes litter or stretchers
- Life rafts (if your vessel carries them)
- Datum marker buoy
- Direction finder
- Night vision goggles

***Suggested Duties and Responsibilities for Equipment Set-up and Operation***

- Ensure and test state and function of listed equipment
- Report deficiencies
- Ensure safety of crew during the equipment operations
- Stow and secure all equipment for vessel underway
- Break out equipment and ready it for use
- Must have a comprehensive working knowledge of the operational procedures, maintenance, and specifications for each piece of equipment

***Example of Commands and Signals for Equipment Set-up and Operation***

**Thumbs up** – ready for operation
**Arms across chest** – secure and ready
**Hand across throat** – Stop and shut equipment down
**Hand outstretched palm out** – halt action
**Palm down swinging forearm up and down** – slow down
**Rotate index finger while pointing up** – speed up or hoist

### 1.3.6 Lookout

A lookout is someone who is watching over the path of the vessel and reporting any objects, oddities, land masses or vessels that may present a danger to the vessel or be relevant to the safe navigation of the vessel. Lookouts may use all available means to determine the safety of the navigation path. The lookouts' secondary duty is to identify objects, targets, or details that may prove relevant to the vessel's mission.

***Suggested Roles and Responsibilities for Lookout***

- ✓ Performs constant visual scans of the vessel's path and reports all objects forward of the beam
- ✓ Routinely looks aft for overtaking vessels
- ✓ Maintains communications with the Helm and Captain/ Coxswain
- ✓ Uses all available means to keep a lookout (hearing, sight, smell, night vision goggles, binoculars)
- ✓ Reports the positions and estimated heading of vessels approaching using a designated sighting system (See commands and signals for lookout)
- ✓ Reports conditions of visibility and changes in weather
- ✓ Protects eyes from wind and spray and sunlight by using appropriate eye wear

### 1.3.7 Common Positions According to Vessel State/Mission

**Transit**

- Command
- Helm
- Navigation Watch
- Radio Watch

**Towing/Salvage**

- Command
- Helm
- Line Handler
- Tow Watch/Salvage Operations
- Navigation/Radio Watch

**Search**
- Command
- Helm
- Pattern Timing and Control
- Spotters
- Navigation/Radio Watch

**Rescue /Medical**
- Command
- Helm
- Equipment set-up and operation
- Medical attendant
- Navigation/Radio Watch
- Radio Watch

## 1.4 Vessel Fitness

### 1.4.1 Routine Inspection

Routine vessel inspection and maintenance is one of the most important activities that we partake in other than the SAR mission itself. If the vessel is not safe or seaworthy it cannot perform the tasks we ask of it, therefore jeopardising the mission at hand.

Vessel inspection should occur regularly, for example, on a monthly basis. This inspection will be combined with any routine maintenance that the equipment should require, such as manufacturers recommended maintenance on outboards, as well as any underwater maintenance. The entire vessel should be gone over checking all electrical components and connections, hoses and connections, tubes' condition and security to hull. As well, all portable equipment should be inspected for serviceability and lockers cleaned out before replacing equipment. These are just a few of the items to be checked during routine maintenance, but are by no means the complete list of items.

Every vessel will require a different checklist, which should be made up by the individual unit. Do not expect the first list to cover every item but add to it as deemed necessary. This does not mean that the vessel shouldn't be inspected at the beginning of every crew rotation but routine vessel maintenance should take place as well as at crew rotation.

It is the responsibility of the crew coming off of rotation to ensure the vessel is in good operating order and that all gear is accounted for and working properly. If something is found in need of attention, fix it immediately and don't leave it for the next person.

All crewmembers should partake in routine maintenance on a rotational basis as it will not only teach the member more about the vessel, but it will instill a sense of ownership and pride in being an integral part of the crew.


Each crew member should be familiar with controls

***Routine Inspection of Personal gear***

- ✓ Flashlight with good batteries
- ✓ Knife (with blunt end on inflatables)
- ✓ Strobe with good batteries
- ✓ Whistle
- ✓ New rubber gloves and breathing airway
- ✓ Notebook and pen or slate with grease pencil
- ✓ Watch with second sweep hand easily visible in low light
- ✓ PFD or Cruiser suit in good condition and straps adjusted correctly

### 1.4.2 Pre-departure Inspection

Pre-departure inspection may seem redundant after reading the last section, but on the contrary, this is the last chance to discover a possible problem before heading out. This inspection is not as complex as the other two mentioned in this chapter and can typically be carried out rather quickly and done in conjunction with the start-up procedures for the vessel. Items most concerned with are first and foremost tube pressure (if applicable), lights, including hand held spotlights, electronics and safety gear.

There should be a pre-departure checklist posted on the vessel, so that it can be readily referred to and can usually be carried out by the first crewmembers at the vessel while waiting for the rest of the crew.

## 1.5 Mission Execution

### 1.5.1 On Call

The most important asset of a crewmember is reliability, as the vessel is useless if the coxswain is the only person to show up to the vessel when the pagers are activated. For safety reasons, the vessel must **NEVER** leave the dock with less than a full compliment on-board, as you never know what you will be tasked to do or how long you will be out. When "on call" you will be expected to remain within 15 minutes of the vessel at all times unless otherwise arranged with your coxswain or designated person. If you will be unavailable it is imperative that you contact the designated person or at the very least have someone stand in for you.

When your pager is activated and you are required to attend an incident, regardless of the urgency, you have no right to violate any traffic laws on your trip. Remember that you are no good to anyone if you don't arrive at the vessel safely.

### 1.5.2 Mission Preparation

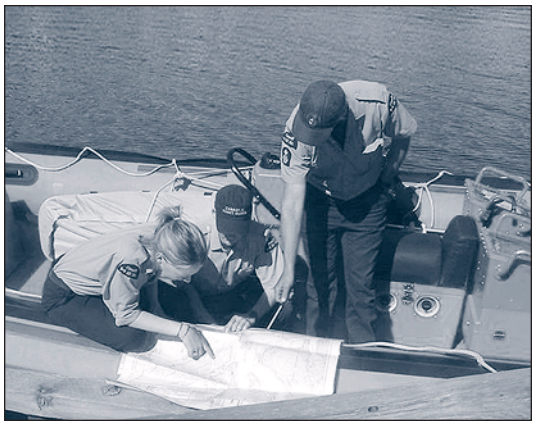

In preparation for the mission, there are a few items to be concerned about upon arrival at the vessel. Firstly, personal safety gear, including helmets, must be worn at all times when underway; this means putting your gear on before you leave the dock. The weather will determine if the crewmembers will want to don extra personal gear and this will be done at this time. Some units have a locker on the dock for storage of seldom used items, (pumps, spine boards etc.) which, when needed, can be loaded aboard the vessel. It is recommended that all gear should be stowed and secured on board at all times if possible.

### 1.5.3 Mission Briefing

Briefing the crew prior to departure, or before arrival on scene provides the following:

- ➜ Mentally prepares your crew to perform
- ➜ Establishes mood of communication
- ➜ Ensures you and your crew work together (cockpit approach)
- ➜ Ensures that standard procedures are utilised and enhanced
- ➜ Reduces the possibility of error
- ➜ Decreases stress and pre-incident anxiety by eliminating the unexpected
- ➜ Establishes greater crew confidence

The most valuable part of the mission preparation is the briefing. Once the crew is assembled, the coxswain will give the crew a short description of the incident at hand including number of persons involved, type of incident, type of vessel, location and any other pertinent information. He may also wish to bring the local chart out and use it to discuss any concerns as to the incident's location as well as the route to be taken. The coxswain will then assign duties for each crewmember and ask if they have any concerns or questions about the tasking. Crewmembers are encouraged to give input and ask questions. A good coxswain will share all of his information with his crew, as it is almost useless if he keeps it to himself.



### 1.5.4 Response Priorities (get there safely)

Two factors will increase risk during the transit. The first factor is the urgency of the call which will increase the navigation speed on the route, and the second is the incident having the crew focussed on the rescue or search instead of on safe navigation. Rescue vessels end up being at a higher risk of collision or grounding from navigational mistakes than incurring damage in a rescue.

Safe speed is dependent on many things like sea conditions, amount of debris in the water, visibility, abilities of the helmsman and route to be taken. If you don't get there safely, you could very possibly become another incident requiring aid yourself. It is better to get there a few minutes later than not at all, no matter what the level of urgency.

***Setting up while underway may not be a good plan***

Imagine your vessel is rushing to the aid of a sinking fishing vessel. The fishing vessel is taking on water fast and declaring a Mayday. The seas are choppy and your motivated and experienced crew moves forward to break out the fire pump and suction hose. The vessel hits an unexpected wave and one of your

team is tossed into the bow locker, dislocating his shoulder, and the fire pump is now bouncing around the foredeck. You stop the vessel and put your injured crewmember in the seat and carry on at high speed to the scene. The fifty-foot trawler is about to slip beneath the waves so you quickly evacuate all of the crewmembers. The evacuation does not go well because the fire pump is on the deck and one of your crew is no longer able to help pull the people off of the sinking vessel.

In this situation the preparation hindered the effectiveness of the vessel and injured a volunteer. This is a classic example of a team that is trying to be efficient by planning their response prior to their arrival. Your vessel may be at the highest risk during the transit, and your best energy should be spent during the pre-departure check and briefing or setting up once on scene. There is always enough time to Stop, Assess and Plan when you have the real scene to observe.

The scene you arrive to is very rarely the scene that you envision. Plans made enroute usually fit the imagined scene and not the real scene. Once you have arrived and discovered that your enroute plan does not fit, then your team has two choices: forget the old plan and make a new one, (this rarely happens) or fit the old plan to the real scene. Thus a bad plan is better than no plan. What often occurs upon arrival is the enroute plan is tossed out and the team goes into the scene without a plan (because a new plan would take too long!). This can be a fatal mistake, because a team without a plan cannot work together. Any accident scene that is complex or unstable is likely to injure or kill rescuers who are acting on their own, without a backup plan or even an initial plan.

### 1.5.5 Night Operations

When operating at night, as we do almost exclusively for about five months of the year, it becomes readily apparent that everything that we do is hampered when in darkness. The most important thing to remember when running in darkness is to slow down due to lack of visibility. All lighting and illumination systems on board shall be tested prior to departure. Personal safety becomes a bigger priority in darkness as well. While on board carrying out your duties, slow down to avoid tripping and falling, possibly overboard. There is always a risk of falling overboard, even more so in darkness, so it is imperative that every crewmember has a personal strobe and whistle as part of his gear. It is almost impossible to find a person in a seaway without some sort of detection device.

## 1.6 Team Communication

Verbal communications are very important in a small team. Messages must be loud and direct; simple gestures aren't good enough, and can be easily misunderstood. It pays to project your voice and speak in common terms. Every order or request must be repeated or at least confirmed by the recipient.

- Make direct eye contact
- Say the person's name and wait for a reply before giving the message
- Direct your speech to ensure that you've been heard
- Acknowledge any requests or commands by repeating the information or stating that you understand
- Provide as much relevant information as possible. If you're a crew member, remember to only give the leader essential information
- If you don't understand the information given to you, ask that the instruction/command be repeated or explained
- Work as a team. If you're the leader, ask for input and give your team the details of your knowledge. Teams function more effectively when members are encouraged to contribute their ideas and expertise
- Do not scream. A good leader only screams when there is danger, and there is no better way of alerting others

**Steps to 2 Way Communications**

1 Look

2 Name

3 Say Message

4 Repeat

5 Confirm

### 1.6.1 Open Boat Communications

At high speeds and in noisy environments it is sometimes impossible to communicate verbally; this is where signals come in. Helm control is one of the most critical communication routines there is. Mistakes in helm commands can result in the vessel heading off in the wrong direction. This is why some coxswains will give their helm commands by hand.

## 1.7 Risk Assessment

As soon as you become a part of a response team you enter into a different realm of risk and you must follow different rules for survival.

Imagine that a neighbour's house is on fire. Her dog Fluffy is barking in a lower floor window and your neighbour is crying "save my puppy!" You know that by the time the fire department arrives, the house will be fully involved and it will be too late for Fluffy. Would you go in to save the dog? Maybe you would assess the risk and determine that the smoke is still high and the flames are in another part of the house; therefore you rush in and grab the dog. The mission was a success and you are an unscathed hero. What do you think was the actual level of risk that you encountered? Maybe a 5% chance of being injured and a 1% chance of dying. This level of risk was probably acceptable, especially considering a life was saved.

When the fire department arrives, what levels of risk do you think they are willing to take? A 1% chance of death and a team of five would mean that they lose one fire fighter every twenty calls. At a 5% chance of injury this means that a busy fire department would lose 5-10% of their crews per year. If you were Chief of this fire department how long do you think you would keep your job? The concept of acceptable risk changes when you take on the role of a rescue team member.

You as a team member must take every action possible to reduce the levels of risk that you face routinely. What seems like reasonable risk on scene may be well above an acceptable level. A one percent risk taken routinely means you will not survive a long career in the field.

### 1.7.1 Stop Assess and Plan (SAP)


When things go wrong on a rescue scene and team members get hurt it usually stems from one of two problems: a loss of scene awareness and/or a bad action plan. Teams need to observe the scene carefully and notice all the details and they need to agree to a plan before entering the event zone. SAP is an on scene assessment protocol that can be used by response teams when approaching unknown situations.

Panic and poor judgment kills rescuers as well as victims. When faced with unusual circumstances, in adverse conditions, proper assessment is the key to survival. These few moments standing away from the action observing, communicating with your team, and formulating a plan, will save countless minutes in fumbling, re-planning or winging it. Time spent carefully may prevent a serious accident or save a life. In extreme conditions this allows time for the team and team leader to act calmly and not be prisoners of their adrenaline. Often a scene will contain hidden or subtle dangers that are missed at first glance. These unknowns can kill.

The SAP protocol was originally developed to prevent volunteer and professional marine-rescue crews from rushing into a scene and getting injured. It is an easily remembered and quickly applied tool that is based on the same common sense approaches taught in many fields. The most experienced rescue and enforcement crews all have pre-action assessment tools that allow teams to recognize dangers before it is too late.

**SAP** is a structured habit that can become a basic tool used in any situation of risk. Using SAP, a small team can:

- ⇛ Identify all the hazards at a scene
- ⇛ Receive input from all team members
- ⇛ Formulate a solution that best fits the problem
- ⇛ Communicate an action plan with the roles for each team member

A **SAP** assessment can be as short as fifteen seconds for routine situations and could take as long as an hour for major incident or disaster scenes. **SAP** can be used at any stage of the response, to the preplanning before entering the scene, prior to boarding the vessel, or prior to making the entry to an enclosed space below decks. A short discussion about dangers at any stage can reduce the risk.

***Special points of interest:***

- ⇛ SAP forces communication and ensures that scenes that appear routine are still assessed thoroughly
- ⇛ This tool is easy to remember and easy to use in the field

#### *Event Zone*

Surrounding every serious incident there exists an area of involvement called the event zone. Inside this zone, the urgency of the incident influences and compels the team to act immediately. Once you have stepped into that zone you are within range of any dangers that may be present, and involved in the scene. Rescuers, enforcement officers and good Samaritans all lose their ability to calmly assess when inside the event zone. They are pushed to act quickly and solve the problem as it presents itself. This is why it is critical to practice stopping outside the event zone for a proper assessment. It is the small or partially hidden clues that can quickly turn a routine situation into a disaster. When rescuers get killed or injured on the scene it is usually because of a loss of situational awareness. They have missed some details that would

have indicated an unstable or more complex scene than was immediately apparent.

Hollywood and re-runs of Rescue 911 give a false impression of what real incidents are like. They constantly review incidents that portray "nick of time" rescues that are not accurate depictions of reality. Very seldom is a situation so urgent that a team does not have time to stop and assess.


***You know you are in the Event Zone when:***

- The people involved are able to look you in the eye and speak to you
- You feel compelled to forget the assessment and just do it
- If something goes wrong you may have to move back
- You are having to act, or manoeuvre to keep yourself and your team oriented and in safety

### *Pre-Arrival Planning Trap*

Not to be confused with proper pre-departure planning, planning for an incident enroute is a common practice for many fast response teams. Crews should focus on safe navigation enroute. There is a perceived need for an instant response upon arrival. When the fire truck arrives, people want to see the fire fighters rush into the burning building, not sit around and chat. The response team feels this pressure and will feel compelled to act first. This has been a fatal mistake many times when crews missed key clues.

Too much response planning before arrival can be dangerous. If the team is responding to a sinking, then the team should check and load a salvage pump and damage control gear. Response plans should not be made based on dispatch information. The scene and problems that they visualise enroute will be different from the scene that they arrive to, and so will the solutions to the problems. Upon arrival, the team will have to consciously forget about their previous plan and make up a new one or try to make the pre-arrival plan fit the real scene. It is hard to give up a plan (even a bad one) and start again. Pre-arrival planning can lead to disaster when team leaders go with a pre-made plan that does not fit the scene. When the team arrives, they should be able to have a fresh, unbiased view of the scene from outside of the event zone.

### *Stopping*

This is a simple step, yet many team members have problems with it. In most situations, the vessel should come to a complete stop (all way off). The important thing is to avoid getting any closer to the scene; only then can the assessment begin. In some situations, it may be necessary to maintain steerageway in a current, to slowly and completely circle a scene or even pace a vessel underway in order to keep a constant position outside of the event zone. This all counts as stopping.

### *Assessing*

The most important step, assessment, must be only assessment with no planning. Here the whole crew observes the scene carefully trying not to be distracted by the main elements (fire, injured people etc.). Details can make a profound difference. Planning is natural instinct that creeps into places where it has no business. One must make a conscious effort to only speak in the language of observation.

If the scene is complicated, it may be necessary to have five seconds of silence while people observe; this gives the crew time to focus on their task of observation. (see example in sidebar)

### *Planning*

The planning stage is the stage where the crew gets to discuss the most effective plan. Everyone gets input but the leader has the final say. Once a plan is decided the leader assigns jobs and gets verification from the crew.

Sometimes situations can change and make a good plan into a bad one. If the leader can foresee certain circumstances then a backup plan can be discussed.

**Example:** "If the boat starts to sink, pass everyone off of the stern and get off."

If things go wrong and the scene becomes unstable or if the team does not have a back up plan then the leader pulls the team out of the event zone and re-assesses the scene for a new plan.

*Language of Observation Example:*

*"I see lines leading off the stern"*

*"I see that fellow has a rifle"*

*"The water looks shallow"*

*"There is gas leaking from the tanks"*

## Coast Guard's Letter of caution

**Dear Coast Guard Auxiliary Crews:**

The Canadian Joint Rescue Co-ordination Centre values the vital contribution that the Canadian Coast Guard Auxiliary vessels make to Search and Rescue in our national waters. The tasks that they perform are often complex and demanding. The CGA volunteers train constantly to be capable of responding to any call for help. We wish to reinforce our message of caution regarding the difficult situations that auxiliary vessels and crews have to face. The Coxswain or Captain's first responsibility is to the safety of his or her crew, and the second is to execute the tasking effectively.

**Here are some points to be aware of:**

Excessive speeds can degrade both crew safety and SAR effectiveness, and must be avoided. Many survivors report that SRUs passed by without detecting them, both when the SRUs were in transit and when executing a search. Excessive SRU speed contributes to this problem. CGA (and CG) FRCs have been involved in several situations where the crew was thrown from the craft due to high-speed collisions - e.g., with log booms and points of land. These incidents could have caused loss of life, needlessly (often the speeds involved were inappropriate).

It is usually better to search thoroughly rather than quickly. It is always better to arrive safely rather than not at all.

It is JRCC's responsibility to assign search areas that can be covered effectively without need for excessive SRU speeds.

Bottom line: Coxswains should use high transit and search speeds only when the safety of the crew can be maintained and when absolutely necessary to execute the SAR response.

Moderate your speed according to these factors:
Close to shore wave direction, frequency, steepness and height; wind speed and direction; visibility; crew experience, fatigue and training levels; craft design, trim and equipment condition; debris in the water; other traffic; navigational hazards (land, reefs, etc).

We at the Joint Rescue Co-ordination Centre value your contribution to Search and Rescue in Canada, but we value your safety and well-being more. Keep up the fine service and be careful.

**John Palliser**
Superintendent of Marine SAR (Pacific)

## 1.8 Critical Incident Stress (CIS)

As a Canadian Coast Guard Auxiliary crewmember you may occasionally experience conditions involving a high degree of risk. While working on a vessel, the potential exists for you or one of your team to become involved in a critical incident. Should this happen, both you and your family could experience emotional or physical trauma as a result of the incident. Through training and safety awareness you can minimise the risk of trauma, but you can't always prevent a critical incident from occurring.

### 1.8.1 A Normal Reaction to an Abnormal Event

A critical incident is any traumatic event which shocks you enough to upset your normal means of coping during or after the incident. How much an incident affects you depends on many factors: the time of day the incident occurs, the number of people involved and the severity of any injuries. Your stress level prior to the incident and the support you receive also makes a difference. You must remember that this reaction is a normal reaction to an abnormal circumstance.

You may experience a critical incident differently from others. You may have been through trauma before without any effects, but find that a certain incident leaves you feeling unable to cope. How you react depends on the particular circumstances at the time of the incident.

Learning about CIS before you become involved in a traumatic event is an important means of prevention. If you are involved in a critical incident it is quite normal for you to have a reaction to the event. The reactions experienced are called critical incident stress (CIS). The CIS Program was developed and initiated by the Department of Fisheries and Oceans to assist those involved in critical incidents. Similar programs have shown that providing prompt CIS support to those involved in an incident greatly assists them in recovering from the stress triggered by the incident.


### 1.8.2 Activation of the System

Should you or another crewmember become involved in a critical incident, your coxswain, or a controller at the Joint Rescue Co-ordination Centre will activate the CIS program on your behalf, by calling a 24-hour emergency number. Whatever CIS support you, your fellow auxiliarists or family require will be arranged. Department of Fisheries and Oceans and DFO Headquarters will pay CIS Program costs.

In cases where the critical incident is particularly traumatic, a Mental Health Professional (MHP) will hold a CIS debriefing. Your Coxswain or unit leader will ask you and all others involved in the incident to attend the debriefing. The debriefing will give you the opportunity to learn more about CIS, and to explore your reaction to the incident. When appropriate, CIS family support will be provided at your family's discretion.

### 1.8.3 Signs of CIS

*Everyone reacts a little differently to a critical incident. Some of the most common reactions include:*

- Nausea and digestive disorders
- Sweating and profuse tremors
- Increased heart rate and blood pressure
- Sleep disruption
- Confusion and disorientation
- Poor concentration and decision making
- Flashbacks
- Anxiety
- Withdrawal and depression
- Sense of loss or grief
- Emotional numbness and helplessness
- Anger and resentment

An integral part of the CIS Program is the assurance of confidentiality. The CIS Policy stipulates that no Peer Team member or Mental Health Professional can be called to testify in any internal review. Further, no names of individuals or conversations are ever recorded.

Whenever a debriefing is conducted, confidentiality is the first ground rule established by the MHP. A CIS debriefing is not a performance review or an operational critique. Whatever experiences you choose to discuss during the debriefing remain in confidence with the other participants.

Remember that the goal of the CIS Program is to provide support to you and your family following a critical incident, so that you may all resume your roles at work and at home without any lasting effects.