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LEGEND

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- Before/after missions
- Transit & initial actions
- Rescue
- Towing
- Medical emergencies
- Multicasualty

Question: YES / NO

Action to perform

Action to continue (follow directions)

Contact / Call (follow indications)

Gather information

RCC/MRSC

Warning

Do not

Organize transport of casualties

Provide first aid as directed/specific first aid info
Gather info and evaluate risks:
Nature of incident, precise position, how many POB involved, any injured, any PIW, weather conditions, currents, etc.

Lives immediately in danger?

NO

Contact local maritime SAR authorities.
If unknown, call 9-1-1.

Yes

Great Lakes, St. Lawrence River, East Coast, West Coast, Arctic?

NO

Contact the Coast Guard:
1. Phone
RCC Victoria, BC:
1-800-567-5111
RCC Trenton, Ont:
1-800-267-7270
MRSC Quebec City, Qc:
1-800-463-4393
RCC Halifax, NS:
1-800-565-1582
MRSC St. John’s, Nfld:
1-800-563-2444
2. Cellular phone
MCTS: *16
3. Maritime VHF Radio
Coast Guard radio, ch. 16 or ch. 70 (GMDSS DSC)

NO

Stop, assess, plan
Save lives in danger

YES

Begin intervention (page 4)
2. RECEIVING A CALL

Note time of call

Exact location of incident, type of craft and description, number of POB, available means of communication with casualty, any other pertinent info.

Medical emergency?

How many injured?

Injured's condition

Other info?

YES

Do you need EMTs or other personnel on board?

YES

Find a pick-up point

Calculate ETA

Plan pick-up

NO

Find the best route to get to the incident

Calculate your ETA

Prepare equipment (consider: weather, anticipated duration of mission and type of mission)

Briefing

Prepare short-term strategies

Departure

Contact RCC/MRSC & MCTS and inform them of:
- Your ETA
- Your intentions

Prepare your mission during transit (page 3)
3. TRANSIT TO THE SCENE

Note time of departure

Note weather conditions

Can you contact the casualty?

YES → Contact the casualty

Confirm position, type of vessel/craft, etc.

Transmit your ETA

Ask POB to don PFDs

If necessary, ask for the casualty to:
- anchor itself
- shoot a flare
- provide basic first aid to injured
- prepare for boarding (place fenders, etc.)

NO → Update your short-term strategies

Prepare the equipment you plan on using without obstructing your working space

Arrival on scene (page 4)
4. ARRIVAL ON SCENE

Note time of arrival and position of casualty

Search object present? 

YES → Rescue initial actions (page 5)

NO → Inform RCC/MRSC and ask for a search plan

Search plan available right away? 

YES → Conduct the search in accordance with search plan

NO → Initiate a sector/expanding square search using a search radius of 6 miles.

Keep RCC/MRSC informed.

Begin proper search procedures once search plan is available.

When search object is found, begin rescue initial actions (page 5)

Refer to IAMSAR vol. III for additional info on how to plan and conduct a search.

Always keep RCC/MRSC informed of your progresses.
5. RESCUE INITIAL ACTIONS

Stop, assess & plan

Description of craft, number of POB, local weather conditions. Potential problems for intervention/evacuation? Need any additional SAR units? Your intentions.

RCC/MRSC

PIW?

YES

Recover PIW immediately (page 6)

NO

Modify/adapt your plan to the situation

Determine best approach and board the casualty (unless it is dangerous to do so) Consider: position of casualty, winds and currents, best approach angle, presence of lines in the water, position of deck fittings, general condition of casualty, best position for transfer of POB/injured, etc.

Have the waiver signed

Ask POB to don PFDs

Inform the master of your intentions

Continue with appropriate intervention
6. RECOVERING PIW

RECOVERING PRIORITIES:
1. Without floatation device, without thermal protection
2. Without floatation device, with thermal protection
3. With floatation device, without thermal protection
4. With floatation device, with thermal protection

WARNINGS!
1. Do not send a crewmember in the water unless ABSOLUTELY necessary. If you have to do so, provide thermal protection, floatation device and tie the crewmember to a line (such as a towing line) to enhance safety.
2. PIW suffering from hypothermia should be recovered gently and kept horizontal to prevent cardiac arrest.

PIW conscious?

YES

Throw an line

Success?

NO

Reach PIW with a pole/oar

SUCCESS?

NO

Approach PIW with your unit

Initiate recovery

YES

YES

Recover PIW (be careful if injured)

Success?

NO

Evaluate recovered PIW’s condition and provide first aid if necessary (page 18)

NO

SUCCESS?
7. CASUALTY ON FIRE

NEVER RISK YOUR LIFE OR THE LIVES OF YOUR CREWMEMBERS. KNOW YOUR LIMITS

PRIORITIES:
1. Save lives in danger
2. Prevent fire from eventually threatening other lives
3. Minimize property damage

Avoid entering the unit on fire at all cost. Do not expose yourself to toxic fumes or risks of explosion

Use your portable pump to produce a heat screen

Approach from upwind

Success?

NO

YES

Conduct transfer bow-to-bow

Limit your effort to what you can do taking into account the safety of your vessel

NO

YES

All accounted for?

Fire is small?

NO

YES

Put a crewmember on board to search for victims and maintain communication with that crewmember at all time

If victims conditions permits, limit property damage. If victims are injured, provide first aid.

(page 18)

Ask POB to don PFDs/thermal protection and ask them to jump in the water

Recover PIW (page 6)
8. GROUNDED/CAPSIZED VESSELS

PRIORITIES:
1. Save lives at risk
2. Prevent property damage

Upon arrival, check if:
1. Anyone was injured during the grounding
2. Everyone is safe and accounted for
3. The vessel is damaged, taking water or leaking contaminants

Any injured?

YES
Gather injured and prepare their evacuation (p. 18)
Leave the vessel where it is and advise RCC/MRSC of your intentions

NO
Vessel will not sink if refloated?

NO
Do not refloat. Transport POB to safety.

YES
Evaluate refloating options. Consider:
1. Tides and present weather conditions
2. Strength of towing attachment points
3. Capabilities of your SAR unit
4. Capabilities of your pumps

Ensure that:
1. Waiver is signed
2. Every POB is wearing PFDs

Inform the master of your intentions

Proceed with refloating (p. 9) or righting (p. 10) procedures
9. REFLOATING PROCEDURES

The damaged vessel will have to be towed/escorted to safety. SAR units must remain available for other incidents. Avoid engaging in long operations when lives are not at risk.

DO NOT REFLOAT IF YOU HAVE ANY DOUBTS ABOUT THE VESSEL’S ABILITY TO REMAIN AFLOAT ONCE REFLOATED

Inform RCC/MRSC of the situation and request additional aid if required (MEDEVAC, pollution control, etc.)

PREPARATION
1. Consider tide, and plan to use it to your advantage
2. Ensure that the vessel will not be driven further aground
3. If hull damage is present, perform temporary repairs if possible

Sound around grounded vessel to find the best direction of pull

Choose the best refloating procedure

Success?

Straight pull

Wrenching and pulling

Bow-on pull

Scouring

Heeling (sailboats only)

I. If hull is leaking, begin dewatering/water flow control procedures (page 11).
2. If hull is not leaking, initiate towing (page 12)
The damaged vessel will have to be towed/escorted to safety. SAR units must remain available for other incidents. Avoid engaging in long operations when lives are not at risk.

**DO NOT RIGHT A CAPSIZED VESSEL IF YOU HAVE ANY DOUBTS ABOUT THE VESSEL'S ABILITY TO REMAIN AFLOAT ONCE RIGHTED**

Inform RCC/MRSC of the situation and request additional aid if required (MEDEVAC, pollution control, etc.)

**PREPARATION**
1. Determine if you need to send a crewmember into the water. Avoid doing so if you can.
2. Check hull for damage
3. Ensure that everyone is accounted for. Do not right a capsized vessel when someone is trapped inside!

Watch for debris or lines when maneuvering around the capsized vessel

Choose the best righting procedure

Success?

- Parbuckling
- Bow and transom eyebolts
- Fore-and-aft towline
- Trailer eyebolt
- Small sailboat techniques

**1. If hull is leaking, begin dewatering/water flow control procedures (page 11).**
2. If hull is not leaking, initiate towing (page 12)
11. DEWATERING/WATER FLOW CONTROL

Always initiate proper water flow control actions, when possible, while attempting dewatering.

- Wood plugs and wedges
- Hinged patches
- Collision mats
- Tarpaulin
- Shoring

Initiate dewatering with all available means (SAR pumps, bilge pumps, etc.)

Continue dewatering until vessel's stability is good enough for safe towing.

Towing will increase water flow if hull is leaking. Ensure that increased water flow can be managed before towing.

Vessel fit for towing?

YES

Initiate towing (page 12)

NO

1. Refer to SAR pump instructions for handling.
2. The exhaust of gasoline SAR pumps will get hot. Be careful not to burn anything with it.
12. TOWING PREPARATION

Avoid getting involved in prolonged towing operations. Remember that you must remain available for potential life-threatening incidents. Always tow to closest safe haven when possible.

Contact RCC/MRSC or MCTS to ask them permission for towing and to inform them of:
1. Towing destination
2. Estimated duration of towing

Use appropriate method to pass the towline

- Heaving line
- Line-throwing apparatus
- Float line

Use appropriate method to weight the anchor of the casualty (if necessary)

- Shackle method
- Kicker hook method
- Bowline method

Select appropriate connecting points and methods

- Trailer eyebolt
- Cleats
- Bow bitt
- Bridles
- Sampson post

Select towing method

- Towing astern (page 13)
- Towing alongside (page 15)
PRELIMINARY PROCEDURES
1. Maintain communication at all time with vessel to be towed
2. Discuss emergercency breakaway procedures and have a mean of cutting the
towline in case of an emergency
3. Secure the shaft of casualty (if needed)
4. Discuss towing speed with master
5. Show proper lights or shapes and/or sound proper sound signals

Note time when
initiating towing

NEVER TOW A
DISPLACEMENT
HULL FASTER
THAN ITS
MAXIMUM
HULL SPEED!

Increase speed slowly until
you reach a safe towing speed

Pay out enough towline to keep a
catenary in the line at towing speed

Keep towed vessel in step

If the towed vessel is yawing:
1. Decrease towing speed
2. Adjust towline length
3. Adjust trim of tow
4. Deploy a drogue from the stern of the towed vessel

Post a towing lookout

Inform the towed vessel
of all your maneuvers

When arriving near a port or marina, prepare to shorten the tow (page 14)
unless you plan to dock the disabled vessel by passing the towline ashore
14. SHORTENING THE TOW

Inform the towed vessel of your intentions

Brief your crew

Choose an area that:
1. Is free of traffic
2. Provides room to maneuver
3. Is protected from waves

Reduce speed gradually to prevent collision with the overtaking tow

Heave in the slack or have the towed vessel drop the towline to maneuver alongside

Remove towing shapes and/or adjust towing lights

Prepare to tow alongside (page 15)
15. TOWING ALONGSIDE

Place fenders to protect both vessels

SECURE YOUR VESSEL ALONGSIDE

YOU WILL NEED AT LEAST 4 SECURING LINES:
1. Bowline (from your bow to towed vessel’s bow)
2. Stern line (from your stern to towed vessel’s stern)
3. Forward springline (from your bow to towed vessel’s stern)
4. After springline (from your stern to towed vessel’s bow)

GENERIC PROCEDURE TO SECURE ALONGSIDE:
1. Lead the towline to your bow for the bowline
   (or pass one if you have retrieved the towline)
2. Secure both springline (forward and after)
3. Secure the bowline
   (keep bow of towed vessel slightly “toed” in to your bow)
4. Place your stern well aft of the towed vessel to maintain maneuverability
5. Secure stern line
6. Back up slowly to remove slack from forward springline
7. Go ahead slowly to remove slack from after springline

Increase speed gradually and tow slowly

Be aware that you will not be able to maneuver as quickly so anticipate accordingly!

Enter the marina/port (page 16)
16. ENTERING A MARINA/PORT WITH TOW

Contact the marina (channel 68 VHF) and:
1. Ask for depth and space available
2. Ask them to prepare the travel lift (if necessary)

Broadcast a security message on channel 16

Prepare dock lines and fenders on both vessels

Look for power lines and other kind of obstructions

Choose the closest and most accessible dock
(this is usually the gas or visitor dock)

Initiate docking procedures
(page 17)
17. DOCKING WITH ALONGSIDE TOW

Adjust speed slowly to maintain control

Test steering and stopping characteristics with alongside tow (if you have not done so before)

Consider:
1. Wind and current
2. Height of tide
3. Type and location of mooring
4. Obstruction in the vicinity of the mooring/dock
5. Location of personnel and docking lines

Determine angle of approach

Make use of a bow spotter if visibility is obstructed by disabled vessel

Proceed slowly!

Secure the disabled vessel to the dock, gather all info for your reports and offer to conduct a Courtesy Verification

If everything is in order, conclude the mission (page 25). If not, continue with proper actions.
18. TRANSPORT OF SICK/INJURED

Assess the situation

Many injured?

YES

Ask for additional resources and initiate multicasualty first aid (page 23)

NO

Trauma?

YES

Protect the cervical spine!

Perform the ABC

Assess the stability of the casualty

If stable, continue with appropriate actions (page 21)

If unstable or potentially unstable, continue with appropriate actions (page 22)

NO

Perform the ABC

Assess the stability of the casualty

If stable, continue with appropriate actions (page 21)

If unstable or potentially unstable, continue with appropriate actions (page 22)

Wear gloves!
### 19. STABLE/POT. UNSTABLE TRAUMA

**Signs/symptoms of potentially unstable trauma casualties:**
- First signs of shock
- Major isolated trauma
- Confusion
- Mechanism of injury suggesting hidden injuries

**Signs/symptoms of stable trauma casualties:**
- No life-threatening injuries
- Good vital signs
- Mechanism of injury does not suggest hidden injuries

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<td>Stabilize/treat all evident injuries prior to transport</td>
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**Victim can walk?**

- **YES**
  - Transfer the victim onto your unit and transport to shore

- **NO**
  - Transfer to a stretcher or any other suitable device

---

**Periodically re-assess the victim’s condition**

**Transfer to EMTs and conclude mission (page 25)**
20. UNSTABLE TRAUMA

Signs and symptoms of unstable trauma casualties:
- Cardiac or respiratory arrest
- Obstructed airway
- Severe thoracic injury
- Advanced signs of shock
- Unconsciousness or altered level of consciousness
- Uncontrollable hemorrhage
- Penetrating injury to the head, neck, thorax, abdomen or pelvis
  - Irregular pupils
- Abdominal tenderness during palpation
  - Both femurs fractured
  - Abnormally slow pulse

If a casualty is unstable, time is critical.
YOU MUST INITIATE QUICK TRANSPORT TOWARD THE SHORE IN LESS THAN 10 MIN AFTER YOUR ARRIVAL!

- Protect the spine at all time unless you can be absolutely sure that it is not injured
- Stabilize only life-threatening injuries
- Transfer to a spinal immobilisation device
- Transfer the victim onto your unit and transport to shore
- Perform secondary exam during transit if possible

Injuries/conditions that must be stabilized before transport:
- Important hemorrhage
- Fractured femurs
- Head/spinal injuries
- Respiratory arrest
- Cardiorespiratory arrest
- Obstructed airway
- Sucking chest wound
- Protruding abdominal content
- Hypothermia

Periodically re-assess the victim’s condition

Transfer to EMTs and conclude mission (page 25)
Signs and symptoms stable medical casualties:
- No sign of shock
- No alterations of the level of consciousness
- No circulatory problems
- No chest or abdominal pain

Perform secondary exam on-scene

Stabilize/treat all evident medical conditions prior transport

Victim can walk?

YES
Transfer the victim onto your unit and transport to shore

NO
Transfer to a stretcher or any other suitable device

Periodically re-assess the victim's condition

Transfer to EMTs and conclude mission (page 25)
Signs & symptoms of potentially unstable medical casualties:
- Chest pain (> 35 years old)
- Abdominal pain
- Gastro-intestinal hemorrhage
- Vaginal hemorrhage

Signs and symptoms of unstable medical casualties:
- Low blood pressure
- Blue skin
- Increased respiratory rate
- Pale and sweaty skin
- Any alteration of the level of consciousness
- Any significant alteration of the pulse

If a casualty is unstable, time is critical. YOU MUST INITIATE QUICK TRANSPORT TOWARD THE SHORE IN LESS THAN 10 MIN AFTER YOUR ARRIVAL!

Stabilize only life-threatening conditions

Transfer to a stretcher or any other suitable device

Transfer the victim onto your unit and transport to shore

Perform secondary exam during transit if possible

Periodically re-assess the victim's condition

Conditions that must be stabilized before transport:
- Respiratory arrest
- Cardiorespiratory arrest
- Obstructed airway
- Hypothermia

Transfer to EMTs and conclude mission (page 25)
23. MULTICASUALTY FIRST AID

Scene stable?

NO

Remove as many survivors as possible from the scene. DO NOT WASTE TIME WITH TRIAGE WHEN SCENE IS UNSTABLE!

Transport these casualties to a chosen casualty reception point

Have someone to triage all recovered casualties

Organize shore-to-hospital evacuation

Evacuate the casualties to a hospital by priorities

YES

Send a crewmember to triage all casualties (START page 24)

Keep constant contact (radio) with your crewmember

Evacuate casualties by priorities:
- Red
- Yellow
- Green
- Black

Transport these casualties to a chosen casualty reception point
24. START TRIAGE METHOD

Victim can walk?

- YES → GREEN
- NO

Assess breathing without opening the airway

Victim breathing?

- NO → Open airway
- YES

Assess respiratory rate

> 30/min?

- NO
- YES

Take pulse at wrist

Present?

- NO
- YES

Assess level of consciousness

Responsive?

- NO
- YES → YELLOW
25. MISSION CONCLUSION

- Note time and inform RCC/MRSC
- Prepare your unit and equipment for the next mission
- Conduct a debriefing with your crew and evaluate your performance
- Complete all relevant paperwork and send it to RCC/MRSC
- Check if crew is subject to post-traumatic stress and ask for counselling if warranted
- Eat and rest if necessary