



Fisheries and Oceans
Canada

Pêches et Océans
Canada

Coast Guard

Garde côtière

SAR ALGORITHMS



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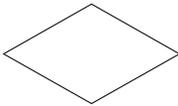
LEGEND

LEGEND

COLOR TITLE CODING

Before/after missions
Transit & initial actions
Rescue

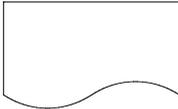
Towing
Medical emergencies
Multicasualty



Question :
YES / NO



Action to
perform



Action to
continue (follow
directions)



RCC/MRSC

Contact / Call
(follow
indications)



Gather information



Warning



Do not

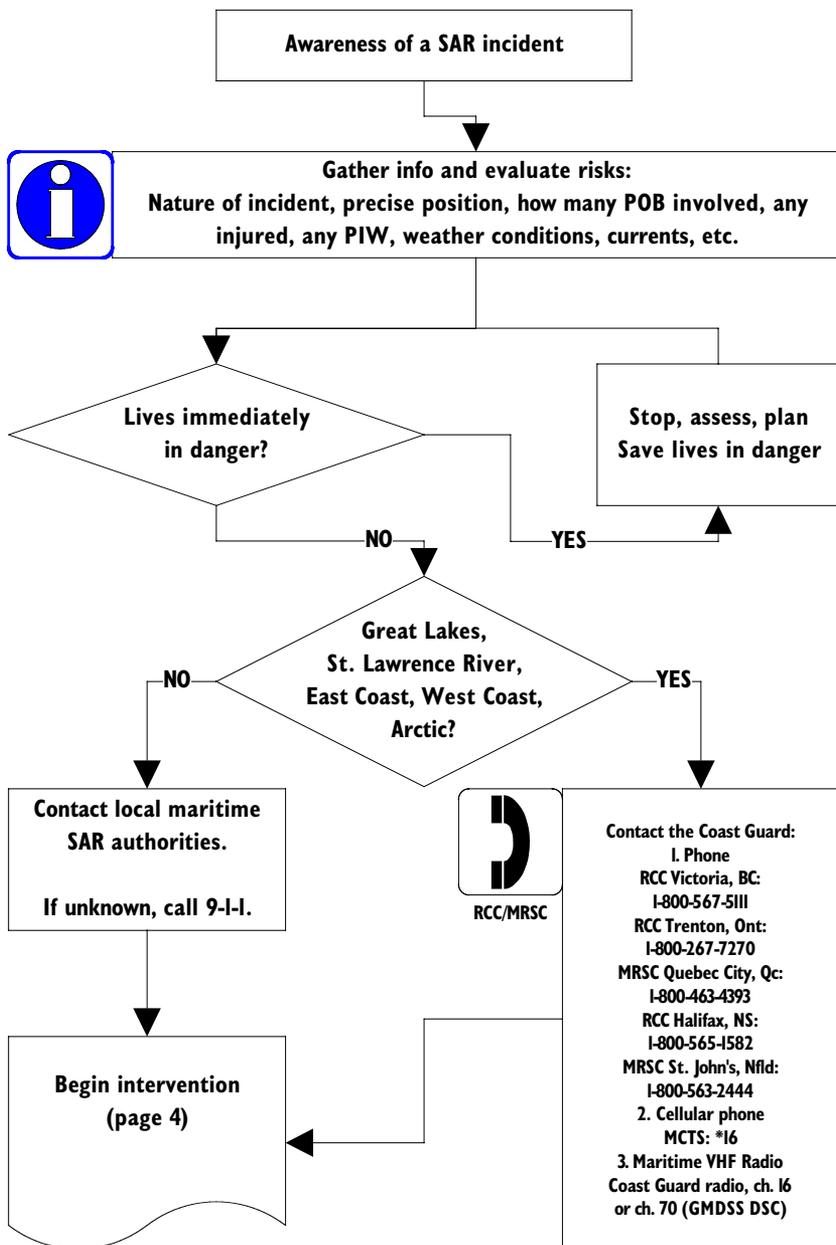


Organize transport of casualties

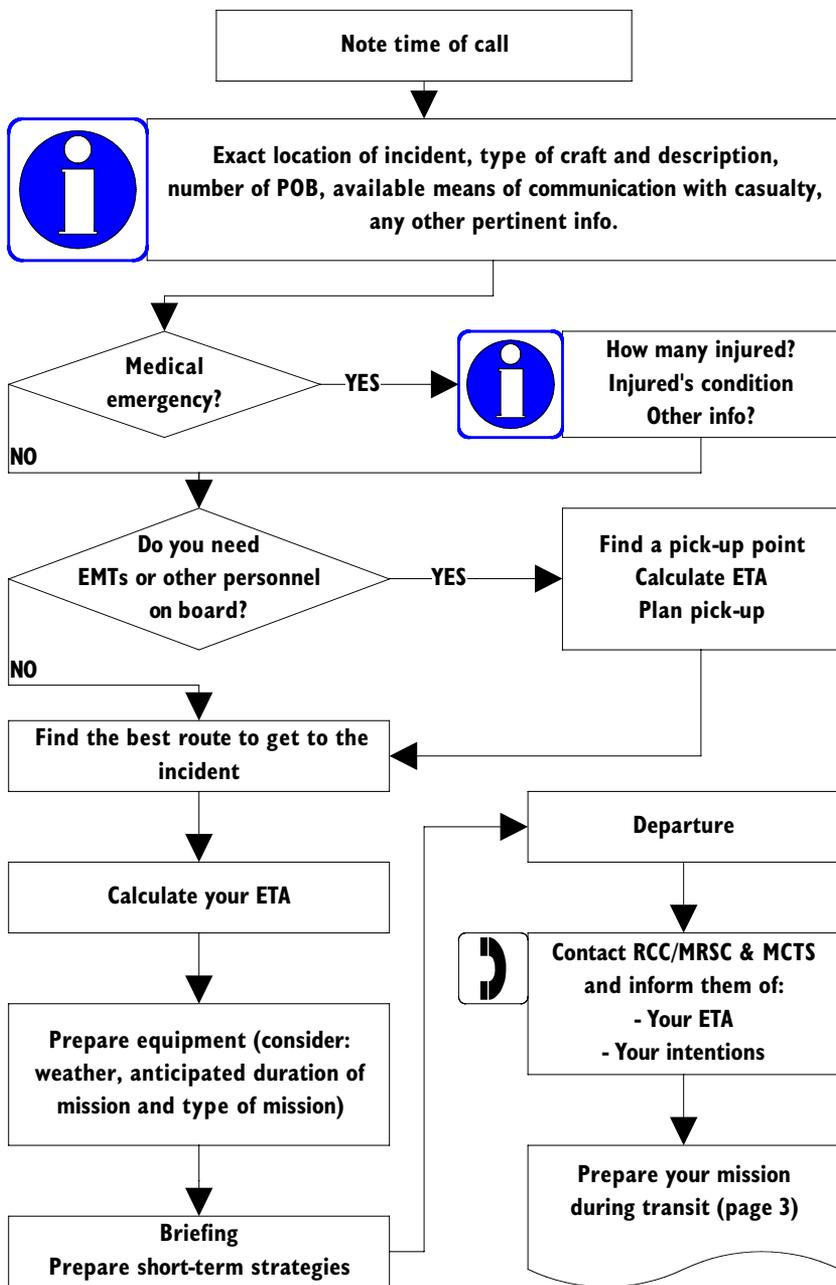


Provide first aid as directed/specific first aid info

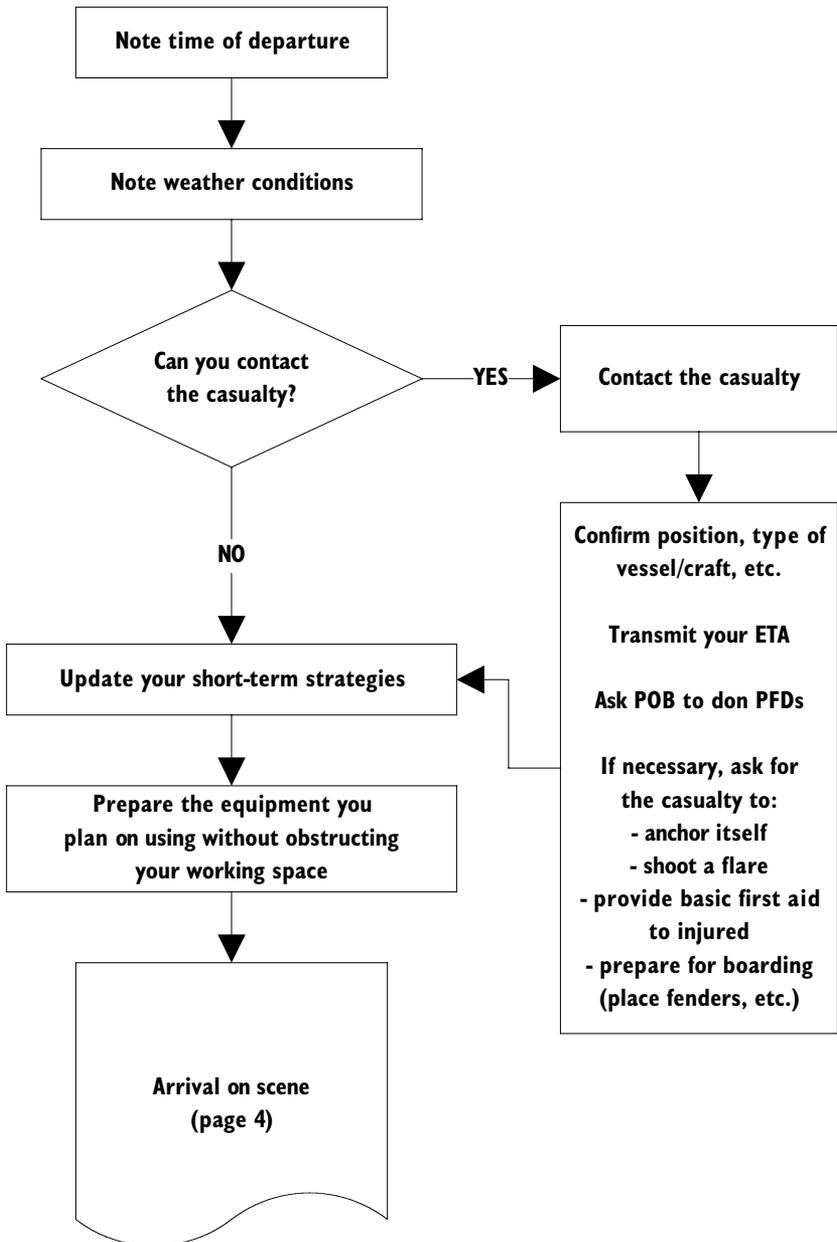
1. ALERTING



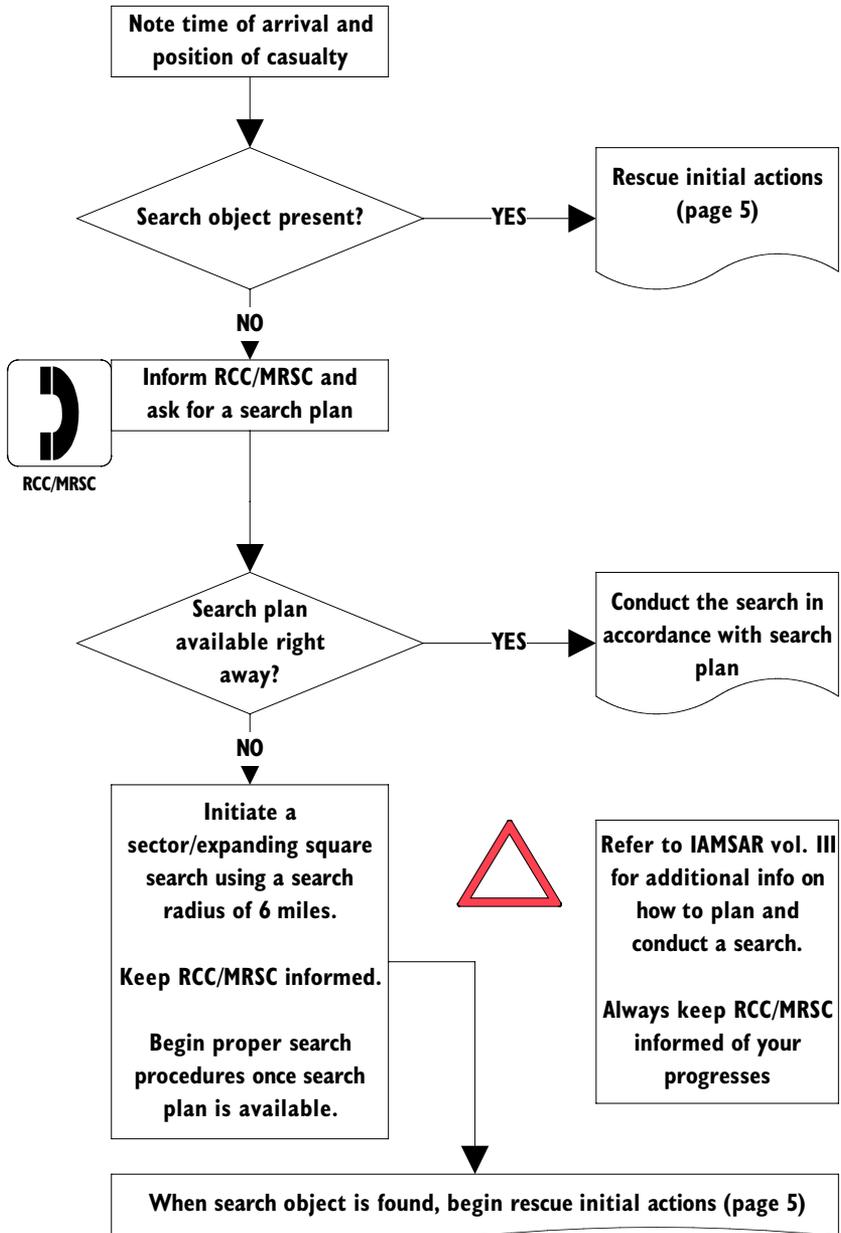
2. RECEIVING A CALL



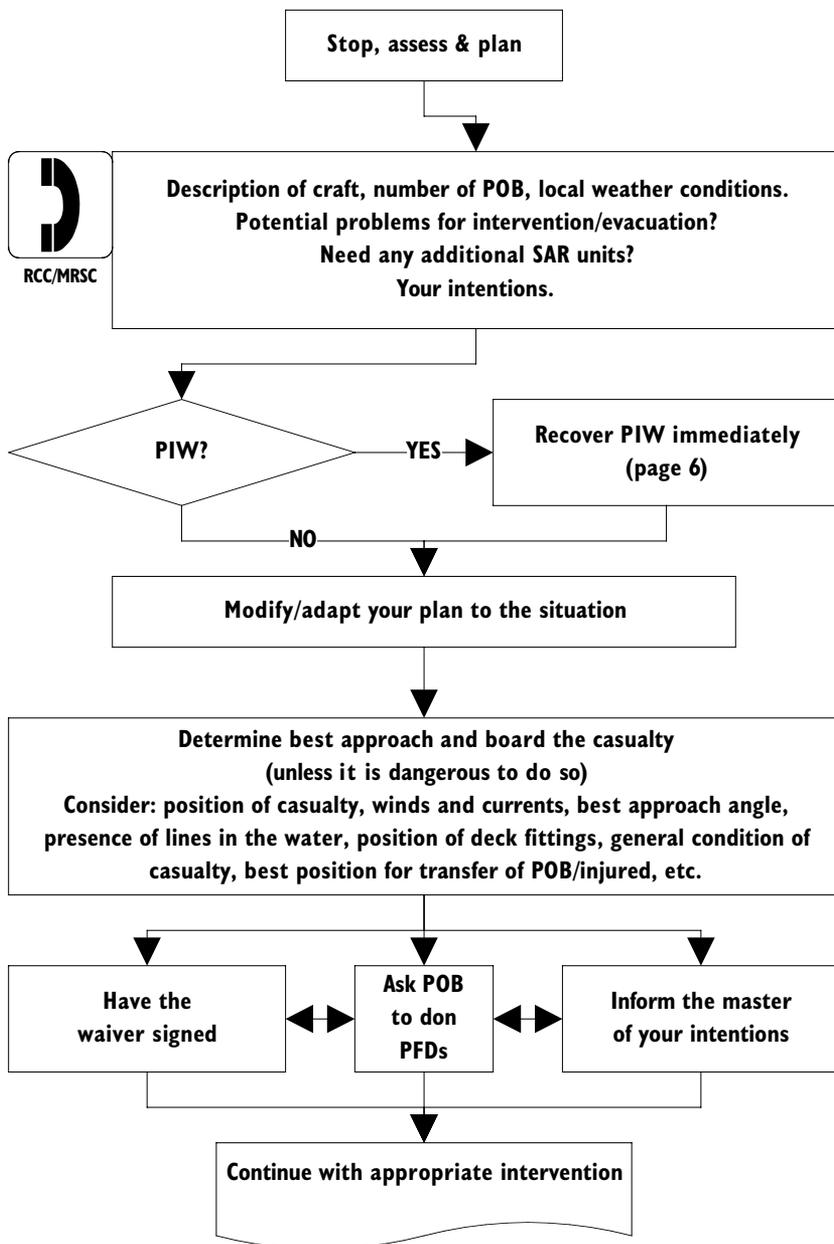
3. TRANSIT TO THE SCENE



4. ARRIVAL ON SCENE



5. RESCUE INITIAL ACTIONS



6. RECOVERING PIW



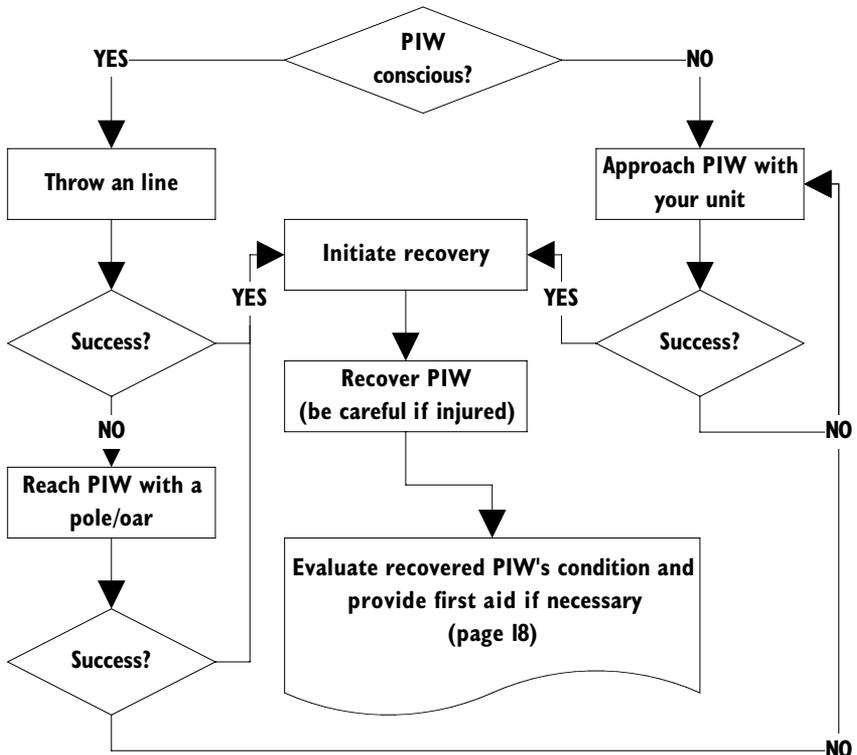
RECOVERING PRIORITIES:

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.



7. CASUALTY ON FIRE



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

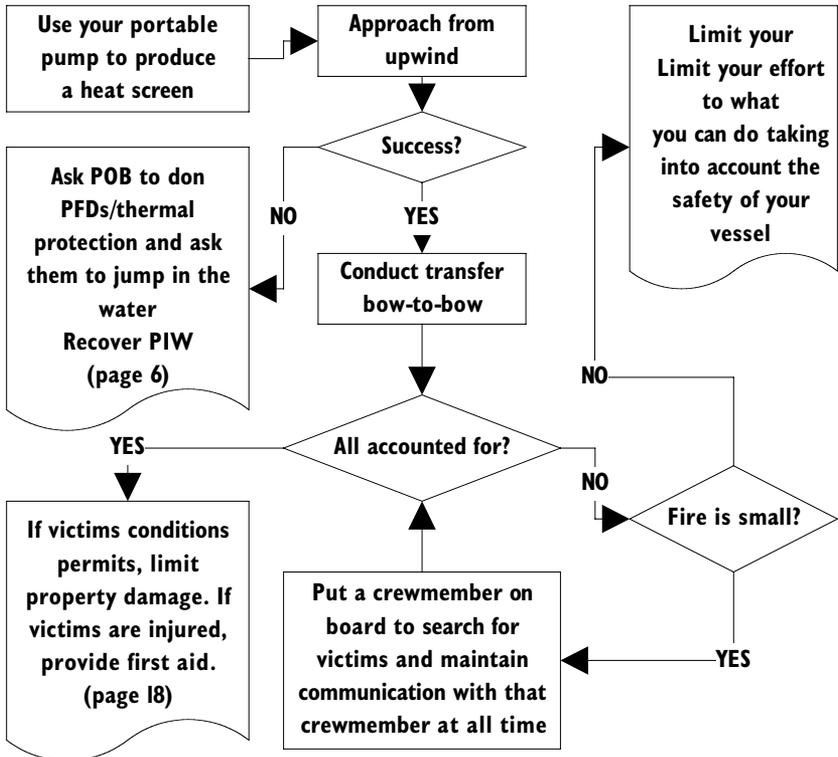


PRIORITIES:

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**



8. GROUNDED/CAPSIZED VESSELS



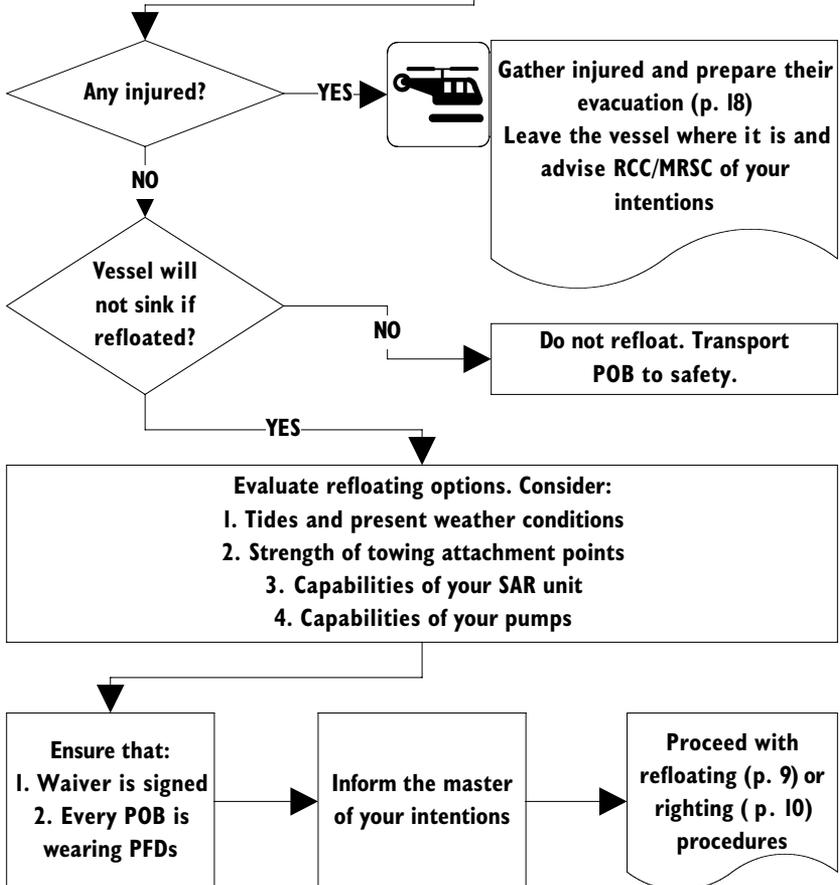
PRIORITIES:

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



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.

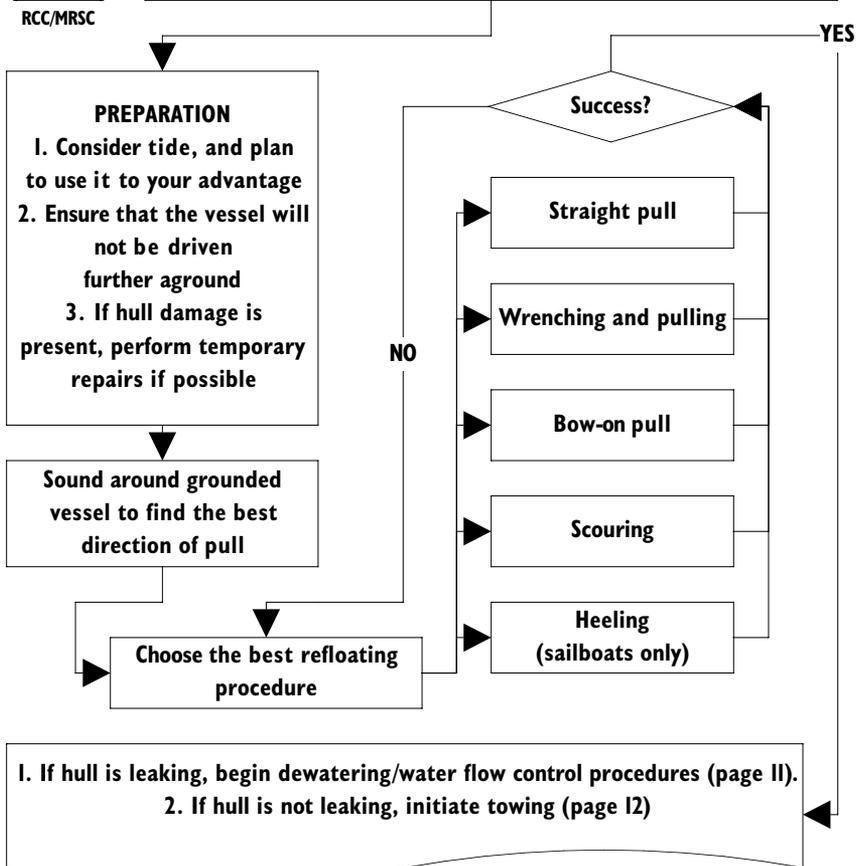


DO NOT REFLOAT IF YOU HAVE ANY DOUBTS ABOUT THE VESSEL'S ABILITY TO REMAIN AFLOAT ONCE REFLOATED



RCC/MRSC

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



10. RIGHTING TECHNIQUES



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.

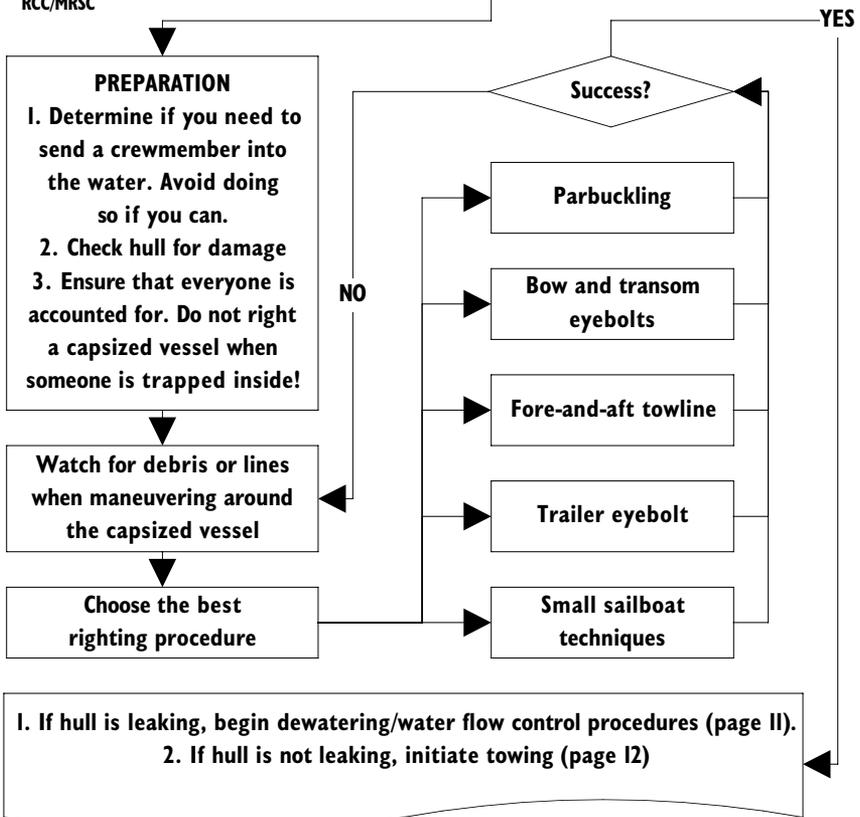


DO NOT RIGHT A CAPSIZED VESSEL IF YOU HAVE ANY DOUBTS ABOUT THE VESSEL'S ABILITY TO REMAIN AFLOAT ONCE RIGHTED



RCC/MRSC

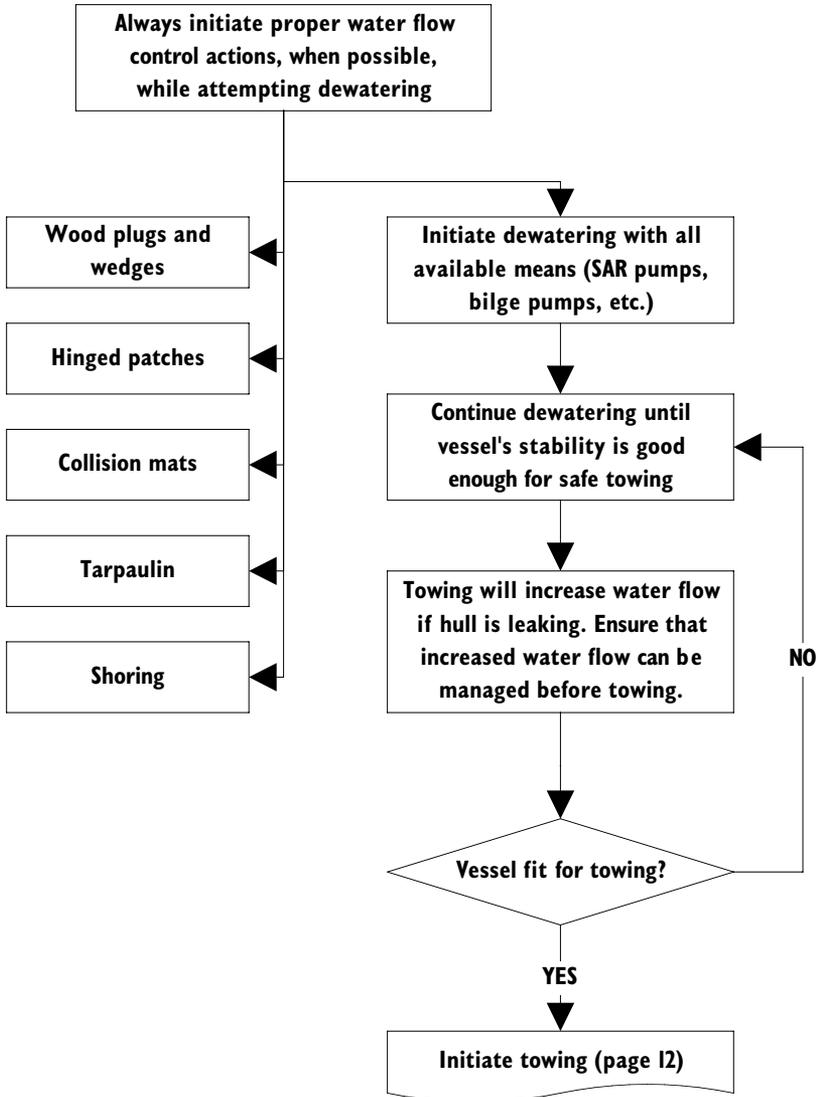
Inform RCC/MRSC of the situation and request additional aid if required (MEDEVAC, pollution control, etc.)



11. DEWATERING/WATER FLOW CONTROL



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



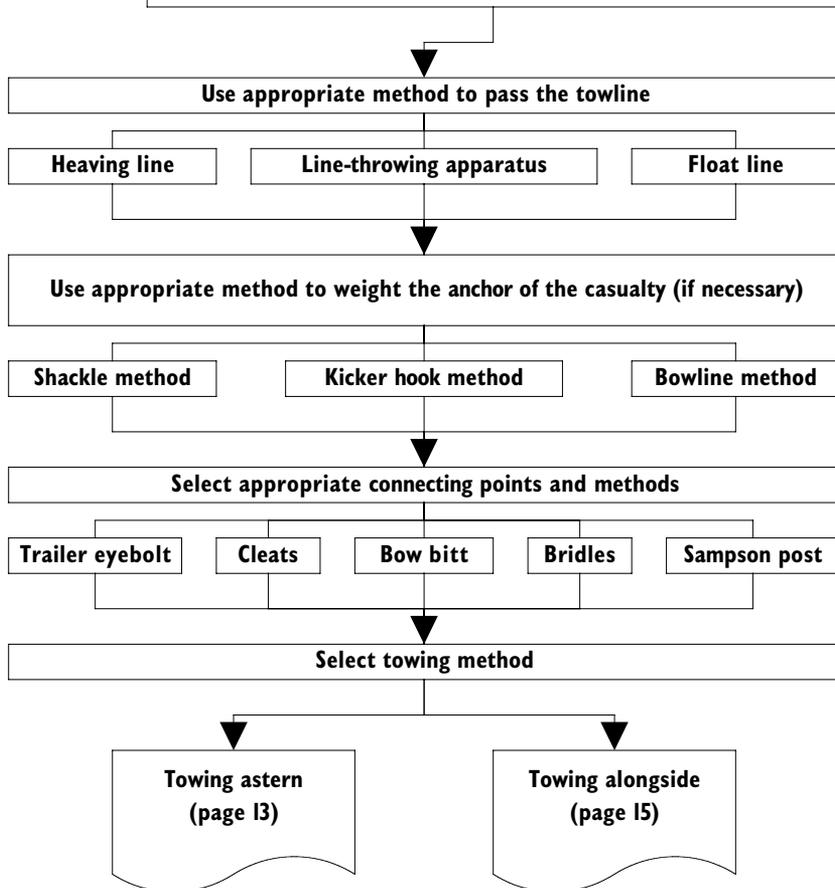
Avoid getting involved in prolonged towing operations. Remember that you must remain available for potential life-threatening incidents. Always tow to closest safe haven when possible.



RCC/MRSC

Contact RCC/MRSC or MCTS to ask them permission for towing and to inform them of:

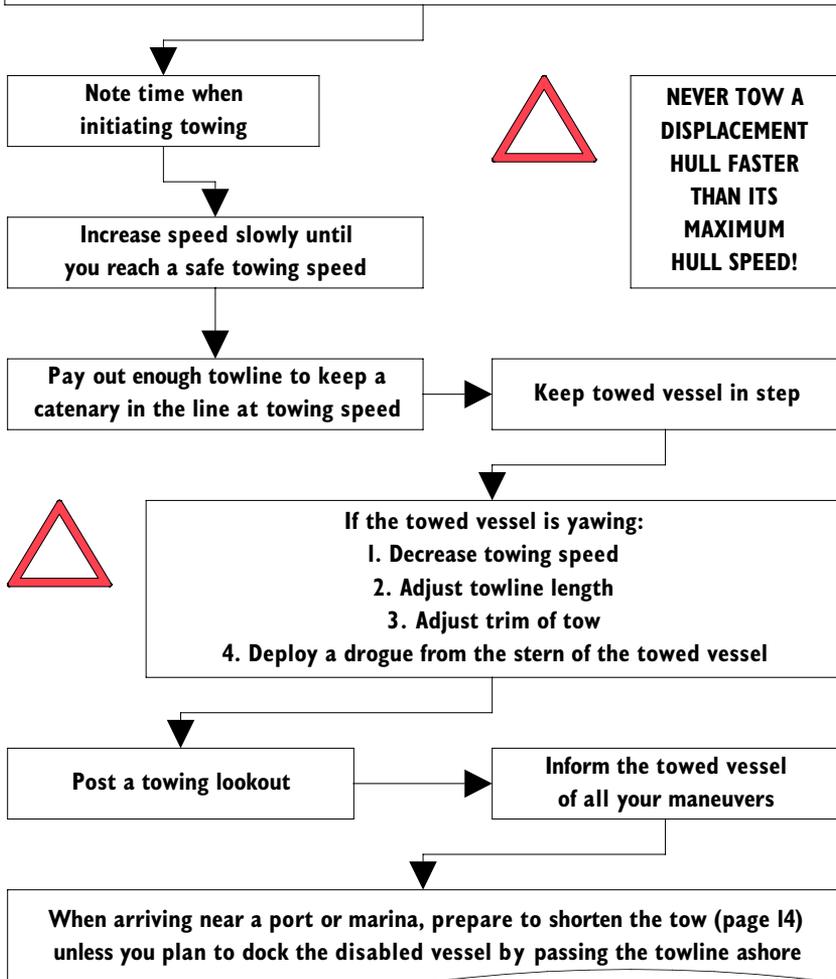
1. Towing destination
2. Estimated duration of towing



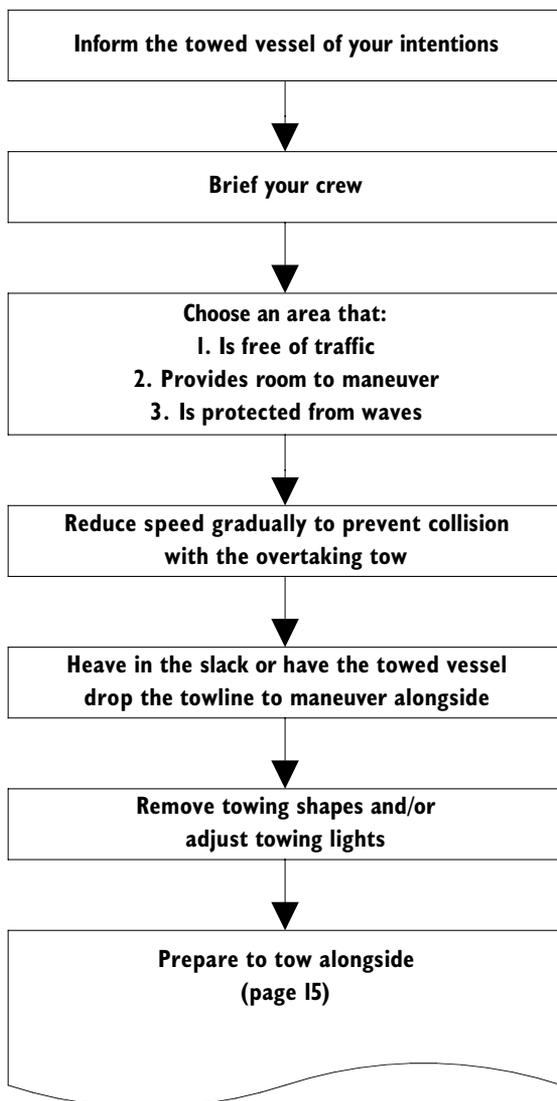
13. TOWING ASTERN

PRELIMINARY PROCEDURES

1. Maintain communication at all time with vessel to be towed
2. Discuss emergency 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



14. SHORTENING THE TOW



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



Marina/Port

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

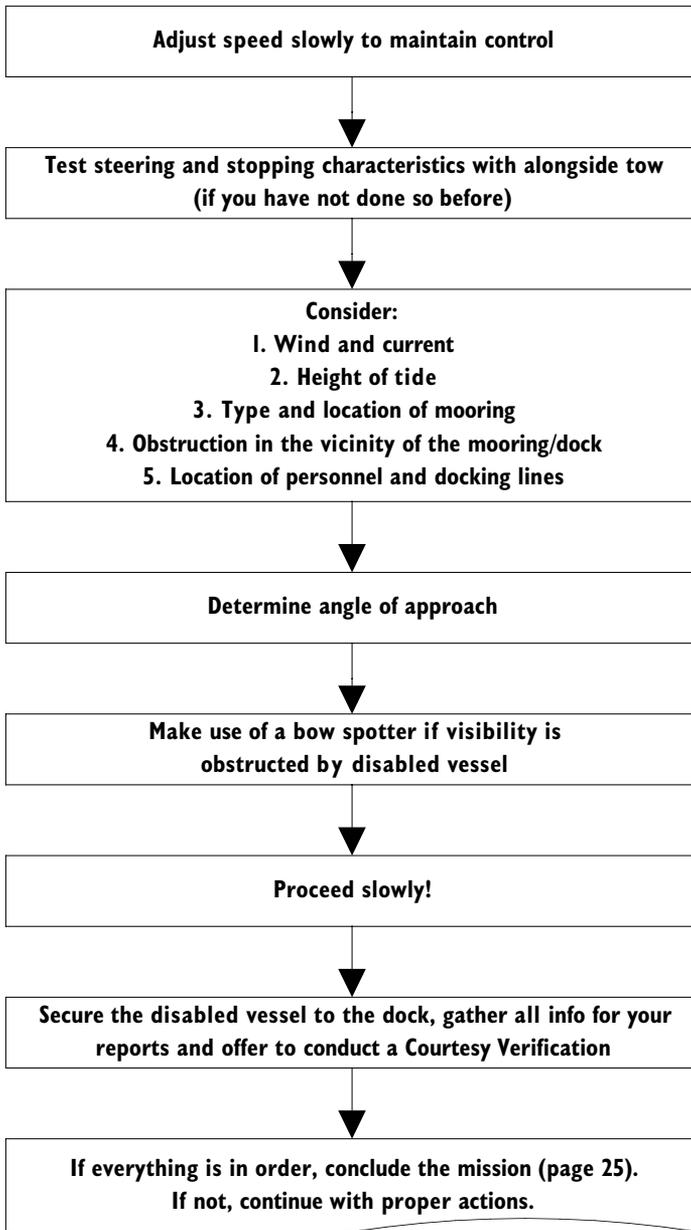
Prepare dock lines and fenders on both vessels

Look for power lines and other kind of obstructions

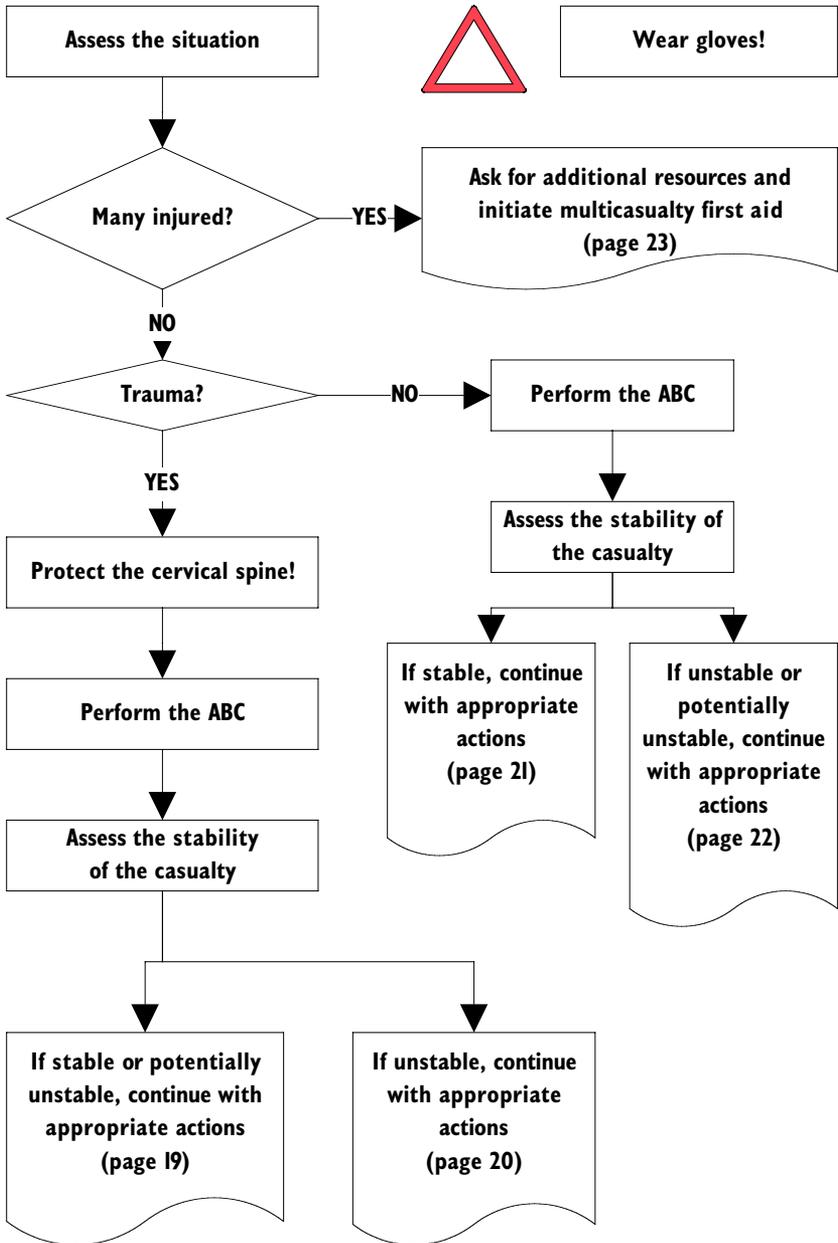
Choose the closest and most accessible dock
(this is usually the gas or visitor dock)

Initiate docking procedures
(page 17)

17. DOCKING WITH ALONGSIDE TOW



18. TRANSPORT OF SICK/INJURED



19. STABLE/POT. UNSTABLE TRAUMA

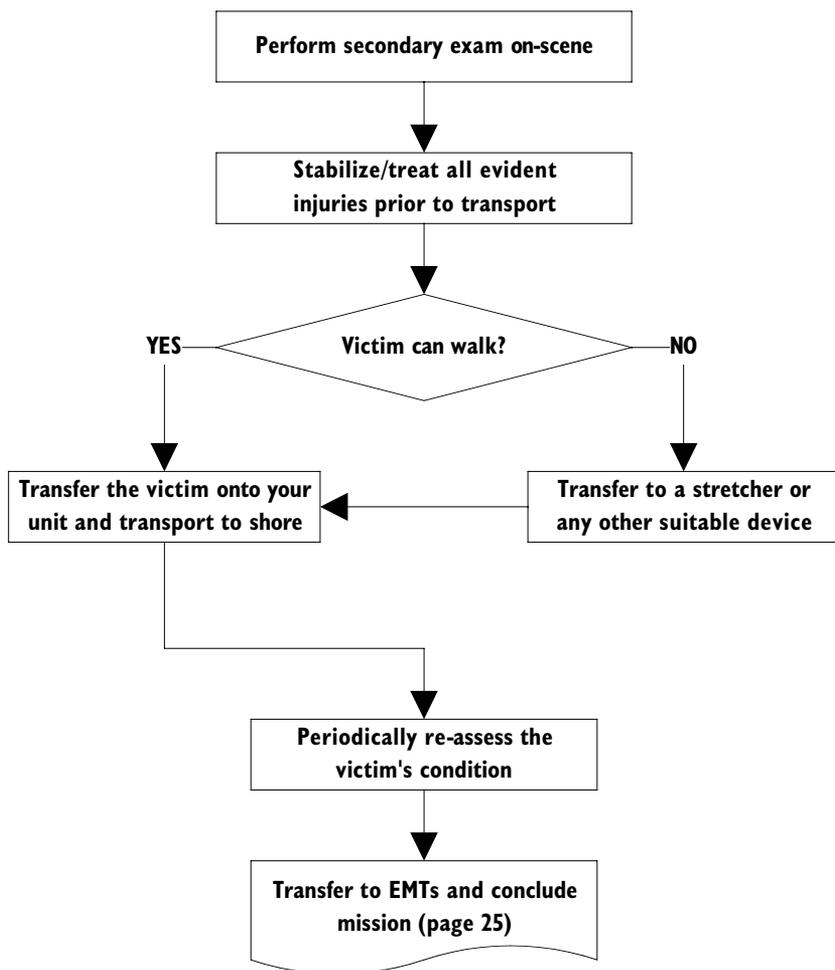


Signs/symptoms of potentially unstable trauma casualties:

- 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



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**



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

**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**

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

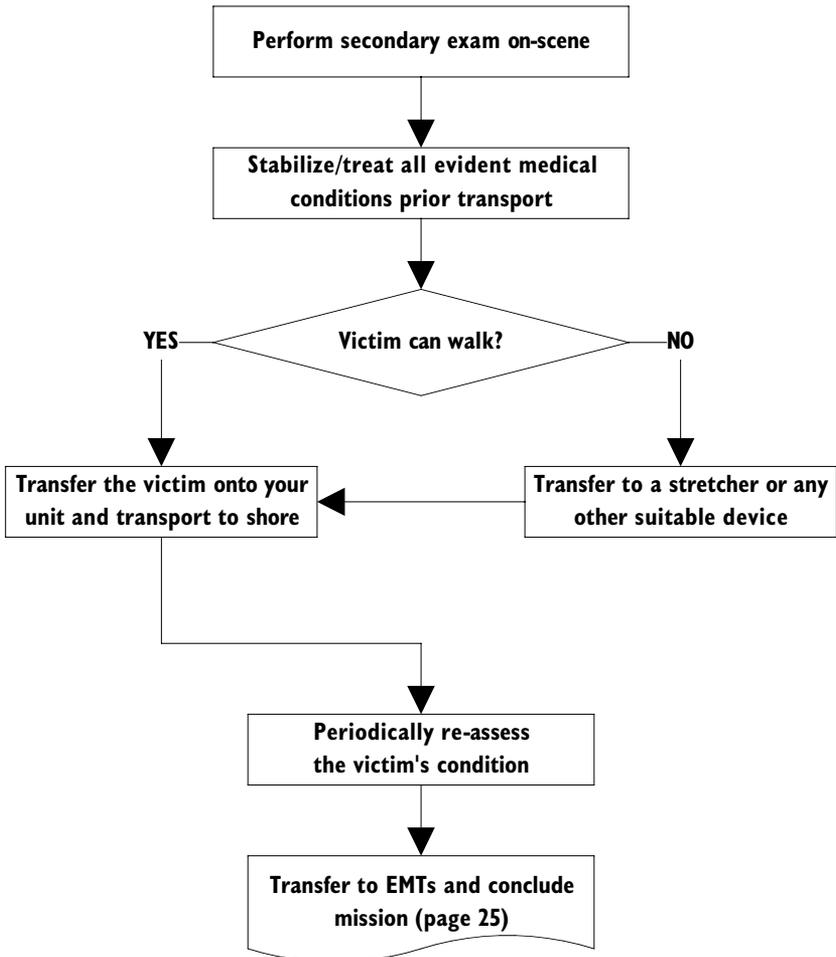
**Transfer to EMTs and conclude
mission (page 25)**

21. STABLE MEDICAL



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



22. POT. UNSTABLE/ UNSTABLE MEDICAL



Signs & symptoms of potentially unstable medical casualties:

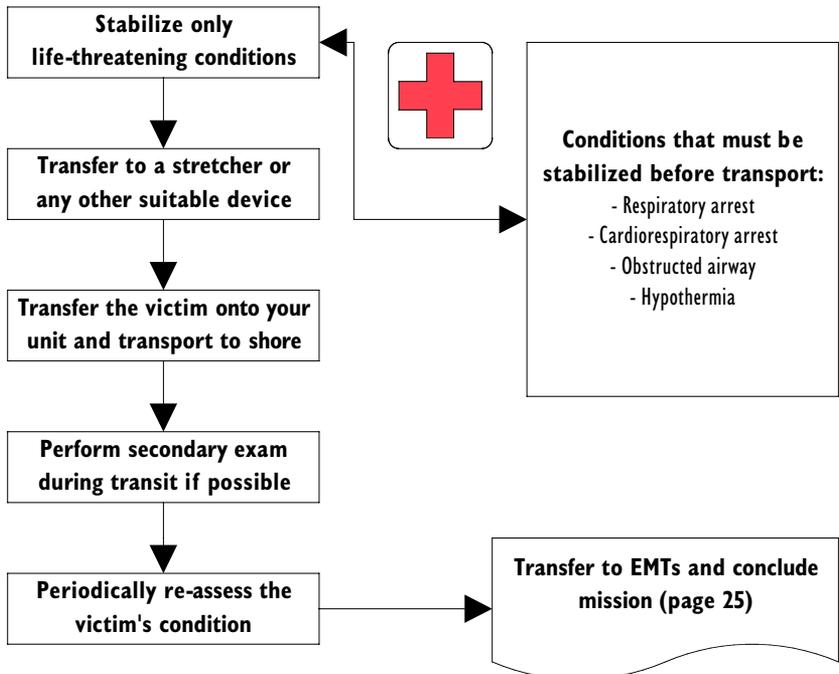
- Chest pain (> 35 years old)
- Abdominal pain
- Gastro-intestinal hemorrhage
- Vaginal hemorrhage

Signs and symptoms of unstable medical casualties:

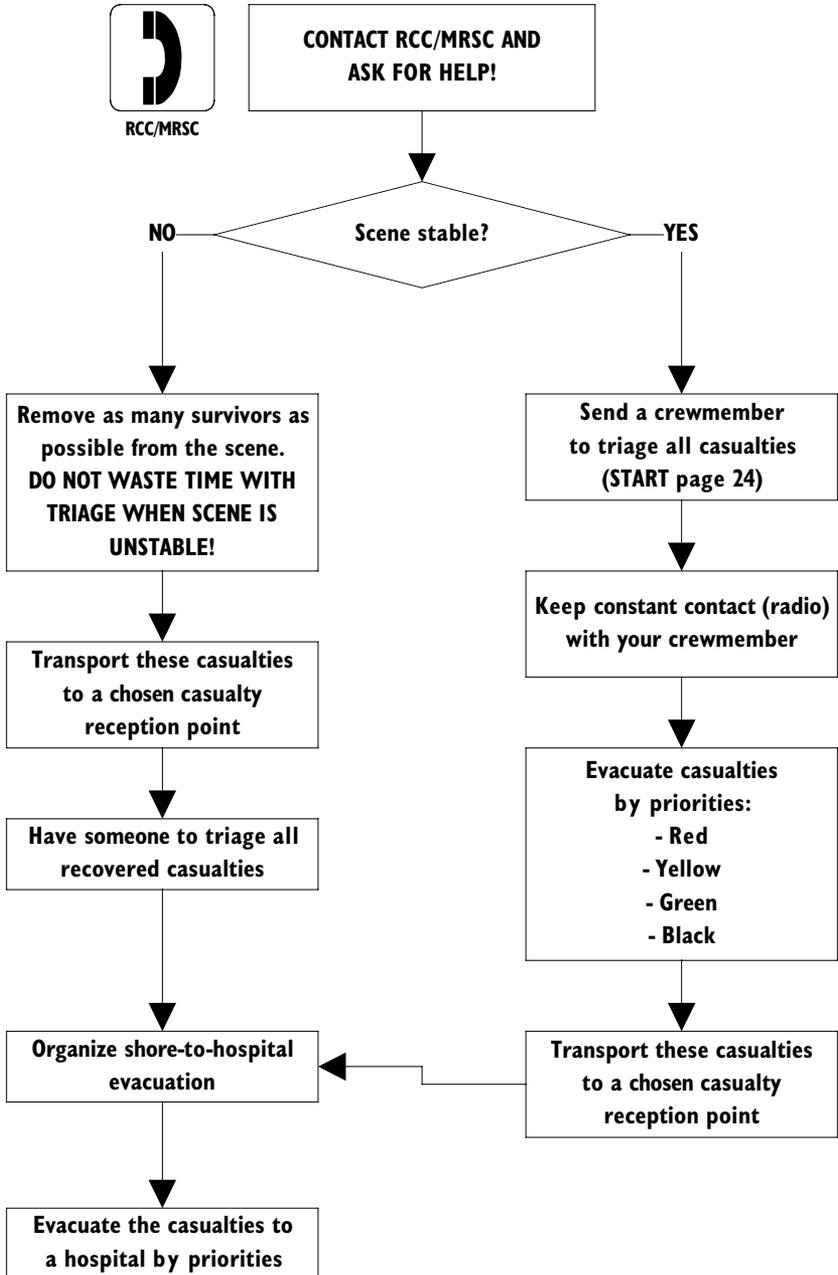
- Low blood pressure
- Blue skin
- Increased respiratory rate
- Pale and sweaty skin
- Any alteration of the level of consciousness
- Any significant alteration of the pulse



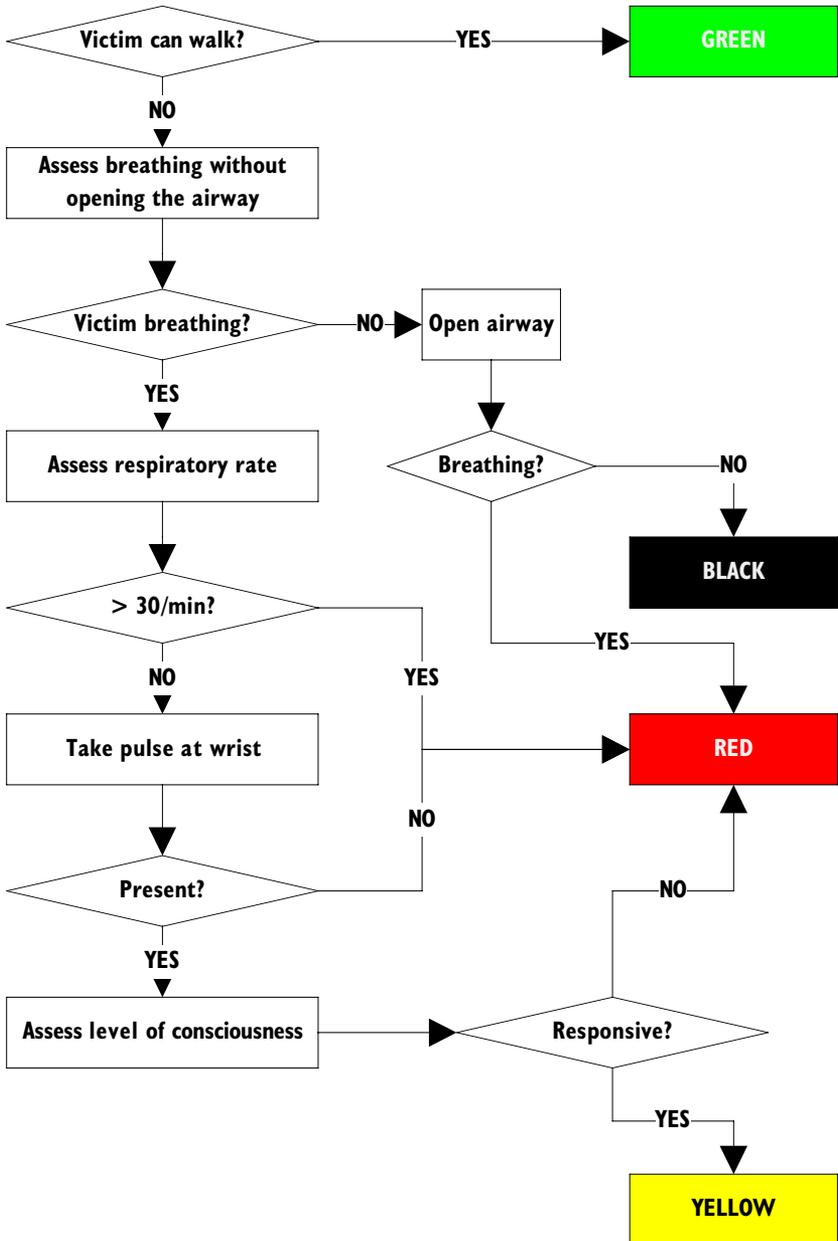
**If a casualty is unstable, time is critical.
YOU MUST INITIATE QUICK TRANSPORT TOWARD THE SHORE
IN LESS THAN 10 MIN AFTER YOUR ARRIVAL!**



23. MULTICASUALTY FIRST AID



24. START TRIAGE METHOD



25. MISSION CONCLUSION

