

# Participate in a Marine Rescue Operation



*(Photo courtesy of Port Macquarie News)*

This workbook is intended for Trainees seeking to attain competency as required by the NSW State Rescue Board Minimum Training Requirements for Marine Rescue Personnel (v 4 2005). It should be studied with reference to the accompanying text "The Bare Facts of Marine SAR" and the assessment documents provided by your chosen assessor.

## **LOG BOOKS**

Trainees should maintain a Log where practical activities and experience should be recorded and witnessed. When you feel confident ask your Trainer to arrange an assessment at your squad or other suitable location. Your assessor will provide feedback on your assessment.

*The Author acknowledges references to material published by the Australian National Training Authority and the NATSAR Manual 2003. All content is supplied on the understanding that users exercise their own skill and care with respect to its use. Before relying on the material in any important matter users should carefully evaluate the completeness and relevance of the information for their purposes.*

*Ranger Hope © 2006*

# Participate in a Marine Rescue Operation

THIS COMPETENCY IS NOT YET VETAB ACCREDITED	
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## Introduction

The Act (NSW) defines “rescue” as the safe removal of persons or domestic animals from threatened danger of physical harm. Fortunately the requirement for rescue is less frequent than the run of the mill activities of rescue squads, these being answering calls for assistance, escorting vessels and precautionary patrols. However situations can escalate and a rescue vessel and crew must always be ready to respond immediately to emergency call, to rescue or to search and then rescue. This workbook aims to introduce the new trainee to the variety of activities performed in participating in a (volunteer) marine rescue.

Some squads will only permit trained personnel to attend at rescue events. In these circumstances, trainees must negotiate to complete the suggested practical assessments in a simulated or training situation.

## 1. Prepare and respond to rescue

### Task and Operation information

#### *1.1 Task and Operation information is obtained.*

***A marine radio message from a vessel requiring assistance*** is the most frequent method used to request assistance. Other ways are:

- ***Notice from the Police*** - They receive calls from the public and have the authority to activate the response that they consider is appropriate. The local Sea Rescue is on their list of emergency response organisations.
- ***Telephone enquiries*** - Phone calls are received from concerned relatives or friends to advise that a vessel is overdue, or that with the deteriorating weather causes fears for its safety.
- ***Counter enquiries*** - Usually the concerned friends or relatives have chosen to visit the trailer / car park to physically check with no joy. They have gone to the enquiry counter at the Rescue Base to express their concerns.
- ***Observer / witness enquiries*** - Calls from other people, not known to the occupants of the vessel in possible distress. They may be, vessels at sea that have seen a vessel behaving strangely or residents with ocean views advising they have witnessed an incident of concern. They often see anomalies, and can become well known sources of information. They are often responsible for early alerts from distress flares.

## Task Information

Task Information is the information gathered in order to appraise the needs of the response operation.

The SARcc Duty Officer will show trainees how to manage phone calls and describe the Operational Plan with provision for documenting a 'Request for Assistance'. Use this to obtain answers in all the blank spaces. When completed ask the caller to hold while you refer this to the Duty Officer. More specific information about the report may be needed. Some Duty Officers may wish you to hand over all such calls in the first instance. A trainee's limits of responsibilities will be defined when given induction.

Experienced rescue workers will recall past informants exaggerating their peril. I recall a reported amputee, dehydrating, losing consciousness, and needing urgent removal from a yacht at sea, who ran from the rescuing helicopter as it touched down at the hospital to hail cab with a hand less one finger. His miraculous recovery was from a bout of seasickness!

It is essential that the exact words of the informant are recorded. You get into very shaky ground if you start to interpret the report, but if the information given doesn't seem to add up, then ask for more detail. The rescue mission will proceed on the basis of the recorded report that should include:

- Who** - The names and details of all involved parties.
- What** - What has happened with as much detail as can be obtained.
- When** - When did this all happen.
- Where** - Charted, natural features, bearings, soundings, distances off.
- Why** - Information on hazards that could recur in the rescue attempt.
- Conditions** - Forecast of operational sea area and the incident scene.
- Injuries** - Minor or major, indicating the needs for specialist resources.

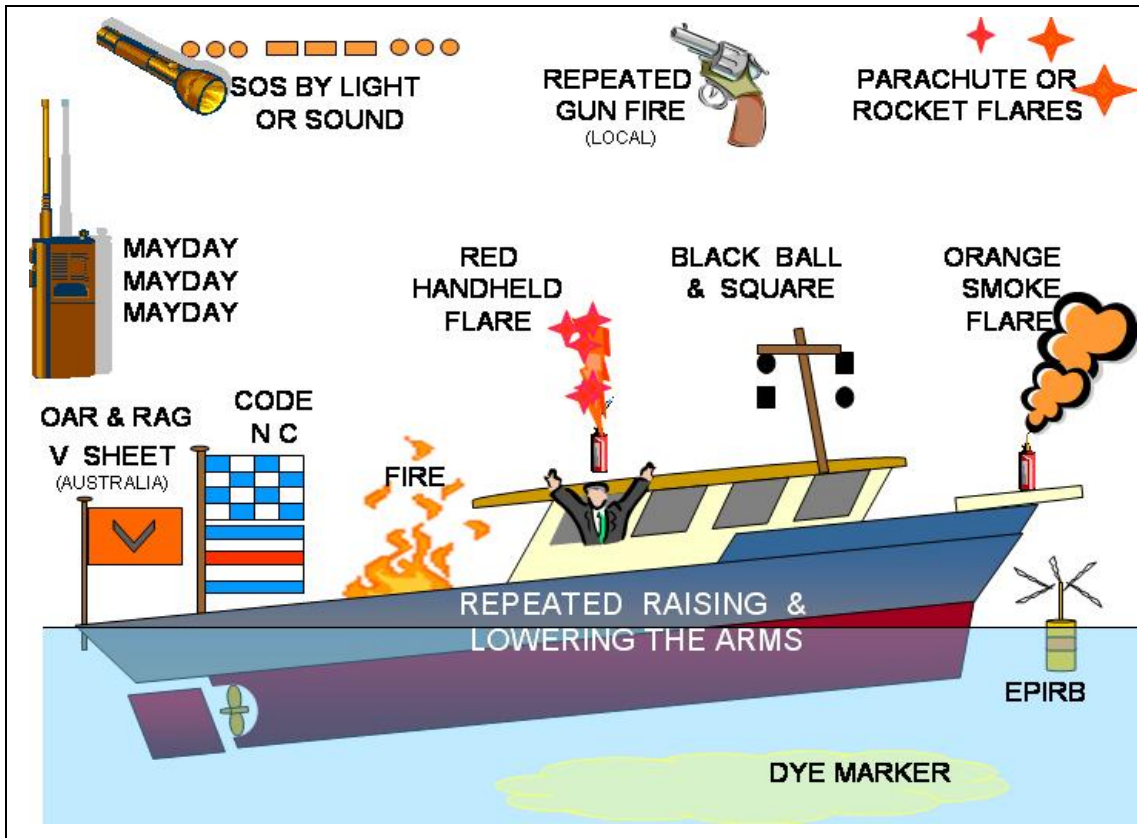
Depending on the gravity of the situation, a response could be immediate, but it is still necessary to continue to gather all the information you can. You may be asked to monitor the fax machine for copies of the latest weather information, police notifications and vessel details, as will be needed at subsequent briefings. You could be asked to help the Duty Officer to collate the information, ensure that the appropriate charts are available and generally assist to prepare for the briefing. You will need to listen carefully to instructions given, carry them out immediately and report that you have completed that task and confirm your next task.

## Operational Information

This is needed to determine and calculate operational requirement such as:

- Route** - And distance to the incident site.
- Weather** - En-route, at the incident site and for the operations duration.
- Conditions** - Day/night arrival at the scene.
- Tide** - Times, heights and ranges.
- Hazards** - Known and potential

You can help gather, collate and prepare the information for the operational plan which by now has been commenced. It will ultimately contain all current task information and operational information available. If you have studied Navigation, let the Duty SARcc Officer know so you can help with the tidal calculations and the plotting of a suitable intended track for the vessel to the incident scene. All may be formalised as a document, the “Operational Plan”.



*The International Distress Signals*

## **Rescue equipment is selected and checked**

***1.2 Rescue equipment is selected, based on the incident information and checked to ensure it is ready for use.***

### **Call out**

The decision to call out may be made by the Duty SARcc Officer alone, or in consultation with Duty Skipper. Whatever process is used, volunteer rescue crew will head for the boatshed.

In the adrenaline pumping response it is vital to appreciate that while a rapid response to beepers is expected, that this does not extend to speeding or driving recklessly – it is a pointless rescue that risks other lives in its pursuit.

If the MRU (Marine Rescue Unit) Rescue Vessel crewman arrives first, he/she needs to know what can be prepared in the interval before the remainder of the

duty crew arrive. Differing Squads will have SOP's to suit their situations, but it would be usual for those first attending to radio the SARcc to ask for the Task Information, open up the boat shed and prepare the Rescue Vessel (RV) for launch pending the skipper's arrival.

When the Skipper arrives, he/she will analyse the task information to identify the required response and the assets that are at his/her disposal. The Duty Skipper will now want the RV checked for a trip of duration and conditions appropriate to the initial plan.

***Vessel Equipment Check*** - This must have already been done before your rostered duty commenced. The equipment must be ready to use.

***Specialist Equipment*** - The Skipper will have informed the team checking equipment if any special items not normally carried will be required for this response; items such as large capacity pumps, additional lines for transferring equipment, facilities to handle multiple injuries, etc.

***Prepare the Vessel for Departure*** - If the vessel is moored or slipway launched, prepare for departure as per the vessels SOP's. If the vessel is trailer mounted, work with your crew to couple up the prime mover and manoeuvre for launching at the ramp. If some urgency exists, take instructions and arrange for a member of the MRU competent to drive the prime mover.

***Designate shore based support team*** - It may be that the Skipper has sufficient boat crew and sees a need to designate shore based personnel for assisting with handling lines on a wharf or reconnaissance from the headland, etc. It is important that such duty officers clearly mark themselves (yellow shirt with Sea Rescue in bold) as to be easily identified by other emergency service operators and the general public.

***The briefing*** - All on board should be aware of the plan, the location and the route to be taken.

In all of this checking and preparation, safety issues are major concerns. The vessel must be able to depart with the necessary equipment at the appropriate time. Delays caused by lack of foresight, neglect of safety issues or general procedures can endanger lives.

## **Personal protective equipment**

### ***1.3 Personal protective equipment is selected, relevant to the nature of the rescue operation.***

Now that you have gathered task and operational information, you will have must select the appropriate personal protective equipment. Always assume that the job can go much longer than anticipated. You need to consider:

**Lifejacket and yellow MARINE RESCUE marked shirt.**  
**Wet weather gear, wet suit, U/V protection – head, skin.**  
**Sunglasses or goggles.**  
**Safety boots, Ear muffs, Work or sterile rubber gloves, as appropriate.**  
**Spare pair of spectacles.**

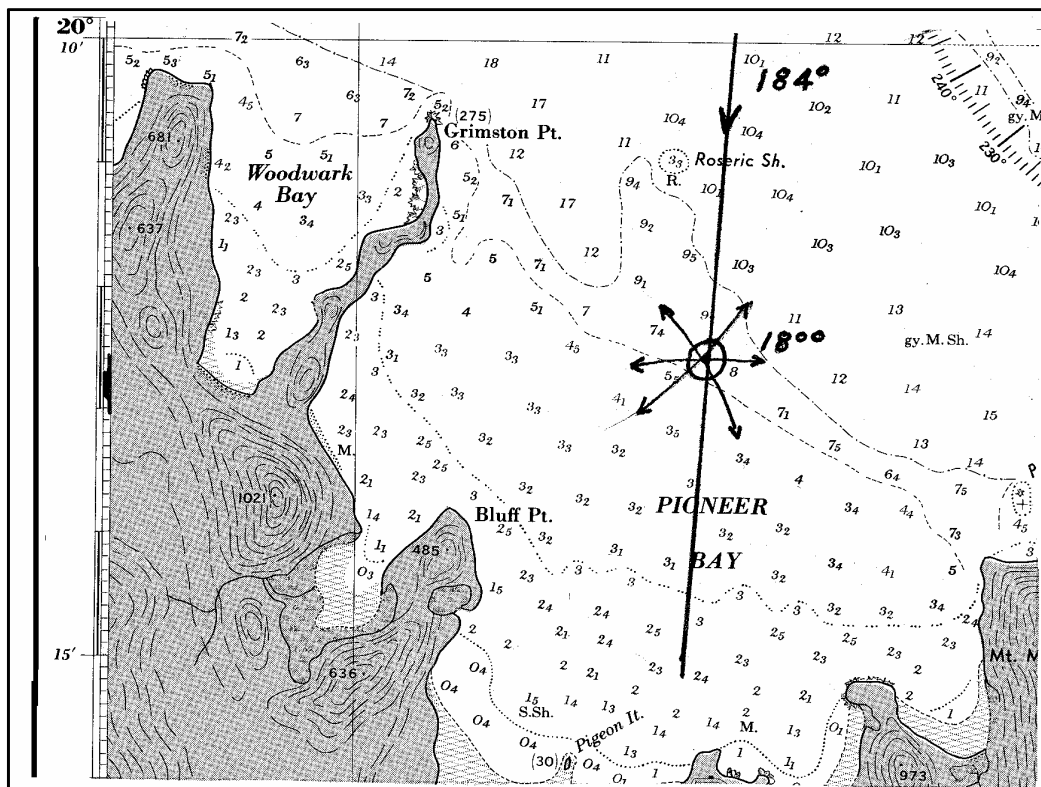
Water, flares and lifesaving equipment should all be aboard.

## **Details of the rescue location**

### **1.4 Location of the rescue is determined.**

From the task/operations information, the location of the incident is determined. It is not unusual for reported positions to be read direct from a GPS and reported (as displayed) to three decimal places (0.001 = 1.85 metres). Re-transmission of such positions will be less likely to cause errors in transcribing if they are reduced to useful accuracies of 185 metres (e.g. 00°00'.1)

Depending on your involvement, you may have to assist the Skipper in plotting of the location. Not all skippers have been into every corner of the operational area. If you have a good knowledge of the incident site and especially if you can provide information about hazards, tell your Skipper and assist in the planning.



**Your help with the plotting may be needed.**

(Chart courtesy of ANTA)

## **Update details of the rescue location**

### ***1.5 Any further details of the nature of the rescue are obtained on approach.***

While the RV is en-route to the incident location the SARcc has not stopped gathering information. Quite often further information becomes available prior to the RV arriving at the location. This is relayed by the SARcc to the RV, just as the RV will update its reports to the SARcc at least every half hour. The radio operator records the messages and reports to the Skipper exactly what was said. Avoid changing it into your own words, as this may inadvertently change the meaning.

During the course of the rescue a running log should be kept (as is practical in the size of RV) detailing navigation and radio traffic. This is vital as the rescue may become a search and rescue. Much time will be saved later in planning an extended operation using that intelligence.

The Skipper and the crew are a *Rescue Team* and all members of the team are encouraged to take an active part especially when knowledge is available about a specific area, some specific equipment or a special procedure. Tell your Skipper when you have specific knowledge and / or expertise.

## **Site hazards and associated risks**

### ***1.6 Anticipated hazards and associated risks are discussed with rescue team members whilst on approach.***

When the RV approaches the scene, the Skipper will stand off to check out the distressed vessel and the approach for dangers and hazards. The Skipper will consider the best method of approach and your assistance in such sightings may influence his considerations for a safe method.

Some items that can have an effect are:

- Lay of the vessel to its anchor, when current is against wind and seas.
- Trailing ropes in the water.
- Flotsam which could cause a danger.
- Shallow water between the RV and the other vessel.
- Reefs or isolated dangers shown by water colour and surging wave action.

You may need to check your observations with the chart, or monitor the echo sounder on approach. The direction wind and sea tide or state of tide will need to be reconsidered, just as water temperature or known shark habitat will be relevant for people in the water. Your team task may be to remove a casualty or casualties. This situation would certainly be more complicated if the vessel is in close proximity of danger. With the hazards identified, they should be monitored as the RV approaches the distressed vessel. Report immediately the detail of concerns that may endanger the ship.





### **ACTIVITY- PREPARE and RESPOND to a RESCUE**

Your Skipper will provide as many opportunities as possible to practice the previous skills during simulated rescue operations or “on the job training”. Practice activities for this element of competency include:

- Studying Squad SOP’s for gathering task and operational information.
- Selecting and checking rescue equipment in line with task information.
- Selecting PPE’s, relevant to the nature of a simulated rescue.
- Determining simulated rescue locations.
- Extending local knowledge by training and study.

Discuss as a team, the method of a safe approach, allowing for anticipated dangers and hazards. Remember to complete your log book.

## **2 - Assess Rescue Scene**

### **Rescue scene reconnaissance**

#### ***2.1 Rescue scene reconnaissance is conducted promptly to determine hazards and requirements.***

The Skipper will pause for reconnaissance at the scene to allow hazards not obvious on the approach to be identified. Be most concerned for the condition of any crew. Talk to them, check they are OK, and watch for symptoms of shock or seasickness, broken limbs, or any injuries that may have been sustained. Look at the condition of the decks, hatch covers, internal bulkheads and the bilges. You need to know if the vessel:

- Is taking water.
- Has evidence of broken equipment/structure from grounding or collision.
- Has fuel leaking from damaged pipes or fittings.
- Has LP Gas fitted and if so ensure it is turned off at the cylinder.
- Has toxic chlorine gas present from sea water flooded batteries.

Time used on reconnaissance is not wasted and subsequent reports must be recorded in a concise and accurate manner as they may be required later at debriefings or at a court of inquiry. When it is clear what the requesting vessel wants, and you have had the opportunity to assess the personalities you are dealing with, obtain the permission on the basis that assistance is given voluntarily with no liability accepted.

### **Communications techniques**

#### ***2.2 Communications with other team members is maintained using appropriate techniques.***

During the approach, the team identified possible hazards. The Skipper has been trained to prioritise requirements and allocate tasks. This would be done in a briefing, prior to coming alongside. You will be allocated a task (what is expected of you). You should acknowledge the task allocated by repeating back enough of the instruction to demonstrate that you have heard and understood the task. If you have a problem, or don't understand then speak up.

Your task may include the preparation and checking of specific equipment. Holler out or give the agreed signal when the equipment is ready, and ensure you have been heard by maintaining eye contact with the Skipper. You may need to do a radio check with portable radios intended to be sent off with a boarding party.

When the instruction is given to proceed, keep in mind.

- The task you have been given
- An awareness of where the rest of the team is working.
- Maintaining communications with team members so efforts focus on the team outcome and the individual task.

As a Crewmember you must keep a sharp lookout, and report in a conscientious manner. Avoid pointing only to describe the direction of a hazard, but qualify the direction by naming a bearing, such as “at nine o'clock or abeam to port. Your reports should be **clear, concise and accurate**.

## **Hazards and environmental conditions**


### **2.3 Hazards and environmental conditions are assessed and minimised or controlled.**

When a vessel is in distress situation, there can be various situations where the environment can be endangered. Leaking fuel or oil spills, chlorine gas from leaking batteries, discarded items from the vessel, including garbage, short ends of ropes, damaged portions of hull or superstructure, items of clothing, discarded or lost overboard, any other things that may finish up in the water because of misadventure or lack of responsible action.

A Rescue Vessel crew should:

- Report hazards to your Skipper.
- Give details of the hazards (what it is and what might be done).
- If a total control of the risk is not possible, consider the best method to minimise the damage that may occur to the environment.

In the event of assisting a vessel that has grounded, particular attention should be given to monitoring for fuel in the surrounding water. It may be necessary to contain the area, report the pollution event and call for additional backup. The format for this is a POLREP which the SARcc will use to inform the relevant authorities. (Police or NSW Maritime Authority).

<p><b>Name, call sign and description of ship.</b></p> <p><b>Position, weather &amp; passage details of ship.</b></p> <p><b>Name and contact details of owner</b></p> <p><b>Position &amp; time of pollution event.</b></p> <p><b>Name, class and description of discharge.</b></p> <p><b>Intended radio schedule of situation reports</b></p>	<p><b>POLREP FORM</b></p>
	

## **Safety and security procedures**

### ***2.4 Health and safety and security procedures are correctly followed in accordance with organisational policy and relevant legislation.***

Responsible Skippers of the vessels in distress will address the state of their vessel, whilst awaiting the RV. But often the incident scene is a catastrophe, the vessel damaged, people injured and ropes and fuel oil everywhere. In the haste to assist, it is unwise to overlook the OH&S principles of risk management:

***Identifying the hazard*** - what could happen.

***Analysing the risk*** - exposure x likelihood x consequence of the hazard.

***Making a control plan*** - to minimising the risk.

***Monitoring/re-evaluating*** - to ensure the plan remains effective.

Top of the list of control measure are of course PPE's but If there is any suspicion that the rescue plan exposes the vessel and crew to uncontrolled risk then the attempt should be abandoned.

Volunteers Marine Rescue Vessels have exemption from the requirement of the Maritime Services Act 1935 to comply with marine speed limits & no wash zones only in the case of distress, urgency or under direction of NSW police for a persons safety (not property), but no such exemption exists for road traffic laws nor for civil actions of compensation resulting from rescue efforts.

## **Recognise the individuals capacity**

### ***2.5 Rescue situation beyond the capacity of the individual is recognised and referred to the appropriate specialist personnel and / or equipment.***

### ***2.6 Need for additional personnel and/or specialist equipment is reported to the skipper.***

Sometimes situations arise that you are unable to resolve. Sometimes a piece of equipment you are working with seems inadequate. You may need a hand from other crew, or it may require specialist knowledge and even the use of additional equipment.

Don't keep going on when it is beyond your capacity or you keep failing. Rescue is a team endeavour. Report and seek assistance from your supervisor. Report the problem in a concise, logical and accurate manner. Offer reasons for the problem and contribute to a resolution of the problem.



### **ACTIVITY - ASSESS the RESCUE SCENE**

Your Skipper will provide as many opportunities as possible to practice the previous skills during simulated rescue operations or “on the job training”. Practice activities for this element of competency include:

- Training in scene reconnaissance to determine hazards.
- Use communications equipment with other Team members.
- Assess the hazards and environmental conditions to minimise or control.
- Engage in OH&S and risk management analysis exercises.
- Identify rescue situations that are beyond the capacity of the individual and refer this to the Skipper.

Remember to complete your log book.

## 3 - Perform a Rescue Operation

### Conduct the rescue

**3.1 Rescue procedures are conducted in accordance with the Team Leader instructions and organisational procedures.**

#### **Types of operations**

The usual requests for assistance are out of fuel, flat batteries, motor failure and escort (advice & local knowledge pilotage). Other less frequent requests can be:

**Vessel aground** - a vessel has run into too shallow water.

**Vessel adrift** – if inadequately anchored may drift many miles to wash up on another shore, if inshore may drift ashore to break-up, if offshore are at risk of becoming a navigational hazard or lost.

**Vessel collision** - resulting in disabled vessel/s and injured people.

**Vessel on Fire** - most dreaded requiring emergency fire service liaison.

**Vessel capsized or sinking** - resulting in persons in the water.

**Persons in the water** – a rapid response is essential.

**Serious injury** - requiring emergency paramedic liaison.

**Vessel lost at sea** - necessitating search and rescue.

The severity of the marine casualties listed above will initiate a scale of the emergency responses as one of “**assist**”, “**rescue**” or “**search and rescue**”. The rescue of persons in distress is a duty of all mariners, but the saving of property could be misinterpreted as a contract to tow. It is important in any other than the retrieving persons from fire, directly from the water or other imminent peril (rescues), not to charge in, but rather to stand off the vessel requiring assistance and ask them how the RV can help. They may only want, a jump start, some fuel, directions or have already corrected the original breakdown problem. When it is clear what the requesting vessel wants, and you have had the opportunity to assess the personalities you are dealing with, obtain the permission on the basis that assistance is given voluntarily with no liability accepted. The disabled vessel and RV vessel’s crews must be briefed on the RV Skipper’s immediate plan. Most will be only too glad to agree to the RV Skipper’s suggestions.

#### **Assist Scenarios:**

In non life threatening callout to assist the initiating SARcc will usually nominate the RV skipper as the On Scene Commander (OSC). There are many variations of circumstance and conditions, but below are a few observations on how your skipper may approach a variety of jobs. It is vital to verify with the disabled

vessel's skipper that assistance given is agreed and voluntary.

### ***Transfers at sea -***

The closing of two vessels in even a moderate seaway requires good driving skills and considered positioning of fenders. There is great danger of bodies and limbs that are attempting to fend off getting trapped between vessels. It may be more prudent to stand off and float down a line from windward.

This may work for transferring fuel drums (also reduces your risk from explosion from a careless smoker) it will not work for passing jumper leads. Positioning with head to wind can reduce roll, but usually the disabled vessel is not under power and it will maintain its drift attitude, that is, abeam the seas for a balanced yacht hull, seas on the aft quarter with a forward cabin vessel or trawler, head toward the wind in an aft cabined vessel. In a seaway as slack lines as the jumper lead length allows are a necessity. It is a safety precaution to ensure the disabled vessel attaches the jumper leads to both his terminals and confirms before the RV attaches to its batteries. When the disabled vessel is underway it is wise to escort it for some way and suggest that a return to shore is advisable unless you want to come out again when it won't start later. The special requirements for the transfer of the injured are considered later.

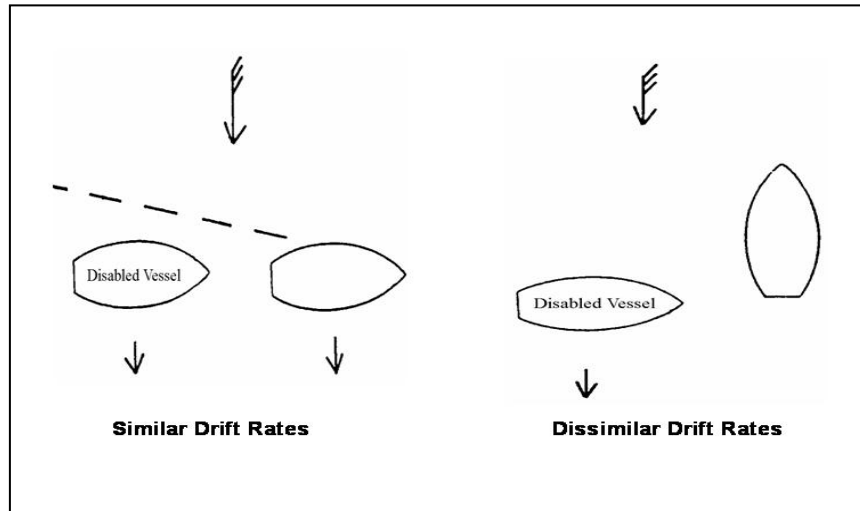
### ***Tow at sea -***

Sometimes a disabled vessel will be in known reasonably deep water awaiting your arrival. If there are no lines trailing in the water and all fishing lines hauled in the RV can approach and negotiate the plan of action with the vessel. This plan will include the asking the distressed to stow all gear, lift and centre outboard, don lifejackets, check communication, and determine a destination.

The positioning of the towline on the disabled vessel needs careful consideration. Tinnies tow well by a clip attached low down on the trailer eye, bow rollers and bow sprits are encumbered with fittings can cut the towline unless anti-chaffing rags are used, yachts often have no substantial forward cleats so they may need to be attached by a turn around the mast and some vessels are so flimsy that a strop may need to circle the entire vessel. The RV end of the towline must be easily released (to avoid the tug being capsized or sunk by a wildly yawing tow) and include a swivel.

For all bar crossing destinations, excepting vessels requiring a helmsman (yachts and displacement tows) transfer of all personnel to the RV is advisable. The manoeuvre to transfer personnel is the same as described above in transfers at sea, but if it is not necessary to actually come alongside the towline can be thrown (passed).

The disabled vessel will not be underway and is at the mercy of the wind or current. Your skipper will judge the drift rates of each vessel to plan a safe approach. It is best for vessels with similar drift rates to make the approach by the RV steaming parallel to the distressed, stopping with its quarter close to his bow to pass the tow. In this way both vessels will be drifting off at similar rates and in the same direction. With vessels of dissimilar drift rates the RV is best to approach into the wind by the bow of the disabled vessel and pass the tow from the RV's quarter.



*Positioning of a tug to pass a tow.*

*(Drawing courtesy of ANTA)*

Warn the distressed when you are about to throw a heavy line with a lump of metal (clip) at them. Most novices have a wildly optimistic notion of how far they can throw a rope and how easily a distressed person (grimly holding on by one hand) can catch it. The result is a line in the water to recoil and re-throw, or worse, around the prop, when with a bit more patience the RV would have been closer and it could have been merely handed over.

Shallow water may prevent the RV getting close. The towline may have to be passed, using heaving lines, and successive heavier lines. Throwing of ropes needs practice and your skill here will pay dividends. Throw high if the wind is behind you so the wind will carry it onward; throw low if the wind is in your face so it won't be blown back toward you. It may be so shallow that the towline has to be floated down, or even swam over to the distressed.

With the towline attached to the agreed point, and the crew on the RV forward of all trailing lines (the hazards of bights) the skipper will drive the RV forward to his chosen length of towline. The line should be one or two times the length of the waves on the bar so the RV and the distressed vessel both enter on the back of a wave. The shorter the towline the easier the RV can steer the tow but the more it will snub, the longer the tow the less it will yaw at speed and the less it will snub. The greatest danger for any tug is for the tow to overtake the tug. The tug's only escape option for is to steer away (consequently heeling toward the tow) as the tow simultaneously pulls the tug toward it, resulting in capsizes.

With the length determined and reached the RV skipper will give the order to tie off and will either move slowly ahead in the direction of the anchor, enabling the distressed easily retrieval vessel of their anchor, or if the distressed vessel is drifting, drive away at thirty degrees until the towline tightens with some spring. Continuous monitoring of the tow is required and the towline must be checked for chaff, particularly at critical points such as after a long tow and entry across a bar is imminent. The judicious moving the points of rope and fairlead contact is called "freshening the nip".

Towing lights or dayshapes should be shown.

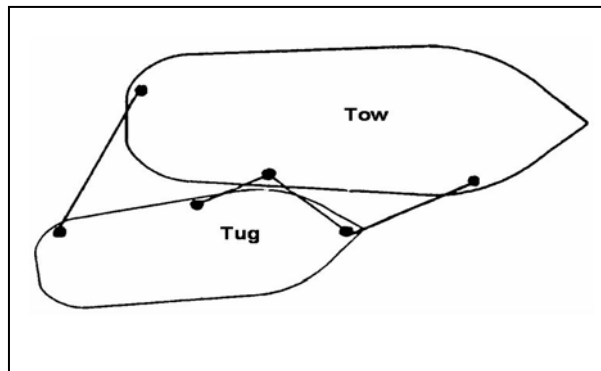


### ***Tow in restricted waters -***

The parallel tow will provide the greatest control in restricted waters and avoid the problems of the tow running on, or even overtaking with disastrous consequences. The aim is to get the tug under the shoulder of the tow so it can muscle it along.

The rig will effectively create an asymmetric catamaran. Small single prop tugs may find it difficult to steer in more than one direction, particularly to windward. To remedy this alter the tension of the bow or stern lines to alter the shape of the slot between both vessels until sufficient steering is gained.

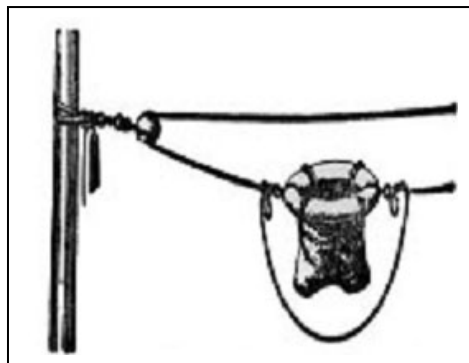
Towing lights or dayshapes should be shown.



*A parallel tow improves control in narrow waters.  
(Drawing courtesy of ANTA)*

### ***Vessel aground -***

The conditions that grounded the vessel await the careless RV. Hazard reconnaissance is vital for a safe approach as is an appraisal of tide, current and wind. On approach, progressive calling of depths from the echo sounder and avoidance of flotsam is required. Shoals or heavy surf may even necessitate floating a line down with a life buoy or sling in order to retrieve persons. Care should be exercised if it is decided to swim a line down. The swimmer must always be attached to a quoit so he/she can be pulled back, but the quoit line must be light enough not to impair his/her swimming abilities. A breeches buoy could be used for transferring several persons in heavy surf.



*A breeches buoy can transfer persons from a stranded vessel.  
(Drawing courtesy of Peter Clissold, Basis Seamanship)*

Grounding can result in structural damage and breach of watertight integrity. It

is a potential pollution event, so monitoring for oil spill (and possibly implementing a containment strategy) is essential. The disabled vessel should not be moved if there is risk that it will subsequently sink in deeper water.

To get a grounded vessel clear may just require awaiting the rising tide to float her off, but dropping an anchor up into the weather will stop the disabled vessel continuing to be driven into shoal ground. A falling tide can be more problematic and requires reducing draught by moving weight (changing trim) or removing weight, or by brute strength in pulling off. Most vessels have greater draught aft than forward, so moving the vessel's crew forward may gain the centimetres needed to refloat her. Heeling a keel boat by flying out the boom or even tugging on a mast head halyard can also reduce draught. In mud, a vessel gets stuck in the suction along her keel. Rocking the boat can sometimes free her.

If these measures prove ineffective then brute strength in towing off may be required. It is usually easiest to reverse it off along the route that the vessel entered. Care must be taken not to heap up sand and mud back towards the tow by excessive prop action.

Sometimes a combination of strategies, including the assistance of the disabled vessel's own anchor and propulsion, is insufficient. When all methods fail it is necessary to enforce an exclusion zone and ensure that the vessel settles down clear of rocks on an even keel to await the next tide. Propping may be required to keep her upright. If she heels and is open to the swell, every effort must be made to ensure the higher freeboard faces the incoming tide as she settles.

### ***Bar Crossing -***

Many rescue squads were founded by local communities to provide rescue across their river bars so this section focuses on rescue specific issues. A full description of bar crossing techniques can be found in the accompanying workbook, "Manoeuvre Small Commercial Vessels".

No size of vessel or experience of skipper can assure safe passage in all conditions. It pays to remember the NSW Maritime Authority's commercial vessels crossing limit of less than two metres swell and twenty knots of wind. That limit is the upper limit marginal conditions, and any experienced skipper should have good reasons to attempt such a bar crossing in any worse conditions. Variation in tide, weather and structure of each bar create individual conditions. Trainees should consult their squad for local knowledge advice, but following observations generally hold true:

*As swells hit a bar they:*

- Slow down.
- Become higher and can break.
- The wavelength gets shortens.

*The best time to cross a bar is:*

- On a run in tide when depth increases and white water reduces.
- At neaps and conditions of low river outflow.
- During offshore winds that flatten the swell, (but increase seas offshore).



*No vessel or experience can assure safe passage in all conditions.*

*Crossing a bar outbound, a typical SOP would include:*

- Pre-departure checks - including trim and loading conditions.
- Proof test - the boat's acceleration and steering performance.
- Lifejackets donned - crew briefed, radio Sop's including crew list.
- A bar assessment - if in doubt, don't go out.

Overloading and over speed are the biggest mistakes made in performance RV's. Take time to properly observe the wave patterns. Avoid breaking waves, look for the 'saddle' of the wave and plan for three waves ahead. They can approach at 20 knots so if you hit them at speed you will become airborne. Setting an outboard trim to keep the bow level will reduce this possibility. As you ride over the crest accelerate to lessen the fall into the trough, but be sure to slow down before reaching the next crest. Repeat this action until out behind the bar. It is best to negotiate waves head on, though some catamarans are more comfortable at twenty degrees. It is unwise for an RV skipper to escort a requesting vessel's skipper (who is not confident to cross unaided) out to sea.

Returning home vessels should assess the bar area and look for a path that will avoid white water and breaking waves. Identify reference points over the river mouth or take a compass bearing because on the bar you can lose sight of it behind the wave in front of you.

*Fast vessels inbound:*

Vessels capable of 20 knots can enter safely by staying within the flat water between the breaking waves. Get onto the back of a swell and stay there as it slows down and builds higher on the bar. Don't run down the face of the wave but don't slow so much that the following wave catches you. If you did your vessel may turn sideways (broach), roll and capsize. Once committed never stop or attempt to turn around.

*Displacement vessels inbound:*

Displacement vessels must batten down as in preparation for heavy weather. All efforts must be made by the best helmsman aboard to avoid the vessel turning sideways (broaching), rolling and capsizing by maintaining the same course as the swell. Once committed never stop or attempt to turn around.

*Towing inbound:*

After a long tow the greatest test on the towline will be in the thick of the bar. Freshening the nip is a wise precaution as is ensuring the towline length is one or two times the wave length on the bar (hence both vessels can both be on the back of their respective waves). A tinny can be towed in fast on one wave, but displacement tows will negotiate a series of overtaking waves risking surfing and broach. The RV is actually quite safe using the tow as a drogue. A timely tug on the towline can pull the tow out of a broach, but the crew must be ready to quick release the towline if she rolls in order to save the RV being pulled down with her.

*Crossing a bar inbound, a typical SOP would include:*

- Pre-bar checks - trim, length of towline and state of chafe.
- Proof test - the maximum tow speed before yaw.
- A bar assessment - crew briefed, wait for best conditions.
- Report back - radio in as per Sop's.

A breaking bar viewed from seaward looks much tamer than the tumble of white water seen from the shore; a fact, coupled with the discomfort of conditions offshore, that often encourages inexperienced visiting vessels to press for the approval and assistance (by a rescue squad) in a risky plan to enter. In poor conditions, despite a genuine wish to assist and relieve, it is generally safer for the visitor to ride out the poor weather offshore, until bar conditions improve.

## **Rescue Scenarios**

Rescue events are formally under the control of a Rescue Coordination Centre that nominates an On Scene Commander. At State level this will normally be the State Police (water police), who is notified by the SARcc or MRU according to SOP's. The first RV skipper to arrive at the incident site, however, will take on the duties and responsibilities of the OSC until relieved. The duties are to:

- Plan -** The rescue with the SARcc or RCC.
- Coordinate -** The rescue plan and find the casualty.
- Sitreps -** Advise the SARcc or RCC of the incident scene.
- Remove survivors -** From danger and report their names and numbers.

The variations of circumstance are many, so the following observations are limited to providing an insight for Trainees on how your skipper may approach a job. Unlike "assists", in rescue events the precaution of verifying agreement to assist voluntarily with no liability is usually inappropriate.

### ***Person in the water -***

A most urgent response is required for these rescues so RV's attending the rescue of persons are relieved from maritime speeding limits, but not of course from operating at "Safe Speed" or civil litigation in the case of damages. At night and restricted visibility the RV must not become the casualty (use the blue strobe light) or to run over the persons in the water (double the lookout).

To pull the deadweight of a person out of the water is not easy. Small inflatable or low freeboard RV's will find difficulty with less than two crew to manhandle survivors aboard. The bow and stern are dangerous boarding areas in violent pitching, leaving the midship as the remaining alternative. With RV's of greater freeboard it will not happen unless bulwark gates, strops or bowlines in a bight, boarding nets, ladders, hoists or hydraulic platforms are available.

The pick up of persons in surf may have to be at speed and timed to coincide with a lull in the swell or a gap between rollers. The opportunity to see hazards such as ropes and flotsam is limited and in the suds even a person can go entirely unnoticed. Whatever the approach, (head to seas or wind is preferable), the propellers must not be turning at the pickup in order to reduce the chance of injury. These driving skills will not be achieved without practice. Most vessels require an approach distance of at least five times their length in order to assess conditions and allow for drift in the final approach. Not being under power, it is easy to under or overshoot or worse still run the person down.

In calm conditions checking for approach hazards at the scene is easier. Large RV's could rig guest warps at their waterline from bow to quarter (allowing survivors to clutch on) and approach so as to create a lee for those in the water. Persons in the water often swim towards the RV as it approaches. This can frustrate the skipper's ability to control the approach manoeuvres as the props create strong currents, sucking in toward the props. Crew should be ready to tell those in the water to wait where they are until the RV comes to them.



*The propellers must be stopped to pick up persons from the water*

*(Photo courtesy of Port Macquarie News)*

### ***Collision -***

Rescue of persons from collision requires the approach hazard reconnaissance and the removal as described above. Conditions can make it safer to keep the persons on board the collided vessels rather than attempt transfers.

The first step when assisting vessels in collision is to ensure that damage control measures are taken. Collision (more than \$100 damage), grounding and fire are all notifiable incidents. This is because of the likelihood of structural damage. You need to check for loss of watertight integrity, close watertight doors and even lash the collided vessels together to reduce water intake. Persons should be moved to the safest platform of the two vessels. The second step is to ensure that other traffic will not add to the disaster by the appropriate use of dayshapes, lights, sound signals in restricted visibility or setting up an exclusion zone. Collisions often result in fire and foundering.

### ***Fire on board -***

Approaching a vessel on fire is a dangerous and unpredictable. RV's are not routinely fitted with fire fighting capability or dedicated fire fighting PPE's. The Skipper's plan will be to pick up survivors (from the water), provide Sitreps, transport and emergency lighting for an Emergency Fire Service back up.

However, a close approach will be needed to pick up survivors and decisive action can quell a small fire. Approaching the vessel into the wind removes the risk of the RV drifting onto the fire, but exposes it to radiant heat, smoke and cinders. The RV's fire pump will be most useful as misting to cool personnel from radiant heat; the deck hose for boundary cooling and extinguishing cinders that drop aboard. Approaching the vessel with the wind risks the RV drifting onto the fire, but reduces radiant heat, smoke and cinders. With the wind behind, the fire hose will have more range to attack the fire. The deck hose may be needed to pump out the bilges of the vessel being filled with water.



*Approaching vessel on fire is a dangerous and unpredictable.*

*(Photo courtesy of US Coastguard)*

### ***Swamping, capsized and founder -***

As with collision, the approach must be vigilant for identifying hazards, (particularly trailing lines with sail boats), in order safely get in and remove persons. Swamping can affect the vessel's stability with many vessels capsizing before sinking.

It is often possible to right small sailing dinghies by the RV approaching the capsized mast head and the crew walking his/her hands down the shroud to pull the craft to the upright. A capsized tinny can be overturned by attaching a main towline to its bow and a second line to the far side of its transom. If the RV tows off briskly with the tinny perpendicular to the towlines, the tinny will be tumbled over by the transom line. A following short fast tow with tension only on the main towline will spill enough of the in flooded water to allow boarding and bailing.

Larger distressed vessels will need damage control measures such as closing watertight doors and pumping out. If the pump is inadequate, other means may be needed. Listing the vessel by moving weights, especially if the damage is near the waterline, will reduce the inflow of water. Any possible material to plug up a hole, including cushions or bedding could also be used. Canvas or sails can be used as a collision mats to drag over the hole and reduce the water ingress so the pumps can cope. If there is damage to the bow, exposing a bulkhead to the sea, then they must be propped as the water pressure on the bulkhead will increase dramatically once the RV gets her under tow.

It is not easy to keep the pumps inlet strainers clear of the debris that collects in a sinking vessel's cabin. Great care should also be taken before entry as the noxious gas chlorine (from batteries contaminated with seawater) collects in the cabin. Pollution from fuel tanks is a certainty following founder and consequently containment needs to be addressed.

### ***Search and rescue -***

SAR is described in the accompanying workbooks, "Assist in Search and Rescue" and "Supervise Response"

## **Supervisors instructions**

### ***3.2 Rescue procedures are conducted in accordance with the supervisor's instructions and organisational procedures.***

The success of the rescue operation depends on each member in completing his/her task toward completing the plan. In the process of briefing, the task and its purpose should be clearly explained and understood. Ask if you are unclear. Your crew are relying on you. In the scenarios of the previous section it can be appreciated that the task as instructed must be performed to avoid jeopardising the safety of the team or the success of the plan.

The confidence that the crew have in each other and their leadership requires an understanding of the reasons behind the decisions taken. This will only be gained by studying the Squad's SOP's, training and participation in de-briefings.

## **Stabilizing casualties**

### **3.3 Casualties are prepared for removal.**

You may have to fish a person out of the water, get them off the bottom of a cliff or transfer them from another vessel. The remoteness of marine incident locations limits paramedic attendance, so rescuers routinely provide emergency care until the casualty can be brought back to shore. Once the dangers at the incident scene are neutralised sufficiently to safely access the casualty then life support is the priority. Duty crews are trained in First Aid EAR and CPR.

**Danger** - check, to you, to others, to the casualty.

**Response** - check is casualty conscious or unconscious?

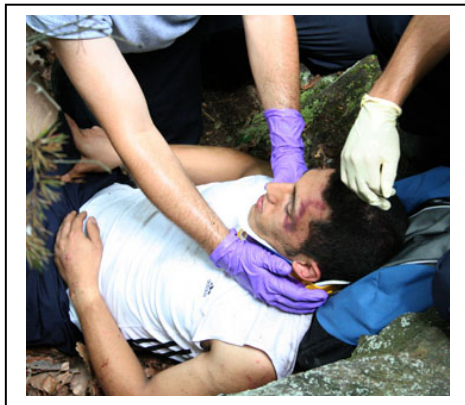
**Airways** - check is airway clear of objects and open?

**Breathing** - check for is chest rising and falling, can you hear breathing?

**Circulation** - check for can you feel a pulse, signs of life?

You may notice bleeding, a suspect broken limb or unusual behaviour. Report all to the Skipper, treat and stabilise as you have been trained in senior first aid, then report again the status of casualty.

Hypothermia must be avoided by the precaution providing a warm situation immediately. Head, neck and back injuries may need specialised care requiring the patient not to be moved if this is at all possible. Puncture wounds may result in uncontrolled haemorrhage if the piercing object is removed. Report such concerns to the Skipper, who can summon appropriate assistance. Keep the casualty informed of the rescue operation and assure them that they will be transported to professional health care quickly.



*Stabilising the casualty for the move.*

Once the casualty has been stabilised by use of splints, neck braces, slings or pressure bandages as are appropriate and are being monitored or treated for shock, you can consult with the Skipper about moving the casualty. Depending of the severity of injuries and the dangers of the location, the following questions must be asked:

***Must the casualty be moved out of danger?***

***Can the casualty be moved safely?***

***How can further injury be minimised?***

***What transportation will be the most suitable?***



A quick conference between the paramedics, SARcc, Skipper and Crew considers the location of the incident, weather, availability of resources and critical time path to determine a workable plan. The crewman's duties are to access the casualty, assess and treat their injuries, assist in preparation for moving and report to the Skipper when the preparations are complete.

## **Removing Casualties**

### ***3.4 Casualty is extricated safely using relevant equipment and rescue techniques.***

The plan to move the casualty will prioritise their well-being. It may be safer to tow the casualty in their vessel to a sheltered stretch of water before transfer or if sinking, an immediate transfer under less duress may be better sooner than later. They may need to be immediately removed from other danger or there is haste to reach professional health care, requiring the assistance of a vessel with the speed and ride for the task. A helicopter may be the only option. Some of many scenarios are outlined below:

#### ***Removing from the water -***

Pulling people out of the water will not happen unless planning has gone into the RV's manning and fit out. Small inflatables can use a timely combination of wave action and rolling aboard. If pick is not immediate, a lifebuoy, life sling or lifejacket should be thrown for temporary floatation. In hard hulls the bow and stern are dangerous boarding areas, leaving the midship as the remaining alternative. Conscious survivors can board with the assistance of ladders, man ropes or boarding nets. It is often easier to pull unconscious survivors on board backwards through the bulwark gate, using the towing strop of their lifejackets. Strops, parbuckles or bowlines in a bight can be hauled by several crewmen in unison. In high freeboard RV's a hoist or hydraulic platform is essential for the unconscious.

#### ***Removing from another vessel -***

Rather than risk vessel collision in heavy seas it can be safer to get able bodied survivors to don lifejackets and swim away from their vessel and recover from the water. The breech's buoy is the classic white water ship to ship transfer equipment, but stretchers are needed for casualties requiring immobilisation. In calm conditions it is possible to pass or winch the casualty direct from ship to RV but sometimes a duckie or life raft will serve best as an intermediate, to be floated over, and the casualty transferred then from it onto the RV.

#### ***Removing from remote coastal location -***

Similar methods to removal from another vessel can be used, bearing in mind the real danger of unobserved rocks close inshore. Usually the Sea Rescue attends such incidents to stand by offshore as a support for access of supplies, lighting and communication while land vertical rescue teams remove the casualty.



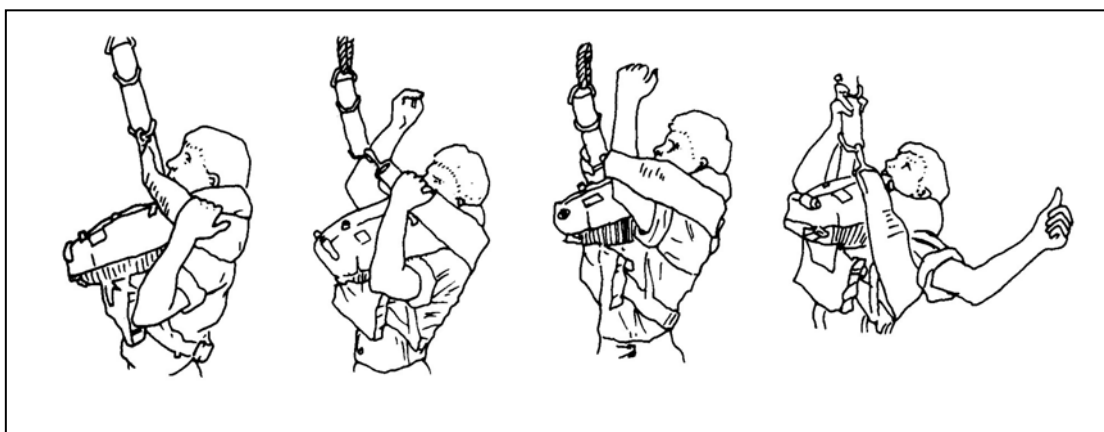
*Immobilising for vertical rescue.*

*(Photo courtesy of SES)*

**Removing by helicopter -**

Removal by helicopter is not a cheap operation and is used only when required and when available. It may take time for the aircraft to reach a remote area, refuel and be on station. The helicopter will have additional problems at night and in poor conditions. However, owing to their unique flying characteristics, helicopters should be considered for use as a rescue unit as a matter of course. The logistical arrangements and planning for such attendance will be negotiated with the Water Police OIC, SARc and the Rescue Helicopters Operations Team.

The helicopter will communicate on VHF Ch 6 or Ch 16. On approach they will make the same hazard reconnaissance of the incident scene as the RV does. They may ask the RV to maintain a heading into the wind, or provide smoke to assist in their hover plan. The helicopter will not allow any chance of ground attachment of their hi-lift wire which could cause them to crash. They often will not want to approach a high masted vessel and may ask for casualties to take to a life raft streamed behind or transfer into an attending inflatable RV. The wire can give a static electrical shock if not dunked in the sea.

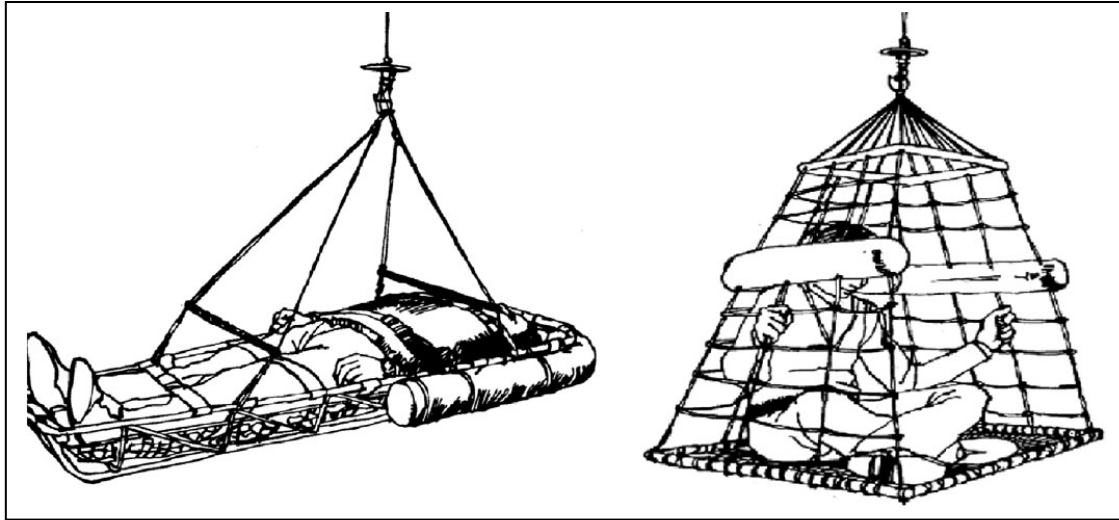


*Attaching a strop for a hi-lift*

*(Drawing Dept Transport Marine Information Manual)*

A thumbs down hand signal indicates you are not ready for the lift; thumbs up that all is ready to go. These same signals are used if a stretcher or basket is

used for the lift. A basket can be used to pick up several persons from the water. Climb in and hold on tight.



*Stretcher and basket.*  
(Drawing Dept Transport Marine Information Manual)

### **Signals by aircraft –**

Aircraft not fitted with radio may signal surface craft to follow them by flying low and circling, throttling back or wobbling their wings to indicate that a distressed vessel is in the direction they subsequently fly. A signal to discontinue would be a similar manoeuvre in the RV's wake.

## **Monitor Incident scene for hazards**

### **3.5 Incident scene is constantly monitored for hazards to prevent injury to self and others.**

During the treatment of casualties the proper use of surgical gloves and avoidance of direct contact with blood or body fluids is essential to reduce the chances of infection.

On a small RV with limited crew it is quite likely that most could become involved with casualties. This will reduce the effectiveness of the RV monitoring its own safety during the operation. There may be able-bodied members of the crew of the vessel in distress, who can assist the RV Team if asked. While the casualty will need monitoring and possibly treatment, some of the continuing other tasks will be:

- Radio watch - take reports and pass on Sitreps for the Skipper.
- Lookout - to avoid traffic or maintain an incident exclusion zone.
- Anchor/mooring watch - to ensure the vessel holds its proper station or

mooring lines and fenders maintain vessel contact for safe transfer.

- Sea watch – to maintain sufficient depth of water under the keel. When the tide is falling, check the sounder and visually watch for uncharted dangers, not evident at high tide.
- Weather watch –to monitor the weather conditions and forecasts that will enable the Skipper to plan for contingencies and the return home.

Once again, the duties of the crew are to report any concerns to the Skipper.

It is unfortunate that occasionally a dead body is recovered. It is important not to upset relatives that may overhear operational communications before being informed officially. During radio traffic that is not secure convention describes bodies as “recovering the package we were looking for”. Similarly body bags should be used before returning to a public wharf.



### **ACTIVITY - PERFORM RESCUE OPERATIONS**

Your Skipper will provide as many opportunities as possible to practice the previous skills during simulated rescue operations or “on the job training”.

Practice activities for this element of competency include:

- Following the rescue procedures in accordance with the team leaders instructions
- Locating and treatment of any casualties
- Treating and preparing casualties for movement
- Safely moving the casualties using available resources
- Monitoring the incident scene for hazards that may cause injury to the team and / or the Rescue Vessel.

Remember to complete your log book.

## 4 - Conclude Rescue Operations

### Recover and maintain rescue equipment

#### ***4.1 Equipment is recovered, cleaned and serviced to organisational standards and manufacturers guidelines.***

Having resolved the incident, landed the casualties and delivered them into the hands of paramedics there is time to address the business of those recovered. This may be to secure the owner's vessel or recovered property, arranging more permanent moorings and overnight accommodation or assistance in accessing repairs. It may be that the seriousness of the incident warrants protecting the scene until the police are able to inspect. This is the opportunity to gather missing details of information for the records and for the de-briefing.

After every use, on return from the job, the vessel and equipment must be cleaned and prepared for the next call out. The accompanying workbook "Prepare, maintain and test response equipment" deals with this more fully, but in summary the tasks are to **clean**, **refuel** and **service**, update the **records** and present **reports**.

#### **Cleaning:**

##### *Moored vessels cleaning internally:*

- Helm throttles and gauges.
- Radar, sounder, GPS, auto pilot, chart plotter, barometer and clock.
- Marine radio/s.
- Chart table, navigator's seat, helmsman seat.
- Radio / radar operator's seat.
- Dinette (where fitted) and seating.
- Main cabin, forward cabin, hatches and doors.
- Walls, ceiling, floors, grab rails, windows and fire extinguishers.

##### *Moored vessels cleaning externally:*

- Fore deck - windscreens, anchor and line, hand rails and deck fittings.
- Side decks - outside of side windows, roof, radar dome and mast, antennas, navigation and signal lights, grab rails and stainless steel fittings.
- After deck - insides of the bulwarks, transom, deck, motor compartment covers, lockers, rope boxes, towing bollard, boarding ladders and platforms.
- Outboard motors - stern drive legs, wash and dry the outside only.
- The hull, wash down, clean and dry.
- Tidy up mooring lines, ensure security.

##### *Trailer vessels cleaning externally:*

Because it is taken clear of the water, you can thoroughly wash down and dry the hull. The trailer must be also thoroughly cleaned, with attention to brakes and road lights to monitor maintain their legal working condition.

## Refuelling & Servicing:

The Skipper or Training Officer will explain the SOP's for the maintenance of rescue equipment.

### *Refuelling:*

If your vessel is permanently moored, there will be a fuel point on a wharf or pontoon. The Skipper will take the vessel to that point and the refuelling will be carried out to risk managed SOP's, limiting the risk of fire and spills. If trailer mounted, you may refuel at the dockside or a private fuel depot that belongs to the Squad. Fuel usage must be monitored and recorded. Diesels may require a fuel additive for maintaining performance.

Standard fire precautions would include caging off the fuel store, provision of ventilation, catch all trays below fuel drums, fire extinguisher and an anti spill and mop up kit. The storage and refuelling zone should be signed for no smoking, naked lights or static electricity sources. Batteries should be turned off and the public access to the site restricted while refuelling.



*The refuelling plan is managed to limiting the risk of fire and spills.*

### *Servicing equipment:*

Guidelines vary with types of equipment. A typical procedure could be to:

- Step 1** Consult Squad Maintenance Procedures.
- Step 2** Take the unit to the cleaning area, and prepared to SOPs.
- Step 3** Service the unit to the manufacturer's guidelines.
- Step 4** Stand to dry.

More thorough checks and repairs may also be required if damage was suspected or sustained. If at this thorough visual inspection a failure or potential for failure is identified, the offending utility should be removed from service, repaired and returned to service quickly. SOP's will also describe the procedure to report lost or damaged equipment.

### **Record Keeping:**

The accuracy of the record keeping has been an important factor in the success of planning and participating in the rescue. Now at its conclusion those records will play an equal part in the internal evaluation (de-briefing), and in the case of a coroners hearing, external evaluation.

As a legal document the logs must be factual (not contain opinion, observations or course language), the date, time, details and author must be identified. If an error is made it must not be erased, but crossed out and initialled. As tempting as it may be to include a humorous comment, this may not be appropriate if the document is later read out in court and may lead to unintended consequences for the squad or the author. Additional scribble notes during incidents must be stored with the logs.

#### *SARcc log, Callout form (Request for Assistance) and Incident report:*

This will record date, time and detail of all communications in and out at the SARcc (radio, phone, fax, email, persons in and out). An SRB incident report form should be forwarded to the NSW Police Marine Command as soon as is practical after the conclusion of a rescue.

#### *RV Vessel log:*

- The date and time.
- The names of all aboard.
- A description of the operation.
- Names of persons or vessel assisted.
- Engine hours.
- Fuel used and taken on.
- A record of start-up and shut down procedures.
- Any emergency drills practised.
- Items that the Master considers worthy of note.

The Skipper may delegate the routine completion of all or part of the log, but is responsible as the named author to check that it is a true record of events.

#### *Running operational log:*

A navigational log of the passage with the details of times, positions and radio traffic. This will be of particular value to state the crews case at de-brief.

#### *First aid book:*

Should include details of injuries and treatment.

It will include the time, date, place, names, contact details and verifying signatures of patient, first aider and witness.

#### *Maintenance log:*

The Maintenance log should show maintenance completed, needed or equipment that has been removed from service for replacement or repair. Performance information of vessels and equipment enables the quality and longevity of equipment to be identified.

Trainees may be tasked to supply some of the data, and enter it under the supervision of the Skipper or his delegate.

**Reports:**

Personal logs, the incident report and other reports such as damaged or lost equipment reports need to be completed. If a formal “Operational Plan” (usual in major rescue) was prepared then details of the response need updating. The Running operational log from the RV will contain the decisions made and their outcomes, the difficulties encountered and their resolution.

**Recognise operational stress*****4.2 Signs and symptoms of operational stress are recognised in self and others and reported to the relevant personnel.***

**Stress** is a common way to describing the pressures people experience in their day to day living.

**Occupational stress** is a build up of tension over time caused by work demands. If an individual does not develop ways of managing this tension, more serious problems can develop.

**Critical Incident Stress** (CIS) is stress from situations or events which causes an individual to have strong emotional reactions. The incident makes overwhelming demands on a person’s coping ability, such that they find it extremely difficult to cope in the short term. Reactions include moderate to high levels of anxiety and apprehension, as well as despair and detachment. Other reactions, such as anger and depression may occur, as well as sleep disturbances, poor concentration, nervousness and feelings of insecurity. People who have been subjected to a critical incident while attending to work or emergency duties commonly report physical discomfort in the form of muscle tension, headache, nausea and indigestion. Most stress can be helped by the understanding and support from those around them; these stress reactions usually pass within a short period of time.

**Post-traumatic Stress Disorder** (PTSD) may develop in some people following a traumatic or a particularly disturbing incident. Even though the incident is over, the strong emotional or physical reactions are not. When these emotional aftershocks (**stress reactions**) occur from remembering the event, an individual may experience a post trauma stress reaction. For some, the incident may be long passed, but the stressful and disturbing memory remains and interferes with that person’s ability to cope. With post trauma stress, the disturbing memory becomes the factor, which triggers the stress reaction.

**PTSD** comprises three groups of symptoms:

- Frequent trauma memories of repetitive thoughts, images, and dreams.
- Staying away from reminders, withdrawal from social interaction, and difficulty responding emotionally to others.
- Heightened arousal, reduced sleep, increased irritability and anger.

In time, the symptoms of **PTSD** disappear in most people, but with some they



can persist. Occasionally, they may appear some time, even years, post-trauma.

### ***Seeking Treatment***

Not all people who experience trauma require treatment. Most are able to recover with the help of peers, family and friends. However, if the event was especially severe, or the person was simultaneously dealing with problems in their life, **PTSD** can become a chronic disabling disorder. It is important that effective diagnosis and treatment is obtained at the earliest opportunity. Survivors may also need professional help to restore well being. A range of health professionals can assist. Help should be sought where the individual:

- Experiences severe problems, which last for more than a month.
- Is constantly on edge or irritable.
- Has difficulty responding emotionally to others.
- Increasingly uses alcohol or other drugs.
- Becomes unusually busy to avoid dealing with issues.
- Has a strong need to share experiences, but no one is available to listen.

**PTSD** is a serious problem needing medical attention. Rather than attempting to treat a colleague, advise the Skipper of the situation and he/she will arrange professional help.

## **De-briefing is conducted**

### ***4.3 Operational de-briefing is conducted and documentation is completed to Organisation Standards.***

The purpose of de-briefing is to arrive at a true picture of what happened, what went well and what needs to be done better in the future. No individual will have “been everywhere” to fully comprehend all aspects of the rescue so it is important that every member of the operation can have their say.

The “Operational Plan” would have been issued at the briefing for a major rescue. It should be returned to the de-briefing, with the SARcc log, Vessel log, running operational logs and other notes useful for an evaluation of:

- The authenticity of the information.
- The effectiveness of communications.
- The adequacy in planning and implementation.
- The effectiveness of the RV Skipper and Crew.
- The performance of vessel, equipment and maintenance.
- Needs for replacement or upgrade of resources
- Needs for further training.

Though an authorised officer may give an interim statement to the media, no opinion can be made on the operation until a de-briefing has established a

consensus of the facts. It is not generally approved that unofficial photos should be taken at incident sites (particularly involving death) and photos are regarded as the property of the Police. Trainees and crewmen are asked not to publicly discuss the matters arising from a de-briefing and should refer those requesting information to their Media Officer.

The completion of the operation requires completion of the statistical reports for forwarding on to Government agencies, more fully described in the accompanying workbook “Briefing and De-briefing”.



### **ACTIVITY- CONCLUDE RESCUE OPERATIONS**

Your Skipper will provide as many opportunities as possible to practice the previous skills during simulated rescue operations or “on the job training”. Practice activities for this element of competency include:

- The recovery, cleaning and servicing of vessel and equipment used in training or on the current operation.
- Describing the symptoms of operational stress in self and others and reporting to the relevant personnel.
- Conducting and participating in a simulated operational de-briefing, and the preparation of documentation to the Organisation’s Requirement.

You should always maintain your Trainee’s Log, in which your activity & experience can be entered and initialled. When you feel confident to undertake an assessment, check with your Skipper for advice. If he/she agrees collect from your TO an “assignment” or “performance checklist”. An Assessor will assess you in your normal workplace (your squad) and provide feedback on your assessment.

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