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R/V WILLIAM KENNEDY EMERGENCY PROCEDURES

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REVISION TABLE

Rev.	Location of Change	Brief description of Change
A0	IFR	Issue for review
A1	IFU	Issue for use
A2	IFU	Issue for use. Update with Name change of vessel throughout Document. 4.1 Change Picture of Life Raft. 12.4 Change Pictures of Man overboard Maneuvers
A3	IFR	Revised document to personalize procedures to R/V William Kennedy and to include pertinent information

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1.0 Purpose and Scope

The purpose of this document is to provide the crew of the **R/V William Kennedy** with a comprehensive outline of the expectations for safe and effective conduct during Emergency Situations.

2.0 Definitions and Abbreviations

BST	Basic Survival Training
CO ₂	Carbon dioxide
EPIRP	Emergency Position Indicating Radio Beacon
MED	Marine Emergency Duties
MOB	Man Overboard or Person Overboard
CCG	Canadian Coast Guard
MCTS	Marine Communications and Traffic Services

3.0 General

It is the responsibility of all ship's personnel to foster a culture of safe work practices to mitigate accidents onboard. Likewise, it is the duty of the Captain and Mate to develop both safe operating procedures for daily operations, and emergency procedures for when systems fail. The safety of everyone onboard depends upon everyone following safe work practices and respecting the limits of their environment. Due to the nature of work at sea, it often falls on the ability of the ship's personnel to work together to meet the unexpected. It is the Master's and his/her crew's duty to ensure that the ship's crew is ready to respond to all likely situations, and that all personnel onboard are familiar with all the emergency procedures outlined in this document.

As we never know who may fall victim to an accident at sea, it is equally important that all ship's crew are as familiar with their individual duties on the muster list as they are with the duties of all other crew members. In this manner the ship will not be in jeopardy if any one person is rendered incapable of responding to their assigned duties.

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Such emergencies could include fire, grounding, collision, flooding, mechanical failure, persons overboard, pollution spills, and more. If the need arises, it is critical that every crew member onboard be fully prepared to act to save the vessel, or in extreme circumstances, to abandon ship and board the survival craft. To this end, it is imperative that the ship's crew is well trained in all emergency procedures and that all lifesaving, survival and search & rescue appliances, and especially life rafts (and their equipment) are properly maintained. Although the likelihood of severe emergencies occurring is remote, preparation is vital. In preparing for such an ordeal, the Master and crew should take note of the following points:

- Carry out regular drills ensuring that each crew member is familiar with their responsibility under the ship's Muster List;
- Verify the operability of the rescue boat motors on a weekly basis;
- Ensure that the required Ovatek and rescue boats equipment and rations are accounted for;
- Ensure that the main hydraulic crane is regularly serviced;
- Practice the donning of immersion suits and lifejackets at each Abandon Ship drill;
- Ensure that shipboard personnel are familiar with the operating instructions for hand-held radios and EPIRBs; that these devices are inspected regularly; and that their retrieval from the designated position is practiced at each drill;
- Practice the use of communications (both voice and radio) during each drill;
- Ensure that crew members dress appropriately according to the weather;

3.1 Alarms Onboard

The William Kennedy has four distinct alarms that will sound in case of emergency. A *short blast* means a blast of about one second's duration. A *prolonged blast* means a blast from four to six seconds duration. These will be made over the shipboard public address system.

1. **General Alarm – 7 short blasts and 1 prolonged blast**

Used to inform crew that an emergency has occurred (grounding, collision, flooding, etc.). Go to your station on the muster plan.

2. **Fire Alarm – continuous ringing and/or shouting FIRE FIRE FIRE**

Fire onboard. Follow your duties on the muster plan or as directed by ship's officers.

3. **Man Overboard – 3 prolonged blasts**

Personnel in the water. Go to your station on the muster plan.

4. **Abandon Ship – Verbal order**

Either announced over ship's public address system or given in person. Go to muster station, put on immersion suit, follow your duties on the muster plan.

3.2 Duty to Report

Reporting of events pertaining to the safety of the vessel and its crew, whether at sea or in port, is the direct responsibility of all shipboard personnel. This includes initial reporting, investigation and ensuring appropriate follow-up action. All marine emergencies will be reported to the Master of the affected vessel without delay. The Master has complete authority in situations affecting the safety of his/her vessel or its crew.

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3.3 Reporting of Pollution

Vessels must report all pollution or threats of pollution. When calling in a spill report, you'll need to provide:

- Your name
- Vessel name (R/V William Kennedy)
- Vessel telephone number (204-818-7972)
- Location of the spill
- Quantity of the spill
- Type of product spilled
- On-scene weather
- Number and severity of casualties (if any)

Report an incident by calling your nearest office. You may also report marine pollution incidents by contacting a MCTS centre on VHF channel 16. All numbers are open 24 hours a day.

NORDREG Canada: (867) 979-5724

Iqaluit MCTS Centre / NORDREG: 867-979-5260

Manitoba: 1-800-265-0237 (coastal/offshore waters)

New Brunswick: 1-800-565-1633

Newfoundland and Labrador: 1-800-563-9089

Nova Scotia: 1-800-565-1633

Nunavut: 1-800-265-0237

Ontario: 1-800-265-0237

Prince Edward Island: 1-800-565-1633

Quebec: 1-800-363-4735

VTS Atlantic Region

St. John's, Newfoundland:
Tel: +1-800-563-9089

Halifax, Nova Scotia:
Tel: +1-800-565-1633

Labrador (Goose Bay), NL, Casualty Pollution Desk: 709-896-2252

Eastern Canada Response Corp. Ltd.: 613-230-7369

- Private sector pollution cleanup response company servicing all waters south of 60° N

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4.0 Abandon Ship

The order to “Abandon Ship” is one which a Master hopes to never give. However, when at sea, circumstances may arise which necessitate this order. Emergencies tend to escalate very rapidly and the crew needs to be prepared to act accordingly.

4.1 OVATEK Life Rafts



The R/V William Kennedy is equipped with Ovatek Rigid life rafts which are widely used as a desirable lifesaving appliance for survival. It is imperative that all personnel are intimately familiar with the procedure of launching and boarding these life rafts.

The person in charge of each lifeboat / raft must be strict, optimistic, positive and confident. He/she should arrange a daily routine, giving each person a specific duty, no matter how small. He/she will take charge of all the emergency equipment, including the distress signals to ensure they are not lost or used indiscriminately. The daily rations of food and water must be issued on time to avoid grumbling and irritability, and each portion should be presented in the full view of each person on board. The boat/raft should be kept dry. Seasickness wastes body fluids and as such, upon entry all persons must take the anti-seasickness medicine contained in the emergency kit. While adrift at sea, a regular watch should be kept, each having two persons if possible, one to support the other in case of weariness.

4.2 Life Raft Boarding Procedure

Option 1: Boarding the raft while onboard the William Kennedy.

- There should be 2 ship's crew members in each raft if possible, with science crew occupying the other 5 positions.
- Open stern hatch by pulling handle on hatch. The hatch will open outward and downward.
- Pull down the ladder that is fixed to the hatch.
- Enter the raft head first, the first person must move all the way forward and sit at the bow.
- Each additional person should sit alternating Port side and Starboard side, each as far forward as possible.
- After everyone is in safely and seated pull up the ladder and close the stern hatch by pulling the cord attached to the ladder.

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- Open both air vents immediately after boarding to allow enough air for occupants – be prepared to close these if the William Kennedy sinks while the Ovatek is still attached. The hydrostatic release unit will release the Ovatek from its cradle once the Ovatek is 1.5 – 4 meters below the surface of the water, and the Ovatek will resurface.
- Open the survival kits and distribute sea sickness tablets.
- When the William Kennedy sinks to the point where the water level reaches the bottom of the raft, unfasten securing straps from raft by pulling the stainless-steel wire attached to the snap shackle on top of the hydrostatic release.
- After raft is deployed, to propel or manoeuvre the raft you may paddle from the bow or stern hatches. Alternatively, sea anchor can be deployed to slow drift. Ensure the line is connected to the bow lug before deployment. This will aid in narrowing down the search area.
- Verify that the exterior light is functional.
- Install the radar reflector on the exterior of the raft.
- Using hand pump located inside raft pump out any accumulated water which may result from having hatches open.

Option 2: Launching the raft and boarding in water

- Ensure painter is attached to the William Kennedy.
- Unfasten securing straps from raft by pulling the stainless-steel wire attached to the snap shackle on top of the hydrostatic release.
- Two persons will lift the raft from its cradle and throw each raft overboard (make sure painter is secured to the ship).
- After each raft is launched the crew should try to bring it to the Starboard aft corner of the ship and keep it steady for boarding by the aft deck ladder.
- If practicable, lower the aft platform and either install the embarkation walkway or bring the ladder from the Engine Room forward escape and lash in place.
- If aft platform is lowered and means of access are in place, use these to descend to the aft platform for entry to the Ovatek.
- Descend using the ladder on the outboard side of the aft platform to water level for entry to the Ovatek.
- There should be 2 ship's crew members in each raft if possible, with science crew occupying the other 5 positions.
- Open stern hatch of the Ovatek by pulling handle on hatch. The hatch will open outward and downward.
- Pull down the ladder that is fixed to the hatch
- Enter the Raft head first, the first person should move all the way forward and sit at the bow.
- Each additional person should sit alternating Port side and Starboard side, each as far forward as possible.
- After everyone is in safely and seated, pull up the ladder and close the stern hatch by pulling the cord attached to the ladder.
- Open both air vents immediately after boarding to allow enough air for occupants.
- Open the survival kits and distribute sea sickness tablets.
- After raft is deployed and occupied, someone must open the bow hatch to cut the painter. If the William Kennedy sinks, there is no weak link in the painter line that will break to release the raft.

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- To propel or manoeuvre the raft you may paddle from the bow or stern hatches. Alternatively, sea anchor can be deployed to slow drift. Ensure the line is connected to the bow lug before deployment. This will aid in narrowing down the search area.
- Verify that the exterior light is functional
- Install the radar reflector on the exterior of the raft.
- Using hand pump located inside raft pump out any accumulated water which may result from having hatches open during boarding

Once the Ovatek rafts have been launched and all persons safely on these rafts, the first task (if possible) is marshalling the rafts together and securing to each other by their painter lines. The purpose of this is to keep everyone together to increase the chances of detection and of survival. The rescue boats (if deployed) should be used to marshal all the rafts together and secure them by their painter lines. Care must be exercised in using the required amount of line, to ensure that the lines do not part and no damage is caused to the life rafts from banging together. In the absence of a rescue boat, all available means should be utilized (paddles, sea anchor, heaving lines, etc.) to marshal the rafts and secure all three together.

4.3 Evacuation Without Aid of Survival Craft

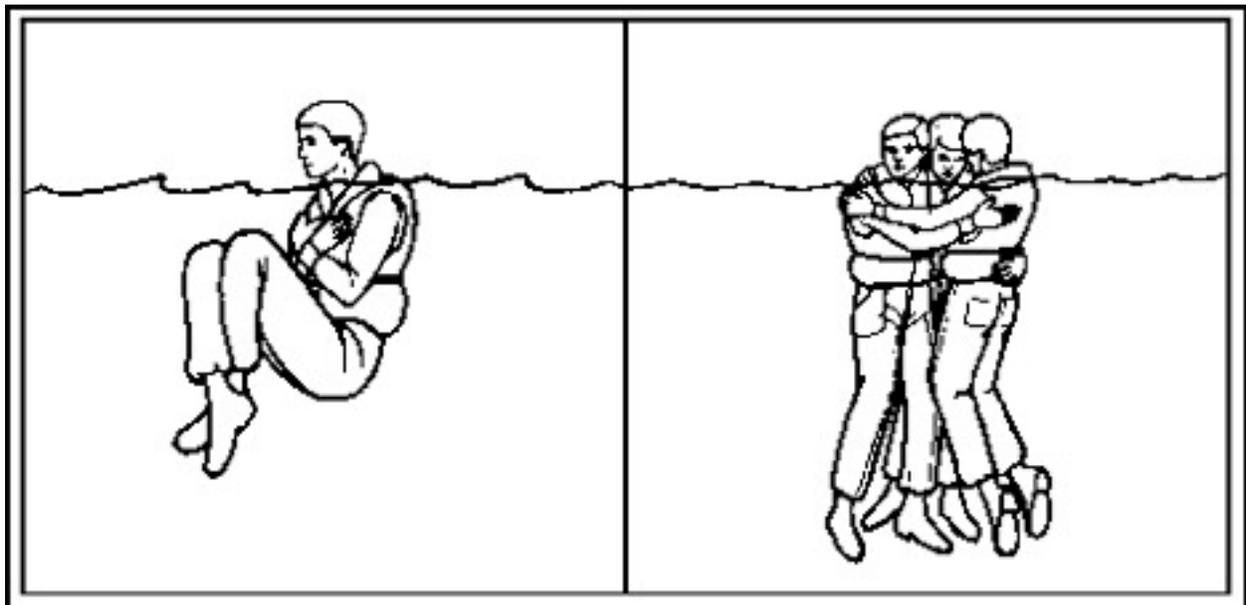
Persons who have been unable to get into the life raft before they leave the ship should be dressed in their survival immersion suits and lower themselves into the water (rather than jump) on the windward side of the ship, so that the ship will drift away from them when they are in the water. If the ship is listed, it is best to leave from either windward bow or stern. When clear of the ship, personnel should form a group to conserve heat, maintain morale, and so that they are more easily seen and rescued. In the event of a ship having to be abandoned because of fire, there may be burning oil on the water. The oil slick will spread on the windward side of the ship as the ship drifts leeward. As such, it is imperative that after the rafts have departed, any personnel left onboard disembark the ship at either the bow or the stern, and make their way perpendicular to the prevailing wind.

Cold water robs the body's heat 32 times faster than cold air. All efforts should be given to getting out of the water by the fastest means possible. Successful survival in this circumstance will require the person or persons to remain calm and rely on emergency training such as Marine Emergency Duties (MED) and Basic Survival Training (BST). Immersion suits are designed to prevent loss of body heat as well as to provide buoyancy. When the situation arises that there is more than one person in the water, they should try to link together as per the below picture.

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In the event that crew members abandoning ship are wearing life jackets, it is critical to keep legs and arms tucked in close to the body and avoid physical activity as much as possible. Any physical activity such as swimming will cause the body to lose heat at a much faster rate than remaining still in the water. Blood is pumped to the extremities and quickly cooled. Should personnel be in cold water and unable to get out, personnel will be faced with a critical choice to adopt a defensive posture in the water to conserve heat and wait for rescue, OR attempt to swim to safety. If there is more than one person in the water it is critical to huddle together facing each other to attempt to preserve body heat (as pictured below).



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4.4 Responsibilities

Master: on the bridge in command of the vessel and communications; broadcast **MAYDAY** on **channel 16** informing of preparations to abandon ship, relaying:

- Vessel Name
 - R/V William Kennedy
- Vessel Position
 - latitude and longitude or
 - place name with range and bearing
- Nature of distress
 - fire, collision, foundering, etc.
- Number of persons onboard
- Amount and type of survival gear onboard
 - 3 x Ovatec 7 life boats
 - 2 x Rescue Boats
 - 25 x immersion suits
 - 1 x EPIRB
- Vessel description
 - 65-foot research vessel, blue hull, white cabin, stainless steel superstructure, large A-frame at stern, black bottom, twin screw.

When it is no longer advantageous to stay onboard the William Kennedy, give order over public address to abandon ship. Inform CCG order has been given to abandon ship. Don immersion suit, grab pyrotechnic flares, handheld VHF's (2), and make way to life raft.

First Mate: head count; don immersion suit; collect EPIRB from top deck; if time allows grab handheld VHF's from Laboratory; bring to rafts.

Bridgwatch / SVOP: don immersion suits, ready rafts for deployment either on top deck or, if in case of fire, deploy into ocean and bring around to starboard aft corner for boarding; grab handheld satellite phone (SVOP); release rescue boat straps, chain binder; if time allows, deploy rescue boats; marshal science crew into Ovatek rafts.

Cook: gather readily accessible food and beverage supplies and bring to muster station; don immersion suit; board raft.

4.5 Abandon Ship Procedure

1. Inform crew to prepare to abandon ship
2. Call CCG, inform we are preparing to abandon ship
3. Muster on main deck
4. Head count
5. Ensure everyone wearing warm clothing, don immersion suits
6. If time allows grab flares, handheld VHF's (2 in bridge, 2 in laboratory), and handheld satellite phone Grab EPIRB from top deck
7. If time allows gather food and beverages / other supplies
 - a. Medication, first aid equipment, official documents, flashlights, blankets, guns, fishing gear, etc.
8. If time allows deploy rescue boats (if possible)

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- a. At a minimum, release staps and chain binders from rescue boats
9. If boat sinking
 - a. Board Ovateks on top deck
 - b. Be prepared to pull release mechanism from inside Ovatek
10. If boat on fire
 - a. Lower Ovatek's into water
 - b. Using painters bring Ovateks to starboard aft corner
 - c. If practicable lower swimming platform and install ladder / stairway
11. Inform CCG abandoning ship
12. On Master's orders, abandon ship from aft deck ladder, assist personnel into each Ovatek following order:
 - a. Crew member – open stern hatch and unfold boarding ladder and assist
 - b. 5 research crew (alternating port and starboard seating)
 - c. 2 crew members – shut stern hatch
13. Conduct another head count as personnel board rafts
14. When in water, tether 3 Ovatek's together
 - a. If rescue boats in water, tether to Ovatek's
15. Keep Ovatek's and RHIB's attached to William Kennedy as long as William Kennedy is afloat – cut line only when William Kennedy is endangering Ovatek's and rescue boats

5.0 Fire

An outbreak of fire occurs when sufficient heat has been applied to a material to produce a flammable gas within an oxygen-rich environment, in the presence of a source of ignition. The process of firefighting involves the process of elimination of one or more of the four elements (heat, fuel, oxygen, chemical chain reaction).

5.1 Types of Fires and Extinguishing Agents onboard

Fire is composed of heat, fuel, oxygen, and a chemical chain reaction. Remove one or more of those elements and the fire goes out. Before fighting a fire, personnel must know what type of fire is present, and especially if electricity is involved. There are four types of fire that may occur on the William Kennedy, classified according to their fuel source.

Class A: Common combustibles such as wood, paper, and plastic can be tackled effectively with a cooling agent, such as water. Extinguishing foams, smothering agents, and dry chemicals can also be used.

Class B: Flammable liquids or gases - including oil, grease, paint thinner, alcohol, propane and gasoline. These are spread by water, so use a smothering agent such as foam, dry chemicals or carbon dioxide (CO₂) instead. If the fire is being fed by an open valve or broken fuel line, it must be stopped at the source if possible. Attempting to put out a fire with an open fuel source risks an explosion; this should only be attempted in a situation where it must be extinguished to reach the shut-off valve or to save a life.

Class C: Electrical equipment, conductors or appliances. Always attempt to shut off the electricity first to eliminate the source of ignition and the chance of electrical shock. Use only

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non-conducting fire extinguishing agents, such as CO₂ or dry chemicals. Understand that dry chemicals may ruin electronic equipment.

Class K: A Class K fire is fueled by flammable cooking liquids, such as cooking oil, and animal or vegetable-based greases. These liquids, when brought up to high temperatures, become volatile and can easily ignite. Due to their high flammability, they also spread rapidly. The best extinguishing agent onboard are the two fire blankets.

Often a fire will comprise of a combination of these four types. Fire extinguishers approved for marine use are designated by a letter that corresponds to the class of fire on which it can be used effectively. Onboard the William Kennedy there are two classes of fire extinguisher.

ABC Fire Extinguisher: Dry chemical agent used to extinguish a fire involving solid materials, flammable liquids, electrical equipment, or any combination of all three, by smothering the fire.

CO₂ Fire Extinguisher: CO₂ is effective in extinguishing any fire in an enclosed space by displacing oxygen and cooling the area. Use caution as by displacing the oxygen, CO₂ can suffocate a person as well. Be wary if there is much air movement as the CO₂ may disperse before the fire is completely extinguished.

Fire Blankets: Fire resistant blankets extinguish by smothering the fire. These are good for class K fires (can be used for small class A fires).

Fire Hose: Water is effective against class A fires by cooling the area, and for providing boundary cooling to the walls and decks surrounding the fire. Should not be used for class B, C, or K fire, as water will most likely spread these types of fire rather than extinguish.

Remote CO₂ system for Engine Room:

- Can only be pulled by a crew member under the direction of the Captain
- Before engaging:
 - o Engines must be stopped
 - o All vents must be closed (4 on top deck, 1 on forward deck)
 - o Door to Engine Room and emergency escape hatch must both be securely closed
 - o All fuel lines must be shut
 - o Engine room must be evacuated by all personnel and a head count completed at muster station
- After engaging, must wait several hours at a minimum to ensure fire is out before ventilating area
- Activation of the fixed CO₂ smothering system should not be undertaken hastily, without careful consideration of all factors and other extinguishing options available. This is an action of last resort, as the ship will lose all propulsion and generators until the fire is determined to be out and the area ventilated. Once the decision is made, act promptly as the sooner a fire is extinguished, the lesser the amount of damage will be sustained.

Note: if the fire involves electronics or electricity, use a CO₂ extinguisher first, if this doesn't work, use an ABC extinguisher. Never use water on a class B, C, or K fire as these will spread the fire rather than extinguish it.

Note: Lithium-ion batteries are considered a "B" class fire and can be attacked with an ABC fire extinguisher. In practice, however, the best fire extinguishing medium we have is the ocean. If a

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lithium-ion battery (or electronic device powered by a lithium-ion battery) catches fire, if possible, flick it overboard to prevent the fire from spreading. Examples of portable gadgets that use lithium-ion batteries include: *cell phones, laptops, tablets, cameras, power tools, and some of the scientific equipment onboard.*

5.2 Responsibilities

Should a fire or explosion occur on board it will be handled under the William Kennedy's fire and Emergency Plan in order of the following priorities:

- Safety of Life
- Control of damage to the vessel
- Prevention of environmental damage

Master: remain on the bridge in command of the vessel and communications; maintain situation under constant review; manoeuvre vessel into favourable position; ensure all ship's crew and science crew are accounted for a muster station; determine if assistance from other vessels is required; if fire in engine room and preconditions are met, give order to deploy CO₂ fixed system; if situation merits broadcast **Mayday** on **channel 16**; and if fire escalates beyond control, give the command to abandon ship.

First Mate: confirm head count at muster station; keep the Master updated as the situation progresses; liaise between Master, attack team, lead scientist; engage CO₂ system if directed by Master; document events and actions taken.

Bridgewatch / SVOP: comprise the fire attack team and/or damage control parties; ready fire hose for boundary cooling; ready bilge system for pumping water out.

Cook: ready first aid equipment and supplies in case the order to abandon ship is given.

5.3 Procedures

Fire spreads quickly! The first person to discover the fire must alert all crew members. Yell "**Fire Fire Fire**" and sound the alarm by using the fire pull (if nearby). Immediately after raising the alarm grab the nearest fire extinguisher or fire blanket attempt to extinguish the fire. *Note: If in the galley use a fire blanket, NOT a fire extinguisher.* The next steps will be determined by the location, size, and severity of the fire.

Fire in the Engine Room

1. Raise alarm
2. If small, attempt to put out with fire extinguisher
3. Muster, headcount
4. Assess severity of fire
5. If large / unable to put out with extinguishers
 - a. Everyone not involved in fire fighting to don survival suits
 - b. Close ventilation to engine room
 - c. Ensure emergency exit and door to engine room are closed
 - d. Shut off all engines and generators if vessel not in immediate danger to navigable hazards

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- e. Shut of all electricity to Engine Room
- f. Pull fuel shut offs outside engine room door
- g. Ensure no one is in engine room / confirm muster station head count
6. Under Captain's orders – initiate CO₂ fire suppression system
 - a. Open 2 bottles of CO₂
7. Issue **MAYDAY** on **channel 16**
8. Monitor situation (through camera's if possible)
9. If fire not under control open remaining 2 bottles of CO₂
10. Continue to monitor situation
11. Call CCG to provide update of situation
12. Wait 24 hours before opening ventilation to engine room
13. If fire is not out
 - a. On Master's orders, follow abandon ship procedure

Fire in Accommodations

1. Raise alarm
2. Attack with fire extinguisher
3. Muster, headcount
4. Assess severity of fire
5. If not out, hit it with multiple fire extinguishers
6. If out, monitor area
7. If not out,
 - a. Everyone not involved in fire fighting to don survival suits
 - b. Fire attack team retreat from accommodations,
 - c. Close all doors at the top of the stairs
 - d. Ensure door to lazarette is closed
 - e. Close all ventilation to accommodations using emergency pulls on aft deck
 - f. Arrange valves in Engine Room to use front fuel tanks to supply engines and generators and isolate aft fuel tanks
8. Rig fire hose and start fire pump
9. Start boundary cooling on galley floor, second galley floor, hallway
 - a. There are no SCBA's onboard – do not enter a smoky area
10. Monitor situation
11. Issue **MAYDAY** on **channel 16**
12. If fire spreads beyond accommodations
 - a. On Master's orders, follow abandon ship procedure

Fire in Galley

1. Raise alarm
2. Attempt to smother fire with pot lid or fire blankets
 - a. Turn off / unplug all appliances if possible
3. Muster, headcount
4. Assess situation
5. If out, clean up and monitor
6. If it isn't out
 - a. Everyone not involved in fire fighting to don survival suits
 - b. Shut off electricity to galley appliances
 - c. Close gooseneck vent (top deck, front center)
 - d. Attack fire with fire extinguishers (preferably CO₂)

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7. Rig fire hose, turn on fire pump
8. If cabinetry / mess on fire, attack with fire hose
9. Issue **MAYDAY** on **channel 16**
10. If fire spreads beyond control
 - a. On Master's orders, follow abandon ship procedure

Fire in Wheelhouse

1. Raise alarm
2. Turn off power to Wheelhouse
3. Attack with CO₂ fire extinguishers
4. Assess situation
5. Muster / head count
 - a. Everyone not involved in fire fighting to don survival suits
6. If out, monitor and clean up
7. If not out
 - a. Attack with ABC fire extinguishers
 - b. Close gooseneck vent (top deck, front center)
8. If still not out
 - a. Everyone not involved in fire fighting to don survival suits
 - b. Issue **Mayday** on **Channel 16**
 - c. Shut down ventilation / close flap on top deck
9. If fire spreads beyond control
 - a. On Master's orders, follow abandon ship procedure

Fire in Laboratory

1. Raise alarm
2. Attack with fire extinguishers
3. Muster / head count
 - a. Everyone not involved in fire attack team to don immersion suits
4. Assess situation
5. If out, monitor and clean up
6. If not out
 - a. Shut off power to affected area
 - b. Close fume hood vent (top deck, aft port side)
 - c. Rig fire hose and turn on fire pump
 - d. Attack with fire hose
7. Issue **MAYDAY** on **channel 16**
8. If fire spreads beyond control
 - a. On Master's orders, follow abandon ship procedure

Fire in Lazarette

1. Raise alarm
2. Attack with fire extinguishers
3. Muster / head count
 - a. Everyone not involved in fire attack team to don immersion suits
4. Assess situation
5. If not out, hit it with additional fire extinguishers
6. Close all ventilation through Lazarette

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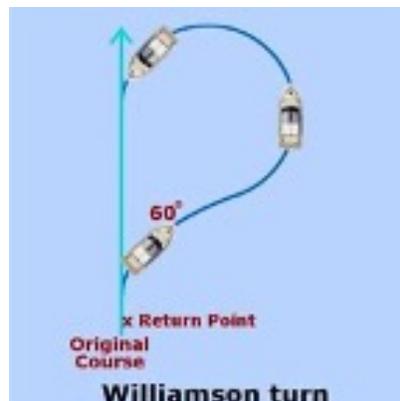
7. Ensure door to Lazarette is closed
8. Shut off electricity to Lazarette
9. If out, monitor area
10. If not out, rig fire hose and start fire pump
11. Use fire hose to provide boundary cooling on aft deck
12. Monitor situation
13. Issue **MAYDAY** on **channel 16**
14. If fire spreads beyond Lazarette
 - a. On Master's orders, follow abandon ship procedure

6.0 Persons Overboard

An accident, which demands instant and correct action on the part of the officer of the watch, is "Man Overboard." The circumstances under which a person falls overboard can be varied but regardless of the prevailing circumstances at the time, the Master and his/her officers should know precisely what to do. The ship's crew should report immediately that a person has fallen overboard, and to act on their initiative according to circumstances.

6.1 Manoeuvring

There are several useful methods which can be used in handling the vessel in order to return to the position of the person in the water the most notably is the "**Williamson Turn**":



- a) Put the rudder over full.
- b) If in response to a man overboard, put the rudder toward the person (e.g. if the person fell over the starboard side, put the rudder over starboard full).
- c) After deviating from the original course by about 60 degrees, shift the rudder full to the opposite side.
- d) When heading about 20 degrees short of the reciprocal, put the rudder amidships so that vessel turns onto the reciprocal course.
- e) Bring the vessel upwind of the person, stop the vessel in the water with the person alongside, well forward of the propellers

If dealing with a man overboard, always bring the vessel upwind of the person. Stop the vessel in the water with the person well forward of the propellers.

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Anderson



- Put the rudder over full. If in response to a man overboard, put the rudder toward the person (e.g. if the person fell over the starboard side, put the rudder over full to starboard).
- When clear of the person, go all ahead full, still using full rudder.
- After deviating from the original course by about 240 degrees (about 2/3 of a complete circle), back the engines 2/3 or full.
- Stop the engines when the target point is 15 degrees off the bow. Ease the rudder and back the engines as required.

If dealing with a man overboard, always bring the vessel upwind of the person. Stop the vessel in the water with the person well forward of the propellers.

6.2 Responsibilities

Observer: Anyone who witnesses a person in the water should yell “**man overboard**” and immediately throw a life buoy and any other nearby floating objects to mark the position and to provide buoyancy for the person in the water. The observer should continuously point with their arm fully extended, and maintain visual contact with the person in the water until such time as the person is back onboard.

Navigational Officer on Watch: Upon receipt of the alert the officer of the watch should immediately:

- Turn the vessel hard over towards the side from which the person fell;
- Order additional life buoys be deployed to help mark the location and drift pattern of the missing person
- Sound emergency stations;
- Post lookouts equipped with binoculars and handheld VHF as high as possible;
- Transmit urgency signal to all vessels in the area and notify the nearest coast station/rescue coordination centre.

Bridgeward / SVOP: Ready the MOB net and Cinch Rescue collar; lower the stern platform; prepare either the deck crane or A-frame and winch; don survival suit; gather handheld VHF; prepare the Rescue Boat for deploying; establish communication with the bridge; on orders from the Master launch rescue boat.

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Cook: Prepare First Aid supplies and warm blankets

6.3 Procedure

1. Raise alarm
2. Throw life ring and other buoyant objects
3. Point with arm fully extended
4. Throw anything floatable overboard
5. Turn boat around using Williamson turn or Anderson turn
6. Broadcast **MAYDAY** on **channel 16**
7. Ready man overboard net and cinch rescue collar
8. Turn on hydraulics
9. Ready Rescue Boat for deployment
10. Ready warm blankets / first aid supplies
11. If Master orders, deploy Rescue Boat
12. Recover individual
13. First aid as necessary
14. Cancel **MAYDAY** on **channel 16**
15. Complete incident report
16. Record events in Official Logbook

The priorities in the last stage of the procedure are:

- **Approach carefully** and at a controllable speed. make the approach because of the ease at which speed can be increased or decreased without making course changes. Try picking up a mooring on any other point of sail and you will soon agree.
- **Make contact** with the victim most likely with a life ring attached to a floating rope, or rescue craft with two persons onboard, or possibly by a rescue swimmer wearing a survival suit and bringing an additional life jacket. Avoid hull or propeller contact with the victim.
- **Retrieve the victim** and get him or her safely on board. Recovery operations should be conducted from the starboard deck at midships, in front of the shelter deck. Make use of the MOB net or the ships hydraulic crane and cinch rescue collar. Alternatively, the stern platform can be lowered to the water line and the victim can be lifted using the cinch rescue collar and either the ships hydraulic crane, main hydraulic winch and A-Frame, or line hauler and A-Frame.
- **Apply appropriate care** for possible near drowning, hypothermia, or any other injuries as per Marine First Aid Training and Marine Emergency Duties (MED). Continue to monitor the victim for secondary drowning for 72 hours following the incident.
- **Document** event by completing incident report and entering into Official Log Book.

6.4 Search

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A search for a person overboard must continue as long as there is any hope for rescue and survival, and should continue while there is reasonable chance of recovering the body.

Seawater Temperature Survival Time without special clothing	
Below 2°C	Less than 45 minutes
2°C to 4.5°C	Less than 90 minutes
4.5°C to 10°C	Less than 3 hours
10°C to 15°C	Less than 6 hours
15°C to 21°C	Less than 12 hours
above 21°C	Good possibility of survival over a long period of time depending on the survivor's physical and mental condition.

Before terminating the search, the wind, sea state and water and air temperature should be considered. Various other factors such as sea state, air temperature and wind speed will affect the above noted estimates. The selection of a search pattern is very important and should only be made after all factors have been taken into consideration. Depending on the time that has elapsed since the person went overboard, the position (if known), and the environmental conditions at the time will also determine the type of search pattern. The rescue coordination centre handling the emergency may provide guidance on the type of search pattern used, track length, track spacing etc.

7.0 Grounding

If the William Kennedy accidentally runs aground, the engines should be stopped immediately. An assessment shall immediately be carried out to determine the extent of damage sustained to the vessel. The follow-up action depends upon the circumstances.

- If the William Kennedy is rapidly taking on water, the bilge pump shall be started, and all efforts shall be made to plug the source of the leak. If the damage is too great for the leak to be stopped, CCG will be informed and plans will be made accordingly.
- If no discernible damage has been sustained, or if minimal but controllable damage has been sustained, the Master will assess the situation quickly and make his/her decision so that the correct action can be taken.

Perhaps the most important factor to consider is the nature of the ground upon which the ship has stranded. If the ground is of sand, clay, mud or loose gravel and shell, no time should be lost in attempting to re-float the vessel. However, if the ground is uneven and made up of rock, the attempt to re-float the vessel should not be made until it has been determined how to minimize further damage.

7.1 Plan of Action

Included in the Master's plan of action when aground the following should be considered:

- Getting afloat;
- Settling aground by decreasing buoyancy, if appropriate;
- Beaching;
- Anchoring;
- Positioning ship's anchors with ship's boats;

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- Initiating towage;
- Port of refuge;
- Slick monitoring;
- Taking frequent soundings both around the vessel and within;
- Frequent draft checks;
- Maintain record of events, actions taken and log of communications

7.2 Responsibilities

Master: Stop the engines; sound the General Alarm; assess the situation, determine extent of damage sustained to the vessel (if significant direct crew to mitigate flooding or effect repairs); determine the type of obstruction and potential for further damage to vessel from backing off; determine state of tide – rising or lowering (If tide rising it may be best to wait for more water to float the vessel; if tide is lowering, all reasonable haste must be made to back vessel off obstruction before situation worsens); determine if assistance is required (if so, broadcast **Pan-Pan** on **channel 16**; liaise with CCG or other vessels in the area); if minimal or no damage is sustained and decision is made to refloat vessel (attempt to back vessel off of obstruction); make log in Official Logbook.

First Mate: Take soundings around vessel; report any findings to Master; document all events and actions taken.

Bridgwatch / SVOP: Inspect engine room compartment, all bilges for signs of damage and water ingress; carrying out any actions to mitigate damage or effect repairs; effecting any repairs needed.

Cook: Prepare First Aid supplies

7.3 Procedure

1. General alarm
2. Muster, head count
3. Assess the situation in relation to the integrity of the ship and danger to life
4. Carry out visual inspection, sound all tanks and check all compartments to determine damage
5. Sound bottom around vessel
 - a. Deploy rescue boat if necessary to aid in sounding
6. Determine state of the tide
7. If there is damage
 - a. Try to fix damage
 - b. Determine if assistance from another vessel is required
 - c. Broadcast alert signals dependent upon the extent of damage and risk to vessel
 - d. Broadcast **Pan-Pan** on **Channel 16**
 - e. Take action to prevent flammable vapours entering accommodation and engine spaces
8. If no visible damage to vessel, determine ability of vessel to float
9. If tide is falling
 - a. Attempt to back vessel off of ground

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- b. Shift weights with deck crane to gain buoyancy
- 10. If tide is rising
 - a. Make exit plan and wait for vessel to float free
- 11. Maintain record of events and actions taken

8.0 Collision

During every moment that a vessel is at sea, the preservation of her watertight integrity is critical. By the very nature of the ship's work, the dangers of collision are ever-present in a ship. By maintaining a constant lookout utilizing all means available, the chances of a serious accident can be minimized. Even so, a ship's crew must be prepared in order to act effectively when a collision occurs.

8.1 Responsibilities

Master: If collision is imminent, a glancing blow should be attempted if possible. If the William Kennedy is involved in a collision with another vessel, the Master should take the necessary steps to safeguard the William Kennedy, crew and the environment as soon as possible. Upon a collision, all alarms must be sounded to muster the crew to their assigned stations for damage control / fire duties. Ensure all ship's crew and science crew are accounted for and at the Muster Station. Give order for research crew and cook to don immersion suits.

After a collision, the Master must render assistance to the other vessel, its crew and its passengers and, where possible, inform the other vessel of the name of the William Kennedy, its port of registry (Winnipeg, Manitoba) and the nearest port at which it will call.

First Mate: identify the extent of the damages to William Kennedy and relay this information to the Master; document events and actions taken.

Bridgeward / SVOP: carry out any damage control measures required; ready any lifesaving equipment if required; ready rafts and rescue craft if required.

Cook: ready first aid equipment; gather supplies if the order to abandon ship is given.

8.2 Procedure

1. Raise alarm
2. Muster, headcount
 - a. All research crew and cook to don immersion suits
3. Assess situation
4. Assess damage to both ships
5. Carry out damage control measures as required
6. Maintain forward propulsion if pushing into the ship
7. Send distress message as appropriate
8. Assess fuel or oil spill
 - a. Ready fuel spill kit and other means of mitigation
9. Assess risk of fire
 - a. Ready fire fighting equipment and means fo mitigation

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10. When a “locked ship” situation occurs, make a joint decision with the Master of the other vessel whether to disengage, with a view to maintaining buoyancy on both vessels once separated;
11. If minor damage
 - a. If no danger of either ship sinking
 - b. Separate vessels
 - c. Extensive documentation
 - d. Share insurance information
 - e. Proceed to port
12. If major damage
 - a. Fire watch
 - b. Flood watch
 - c. Check stability of both vessels
 - d. Evacuate crew from one vessel to the other if necessary
 - e. Broadcast **Mayday** on **channel 16**
 - f. Ready first aid kits
 - g. Ready man overboard equipment
 - h. Under direction of master, follow MOB or abandon ship procedures as necessary
13. The Master should be ready to assist the other vessel if any problems arise
14. Document all events and actions taken in Official Logbook

9.0 Hole Below Waterline / Flooding / Foundering

When confronted with a hole below the waterline the primary focus is to stem the ingress of water. This can be effected by plugging the hole from inside the vessel, using wood, hard plastic, or any number of makeshift plugs, shored up with bracing. From the outside of the vessel, a tarp with ropes tied to the grommets can be worked down from the bow of the boat, shimmying it aft along the hull until the damaged area is covered. Secure the ropes to the rails of the boat. A tarp will not necessarily stop the leak but it will slow it considerably.

9.1 Responsibilities

Master: General alarm; assess situation; ensure all ship’s crew and science crew are accounted for and at Muster Station; give order for research crew and cook to don immersion suits; check all compartments to determine damage; direct crew to plug hole to mitigate ingress of water; determine ability of vessel to float (if sinking fast, consider beaching or stranding if possible); radio broadcast (**May-day** if in immediate danger of sinking; **Pan-Pan** if taking on water faster than pumping but not immediate danger of sinking); maintain record of events and actions taken.

First Mate: Inspect engine room compartment, all bilges for signs of damage and water ingress; report any findings to Master; document events and actions taken.

Bridgeward / SVOP: Carry out any actions to mitigate flooding by plugging hole; utilize a tarp with ropes attached to grommets to cover hole from outside vessel - work tarp back from bow using lines going up both sides of vessel, when the tarp covers the hole, secure lines to railings on either side of vessel.

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Cook: Prepare First Aid supplies and warm blankets

9.2 Procedure

1. General Alarm
2. Muster, headcount
 - a. All research crew and cook to don immersion suits
3. Start bilge pumps
4. Assess situation
5. Attempt to plug / fix hole
6. Use a tarp and lines attached to rails to pull over hole from outside
7. Call CCG
8. Carry out visual inspection
9. Determine if boat is sinking
 - a. If it is, follow abandon ship procedure
10. If boat not sinking
 - a. Head back to port

10.0 Steering Failure

As the William Kennedy is fitted with twin engines and screws, steering without use of the rudders can be achieved by throttling the two engines independently to run at different speeds. For greater manoeuvrability, splitting the engines (one ahead one astern) will turn the vessel faster. This technique can be used to progress the William Kennedy to a port of refuge where repairs can take place.

- In any loss of steering capability, the rudder posts and connecting tie rod should be chained or lashed in the neutral position to prevent damage to assembly and to assist in controlling drift as much as possible.
- The Restricted in Ability to Manoeuvre Lights (Red, White, Red) should be illuminated
- Should the rudders be jammed over in either direction, careful manoeuvring with one or both engines can maintain headway
- If the rudders cannot be restrained and are free-swinging, it has been found that they will usually assume a straight ahead position, so long as ahead revolutions are maintained.

10.1 Responsibilities

Master: Assess situation; use twin engines to steer vessel; check all compartments to determine damage / cause; direct crew to secure rudder posts and connecting tie rod at neutral position; broadcast **Sécurité** on **Channel 16**; display Restricted in Ability to Manoeuvre lights (RED – WHITE – RED); make way to nearest port of refuge where repairs can be made; document all events in Official Logbook.

First Mate: Investigate cause of steering failure; report cause to Master; maintain record of events and actions taken.

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Bridgeward / SVOP: Lash / chain rudder post and connecting tie rod; attempt to repair steering system.

Cook: Keep cooking

10.2 Procedure

1. Assess situation
2. Use twin engines to steer vessel
3. Chain rudder posts and connecting tie rod in place
4. Broadcast **Sécurité** on **Channel 16**
5. Display Restricted in Ability to Manoeuvre lights
 - a. RED – WHITE – RED
6. Make way to nearest port of refuge where repairs can be made
7. Document all events in Official Logbook
8. Attempt to repair damage

11.0 Engine Failure

Upon the loss of both main engines, the vessel should be headed up into the most favourable drift direction before way is lost. Changes of list and trim, as well as keeping the rudder in a downwind position will also affect the ultimate drift direction. Deploying a sea anchor will keep the vessel pointed into the wind and will slow drift.

- The Not Under Command Lights (Red over Red) should be illuminated
- When the vessel is in danger of grounding or collision, or when deteriorating weather may inhibit its use, the ships anchor should be deployed immediately.

11.1 Responsibilities

Master: Assess situation; assess if grounding or collision is imminent; check weather; broadcast **Pan-Pan** on **Channel 16**; display Not Under Command lights (RED – RED); document all events in Official Logbook; attempt to repair engines.

First Mate: Investigate cause of engine failure; report cause to Master; attempt to repair engines; maintain record of events and actions taken.

Bridgeward / SVOP: Stand watch on bridge; monitor communications on radios; assist with engine repairs.

Cook: Keep cooking.

11.2 Procedure

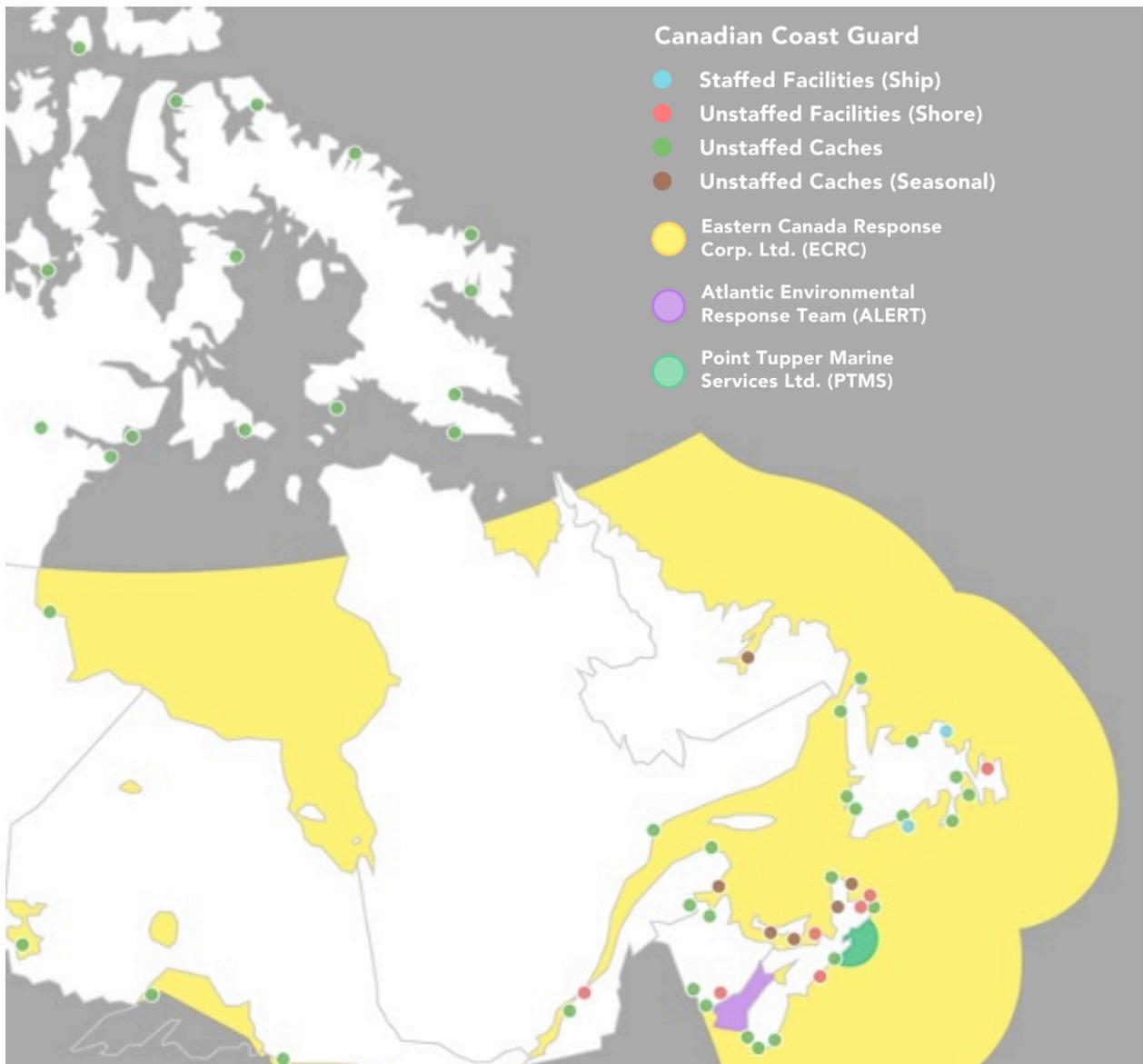
1. Assess situation
 - a. Assess if grounding or collision is imminent
 - b. Check weather

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2. Ready anchor for deployment
3. Ready bar for manual steering
4. Broadcast **Pan-Pan** on **Channel 16**
5. Display Not Under Command lights
 - a. RED - RED
6. Attempt to repair damage

12.0 Pollution Spills

Areas of Response & Response Assets



When a pollutant is spilled from a vessel, immediate action must be taken to stop the spill from continuing. Following this action, an initial assessment of the size, type and location of the spill

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must be recorded, along with what shoreline, habitat, and marine life, if any, are threatened. This information is essential to immediate decisions and actions on whom to alert and what equipment to deploy. Minor spills may well be handled effectively by on-scene equipment and personnel, while major spills will require assistance from industry and government personnel. The CCG must be informed of any pollution spills. Monitoring and surveillance efforts will continue following the initial assessment until the spill is dispersed or recovered.

In Canadian waters below 60°N, when notified the CCG will perform an assessment of the marine pollution incident and conduct initial response operations, where necessary. However, the CCG will put the onus of a response on the polluter who is expected to appoint an On-Scene Commander responsible for: providing the CCG with an acceptable response plan; directing the response accordingly; and deploying response resources. The CCG retains the right to intervene and assume the overall management of the spill response for mystery spills and where the polluter is unwilling or unable to mount an effective response of its own.

In Arctic waters, above 60°N, the CCG will still put the onus of a response on the polluter. Since there is no industry funded response regime in the Arctic, the CCG maintains a response capacity in the Arctic should the polluter be unable or unwilling to respond.

12.1 Oil Spill Response Supplies onboard the William Kennedy

The William Kennedy's oil spill response kit is located on the top deck (yellow barrel in the front Port corner). This kit contains:

- Oil only polypropylene absorbents – white in colour
 - Sorbent media used to absorb oil-based chemicals which include but not limited to diesel fuel, oil, gasoline, and kerosene, while repelling water and water based products
 - 9 x Large Oil Only Socks
 - 13 x Medium Oil Only Socks
 - 100 x Oil Only Absorbent Pads
- ENSORB Super Absorbent (in 1 gallon plastic jug)
 - Used to absorb most spills
 - Do NOT use for hydrofluoric acid
- Qualisorb (30 lb bag)
 - White granular absorbent is made of recycled paper and used to soak up liquids such as oil, gas, paint and chemicals.
 - 30 lb bag has absorption capacity of 16.7 gallons
- Pack of wipers
- Safety goggles x 2 pair
- Green Rubber gloves x 2 pair
- Yellow Hazardous Material Disposal Bags x 10
- SDS sheets
- 2016 Emergency Response Guidebook
- Instruction sheet and SDS

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12.2 Responsibilities

Master: Contain the flow if possible; assess the situation; coordinate crew to make use of on board pollution spill kit to clean up or reduce as much as possible the flow of released pollutants; request for assistance in clean up, if required; report to Director of Fleet Operations or designate (Marine Superintendent); advise CCG; document all events; make entry in Official Logbook; replace absorbent materials, salvage drums, and safety equipment that were used in the clean-up process.

First Mate: Select the proper clothing and gear to properly respond to the spill and distribute PPE for all crew members involved (if you cannot identify the spilled substance, always treat it as highly toxic); liaise with Master; complete all notification documents, medical exposure reports, and paperwork associated with the spill incident.

Bridgeward / SVOP: Carry out spill mitigation procedures; use socks, dikes, and/or booms to contain the spill and keep it from spreading or contaminating water sources; act quickly to stop the source of spilled material, if possible; place absorbent pads, pillows, socks, and booms directly on the spilled material; carry out clean-up procedures; use plastic bags to gather all oil-saturated media used in cleanup; dispose of contaminated material in compliance with local, provincial/territorial, and federal regulations; decontaminate the site, personnel, and all equipment.

Cook: Ready First Aid supplies.

13.0 Receipt of Distress Messages

The importance of recognizing all distress signals and being fully conversant with their use, together with the procedure of rendering assistance, cannot be emphasized strongly enough. All vessels have a duty to render assistance to other vessels in need. One of the most significant factors required in providing assistance is maintaining a radio watch on the designated distress frequency 156.8 MHz (Marine VHF radio channel 16).

Note: An aircraft distress call will normally be transmitted by radio on the frequency in use at the time between the aircraft and the appropriate air traffic control centre or on the International Air Distress Frequency 121.5 MHz.

When the navigational officer on watch or bridgeward on shift hears a distress call, he/she must answer it, while at the same time allowing a sufficient interval for other ships in the area to acknowledge in order to determine who are closest to the distressed vessel. The Master must be informed on whether other ships have acknowledged the distress call, and the positions of those ships. The Master may then give instructions to relay the call on the distress frequency, particularly if his own ship is unable to render assistance and if the CCG or other ships have not acknowledged the original call. All particulars must be logged. In addition to vessels in the vicinity of the distress call, Coast Radio Stations may relay assistance. If on scene, the CCG will take command of the situation and will direct vessels as required.

Upon being informed of a person or vessel in distress, the Master of a vessel has a duty to render assistance to every person found at sea in danger of being lost, and must proceed at all

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possible speed to the rescue of persons in distress, in so far as such action may reasonably be expected and providing that rendering assistance will not endanger his/her own ship or crew.

As soon as the distress call is received, the Master must acknowledge the call, indicate his intentions to the distressed person or persons, liaise with other vessels in the area, and if practicable proceed to the distress area. He/she may be exempt from rendering assistance if his/her vessel:

- Is unable to do so due to mechanical or environmental reasons
- Is too far away to render assistance and / or other vessels in the vicinity are able to render assistance
- Is released from the above statutory obligations by the controlling coast authority

If the Master considers it unreasonable or unnecessary to proceed to their assistance, the Master must enter in the official log-book the reason for failing to proceed to the assistance of the persons in distress and inform the appropriate search and rescue service accordingly. If the Master fails to abide by the statutory requirements he/she is guilty of a misdemeanour. If he/she does not answer a distress call, he/she must enter the reason in the Official Log Book.

14.0 Radio Distress Broadcast Procedures

Your most powerful distress tool is your radio. In the event of an emergency, it is extremely important to establish radio communication immediately with the Coast Guard or another vessel. **Do not wait until the situation is out of control.** At that point, there may be no power to the radio or it may be too late for rescue units to respond. When making a distress broadcast on **channel 16** (156.8 MHz), it is imperative that the radio operator communicate in a controlled, deliberate manner. ***Speak Slowly - Clearly - Calmly***

There are three internationally recognized radio signals used for marine emergencies. **MAYDAY**, **PAN-PAN**, and **SECURITY**. All three have priority over other radio traffic.

MAYDAY calls also have priority over all other emergency signals. They are to be used only when a vessel or life is threatened by grave and imminent danger and a request is made for immediate assistance. To transmit a MAYDAY message, make sure your radio is on and you transmit on channel 16 VHF. Then state:

1. MAYDAY, MAYDAY, MAYDAY
2. THIS IS R/V WILLIAM KENNEDY, R/V WILLIAM KENNEDY, R/V WILLIAM KENNEDY
3. Release this microphone button briefly and listen for acknowledgement. If no one answers, repeat steps 1 & 2. If there is acknowledgement, or if the Coast Guard or another vessel responds:
4. MAYDAY
5. R/V WILLIAM KENNEDY

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6. *Position (latitude and longitude or range/bearing from a known location are preferred)*
7. *Nature of the distress.*
8. *Number of persons onboard AND nature of any injuries*
9. *Present seaworthiness of the William Kennedy*
10. 65-FOOT RESEARCH VESSEL, BLUE HULL, WHITE CABIN, STAINLESS STEEL SUPERSTRUCTURE, LARGE A-FRAME AT STERN, BLACK BOTTOM, TWIN SCREW
11. THIS IS R/V WILLIAM KENNEDY. OVER
12. If your situation permits, stand by the radio to await further communication with the Coast Guard or another vessel.

In an emergency scenario, make use of the **red button** on one of the DSC VHF's. Flip up the red cover, press and hold the red button for 5 seconds, or until the radio "beeps". Both DSC VHF's on the William Kennedy are programmed with the same MMSI number (316040542) so there is no advantage to triggering both. Pressing this button will transmit an electronic Mayday to all ships in the immediate area every 4 seconds until it is acknowledged by another vessel radio.

If you hear a **MAYDAY** call and it is not answered, you must answer it and log the details of the call. When you can be reasonably sure you will not interfere with other distress-related communications, advise the vessel in distress what assistance you can offer.

MAYDAY RELAY: All vessels that are required to have radios are required to relay Maydays that are heard but go unanswered.

To relay an unanswered Mayday, make sure your radio is on and you transmit on channel 16 VHF. Then state:

1. MAYDAY RELAY, MAYDAY RELAY, MAYDAY RELAY.
2. THIS IS R/V WILLIAM KENNEDY, R/V WILLIAM KENNEDY, R/V WILLIAM KENNEDY
3. *Name of vessel in distress.*
4. *Location of vessel in distress.*
5. *Nature of problem with vessel in distress.*
6. *Degree of assistance needed.*
7. Listen for acknowledgement.
8. Transmit additional requested information.

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PAN-PAN (pronounced pahn-pahn) calls are for very urgent messages concerning the safety of a boat or persons. Examples include urgent storm warnings by an authorized station and/or loss of steering or power in a shipping lane. To transmit a PAN-PAN message, make sure your radio is on and you transmit on channel 16 VHF. Then state:

1. PAN-PAN, PAN-PAN, PAN-PAN,
2. ALL STATIONS, ALL STATIONS, ALL STATIONS
3. THIS IS R/V WILLIAM KENNEDY, R/V WILLIAM KENNEDY, R/V WILLIAM KENNEDY
4. *Nature of urgent message.*
5. *Position (latitude and longitude or range/bearing from a known location are preferred).*
6. *Total number of people on board.*
7. 65-FOOT RESEARCH VESSEL, BLUE HULL, WHITE CABIN, STAINLESS STEEL SUPERSTRUCTURE, LARGE A-FRAME AT STERN, BLACK BOTTOM, TWIN SCREW
8. THIS IS R/V WILLIAM KENNEDY. OVER
9. If your situation permits, stand by the radio to await further communication with the Coast Guard or another vessel.

SÉCURITÉ (pronounced say-cure-i-tay) calls are the lowest priority emergency calls and are used to alert vessel operators to turn to another station to receive a safety message. SÉCURITÉ warns nearby vessels of a possible hazard.

1. SÉCURITÉ, SÉCURITÉ, SÉCURITÉ
2. ALL STATIONS, ALL STATIONS, ALL STATIONS
3. THIS IS R/V WILLIAM KENNEDY, R/V WILLIAM KENNEDY, R/V WILLIAM KENNEDY
4. SÉCURITÉ
5. R/V WILLIAM KENNEDY
6. *Position*
7. *Nature of safety message.*
8. *Advice / Other Information*
9. THIS IS R/V WILLIAM KENNEDY, OUT