



Transport
Maritime

BOATING HANDBOOK



A LIFEJACKET NEVER RUINED A DAY ON THE WATER



When you're out on the water an accident can happen suddenly, turning a good day into a mayday. With a wide range of lifejackets available, from comfortable foam to modern inflatable styles, there's one to suit every need. So be safe and wear yours.

Go to www.lifejacketwearit.com.au for more information.

Welcome to the Boating Handbook

While you're enjoying your time on the beautiful waterways of NSW, it's important to keep safety in mind at all times.

This handbook has been produced to help you understand the basic rules for safe and responsible boating in NSW.

Boating safety is a priority for the NSW Government. While the recently released *Boating Incidents in NSW* report shows a gradual decline in fatal boating incidents over the past decade, still too many deaths are occurring which could have been easily prevented if the person was wearing a lifejacket.

In December 2012 I launched a new lifejacket safety campaign which encourages people to always wear a lifejacket when they are out on the water. You'll see it in newspapers, on posters, on billboards and online. The campaign reminds people that modern lifejackets are comfortable, lightweight and can be worn all day without ruining your fun.

No-one expects the unexpected, but it happens every day on NSW waterways. No amount of boating or swimming experience will save your life if you are knocked unconscious, being dragged down by your clothes or paralysed by cold shock.

Keep yourself, your mates and your family safe by always wearing your lifejacket.

Safe boating,

Duncan Gay

NSW Minister for Roads and Ports



Duncan Gay

NSW Minister for Roads & Ports



Lifejacket wear rules introduced in November 2010 apply on NSW waterways, see page 20 for full details.

Beacons have an average battery life of 5-7 years but different models have different life expectancies.

**Do you
know when
your distress beacon
will need a new
battery?**

For safety's sake, Don't leave it too late, Check your battery expiry date.

If your battery has passed its expiry date you have two options:

1. Have your beacon serviced by the manufacturer.
2. Upgrade to a new beacon - AMSA recommends GPS equipped 406 MHz beacons.

406 MHz beacons have their battery expiry date printed on the beacons label.



**www.amsa.gov.au/beacons
1800 406 406**



Australian Government
Australian Maritime Safety Authority

Please dispose of unwanted beacons responsibly,
see your local Battery World store.



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Boat driving licence

The speed at which a boat is driven determines whether a person needs to be licensed.

Any person who is the master of a powered vessel operating recreationally on NSW waters at a speed of 10 knots (18.5kph) or more must have a boat driving licence.

Ten knots is the speed at which most accelerating boats will start to plane – that is rise up and skim on top of the water instead of ploughing through it.

The exception is that anyone who drives a personal watercraft (PWC) at ANY speed must have a PWC Licence.

Types of licence

General Boat Licence

A licence for people aged 16 years and over to drive a powered vessel at 10 knots or more (excluding a PWC).

Young Adult General Licence

A restricted licence for those aged from 12 to under 16 years. A Young Adult licensee must:

1. Be accompanied by the holder of a General Boat Licence when travelling at 10 knots or more.
2. Never exceed 20 knots.
3. Never travel at 10 knots or more after sunset and before sunrise.
4. Never travel at 10 knots or more when towing a person.
5. Not drive in any organised aquatic activity without prior approval from Roads and Maritime Services.
6. Never operate a PWC unless they are the holder of a Young Adult PWC Licence.

Personal Watercraft (PWC) Licence

A special licence is required to drive a PWC regardless of the speed it is driven. Persons who hold a General Licence can upgrade to a PWC Licence at any time. A PWC Licence includes a General Boat Licence.

Young Adult PWC Licence

A restricted licence for those aged from 12 to under 16 years who wish to drive a PWC. The same restrictions which apply to the Young Adult General Licence apply to this licence.

Additionally, a Young Adult PWC Licence holder must be accompanied by a PWC Licence holder on the PWC when operating at a speed of 10 knots or more.

Licence period

A General Licence or PWC Licence is available for one, three or five years. You will save money by selecting a three or five year licence. Young Adult licences are only available for one year and expire on the applicant's birthday.

Licences are initially issued as paper licences, followed by a plastic card. All PWC licences are issued as plastic photo licence cards.

Using a vessel commercially

If you intend using a vessel commercially, different requirements apply. Your vessel may need to comply with specified design and construction standards. It may need to carry safety equipment for a commercial vessel and may require a survey certificate.

While some commercial vessels can be operated using a general boat licence or PWC licence, many commercial vessels require the master and crew to hold a commercial qualification or certificate of competency.



To obtain a certificate of competency you will need to meet minimum sea service requirements, complete approved training and first aid course and meet specified medical and eyesight standards.

Holders of certificates of competency as a master, mate or coxswain are exempt from the requirement to hold a PWC or General boat driving licence.

For further information contact Roads and Maritime Services on (02) 9563 8777 or visit the commercial vessels section online at www.rms.nsw.gov.au.

Obtaining a boat licence

To obtain an initial General or Personal Watercraft (PWC) Licence, applicants must:

- Complete the compulsory General Licence Boating Safety Course and/or the PWC Licence Boating Safety Course;
- Provide evidence of practical boating (logbook) experience; and
- Successfully undertake the General Boat Licence test and/or the PWC Licence test.

The above requirements also apply for initial Young Adult General and Young Adult PWC licence applicants.

The Boating Safety Course(s) must be completed before the licence test(s) can be attempted. However, practical boating experience requirements can be completed at any stage.

Applicants wishing to upgrade their existing general boat licence to a PWC licence are not required to provide evidence of practical boating experience and need only comply with PWC Licence Boating Safety Course and PWC Licence test requirements.

On completion of the Boating Safety Course, practical boating experience and licence test requirements, the relevant boat licence will be issued to applicants on payment of the licence fee.

For more information on how to obtain a boat licence, contact Roads and Maritime Services on **13 12 56** (7 days a week, 8.30am – 4.30pm) or visit our boat licensing section of the Roads and Maritime Services website.

Set out below are the options available to licence applicants on how to comply with the Boating Safety Course, licence test and practical boating experience requirements.

How to comply with Boating Safety Course requirements

Boating Safety Course (BSC) requirements can be met by one of the following methods:

1. By viewing the General and/or PWC Boating Safety Course presentations online.
2. By purchasing online or at any Roads and Maritime Services office, a DVD of the course(s) for viewing at home.
2. By attending a Boating Safety Course conducted by Roads and Maritime Services (www.rms.nsw.gov.au) or Marine Rescue NSW (www.marinerescuensw.com.au).

Regardless of the BSC method selected, a nominal fee applies and the applicant is issued a Certificate of Completion. On presentation of the BSC Certificate of Completion, which is valid for 12 months, applicants can sit the licence test.

How to comply with boat licence test requirements

Both the General and PWC Licence tests can only be attempted following completion of the Boating Safety Course(s) and initial PWC licence applicants must pass the General Licence test before the PWC test can be attempted.



The General Licence test comprises 40 multiple choice questions of which the first 15 must all be answered correctly. Of the remaining 25 questions a minimum of 20 questions must be answered correctly.

The PWC test contains 15 questions of which a minimum of 12 must be answered correctly. A fee is payable for each licence test attempt, which can be sat an unlimited number of times.

Licence tests can be undertaken at a Roads and Maritime Services registry or maritime service centre or a Government Access Centre. If you attend a Government Access Centre you must present or send your stamped application form, together with your certificate of completion and completed logbook, to a Roads and Maritime Services office.

When attending for a licence test, applicants must provide the BSC Certificate of Completion and acceptable Proof of Identity.

Young Adult Licence applicants must be accompanied by a parent or legal guardian who must provide acceptable proof of identity.

PWC Licence applicants must provide two passport acceptable photographs.

How to comply with practical boating experience requirements

Practical boating experience can be gained by completing a Boating Licence Practical Logbook.

Initial general and initial PWC licence applicants must undertake, in the company of an experienced skipper, a minimum of three trips in a powered vessel (excluding PWC), and under power.

An experienced skipper is a person who holds, as a minimum, a valid NSW or interstate General Licence and has held the General Licence for at least three years. Young Adult Licence holders are not considered experienced skippers for this purpose.

The vessel used to undertake practical experience must carry the prescribed safety equipment and be fitted with appropriate lights if undertaking optional night time navigation.

Details of each trip must be recorded in the logbook and be verified by the experienced skipper. The applicant and the experienced skipper must also confirm that all elements relating to practical experience competencies, as listed in the logbook, have been covered by initialising each element.

The logbook is available free of charge from any Roads and Maritime Services office and Government Access Centre or by download from www.rms.nsw.gov.au.

Only trips undertaken within the 12 months prior to the issue of a boat licence will be recognised for the purpose of satisfying practical experience requirements.

Alternative methods to obtain a boat driving licence

The following two options are available as alternative methods to obtain a boat driving licence:

1. Completion of a General and/or PWC Boating Education and Training Course conducted by a Roads and Maritime Services accredited Recognised Training Provider (RTP).

On completion of the course/s (including the licence test/s), successful applicants are issued a Certificate of Completion.

The compulsory practical boating experience requirement can also be undertaken with an RTP, or the applicant can choose the logbook option.

Fees and conditions apply to attend a Boating Education and Training Course and to undertake the practical component.

A list of accredited RTPs with direct links to their websites is at www.rms.nsw.gov.au.



2. Successful completion of one of the following Yachting Australia (YA) courses:

- National Powerboat Training Scheme.
- National Yacht Cruising Scheme.
- National Motor Cruising Scheme.

YA courses are recognised as satisfying the full requirements (including the practical component) for the issue of a General Licence. Certificates of completion issued by an RTP or YA are only valid for 12 months from the date of issue.

Other qualifications may be recognised – please call **13 12 56** for more information.

When applying for a licence

- An applicant must provide acceptable Proof of Identity documentation before sitting a test.
- Young Adult Licence applicants must be accompanied by a parent or legal guardian when sitting the test. Proof of Identity of the parent or guardian is also required.
- PWC Licence applicants must provide two colour passport acceptable photographs (light background). PWC Licences are plastic photo cards.
- An applicant must complete a licence application form, declare any medical condition or physical disability which may affect their ability to safely operate a boat, meet eyesight standards and pay the appropriate fees.



REMEMBER



You must carry your licence when doing anything for which the licence is required, and produce it for inspection when requested by a Roads and Maritime Services officer, a Police officer or other authorised officers.

Owners of vessels must be able to identify the person driving their vessel at all times, even if the owner is not onboard at the time.

Licence holders and owners of vessels should promptly notify Roads and Maritime Services of any changes to personal details or address, or penalties may apply. Licences sent to the wrong address can be cancelled and a reinstatement fee charged.

If your licence is not renewed within five years of its expiry date you will need to complete the entire licence process again.

Proof of Identity

To ensure the accuracy of records, applicants must provide acceptable Proof of Identity (POI) when conducting a business transaction. Except for PWC licences, POI is not required for renewal of products.

POI documents must be original or certified copies and POI requirements can be met by providing a NSW Photo Driver's Licence and, for young adults, an Australian Full Birth Certificate.

For a full list of acceptable POI documents view the Proof of Identity brochure on our website or telephone **13 12 56**.



Boat registration

Registration of vessels

The information contained in this section is provided as a guide only. For more detailed information telephone **13 12 56**.

A person must be at least 16 years of age to register a vessel in NSW. The following vessels must be registered in NSW when occupying NSW navigable waters:

- Any commercial vessel.
- Power-driven vessels that are powered by an engine with a power rating of 4.0 kilowatts or more (as a guide, 4.0kw is approximately 5hp).
- Any power-driven or sailing vessel of 5.5 metres or longer.
- Every vessel subject to a mooring licence or marina berth.
- Personal watercraft (PWC).

Note: Exemptions may apply.

Transfer of registration

On sale of a registered vessel, the seller must complete the transfer and notice of disposal sections of the registration certificate and forward the notice of disposal to Roads and Maritime Services within 21 days of the date of sale.

The transfer section must be given to the buyer, who must apply for transfer within 21 days of the date of purchase, otherwise penalties may apply.

Registration label

A registration label will be forwarded separately on payment of the annual registration fee. This must be affixed to the exterior of the vessel on the port (left) side of the hull where it is clearly visible.


On sailing vessels it must be affixed to the transom or port side.

Registration numbers

Registered vessels must display at all times their registration number on both sides of the hull in figures at least 150mm high (100mm for PWC and sailing vessels).

Sailing vessels may display the registration numbers on the transom.

The registration numbers/letters must be in a contrasting colour to the hull, solid characters (not outlines), in a clear font or style and displayed in upper case so they can be clearly identified.

 **NOTE:** Both the registration label and number are to be removed from the vessel if registration is cancelled.

Australian Builder's Plate (ABP)

Most vessels built from 1 July 2006, including imported vessels, must have an ABP affixed prior to initial registration. Displaying an ABP does not exempt vessels from the regulatory HIN requirement (see the following section).

There are two types of ABP, one for vessels under 6 metres and one for vessels over 6 metres and the plate must be permanently affixed in a position where it is clearly visible.

An ABP enhances the safety of passengers by providing key safety information that includes:

- Engine power rating and weight;
- Maximum person capacity;
- Maximum load capacity;
- Buoyancy characteristics (for vessels under 6 metres); and
- Warning statements.

Hull Identification Number (HIN)

The HIN system (or Boatcode) facilitates the identification of vessels through the affixing of a unique identifying number and provides benefits that include:



- The expansion of the Register of Encumbered Vehicles (REVS) to include vessels; and
- A numbering system that deters vessel theft and assists in the recovery of stolen vessels.

Boatcode is compulsory:

- For new vessels prior to initial registration.
- On transfer of registration where the vessel has not previously been affixed with a HIN.
- For second-hand vessels being registered for the first time.

Prior to purchasing a second-hand vessel, prospective buyers should contact REVS on **13 32 20** between 8:30am and 5:00pm weekdays and 9:00am and 2:00pm Saturdays.

Choosing the right boat

Boats are designed and built for different purposes. There are different hull shapes to suit different water conditions and loads. Before you use or obtain a boat, do some research and talk to other boat operators, manufacturers and retailers and consider the following questions.

What size boat do you need?

The right size boat will depend on the number of people you intend to carry, the amount of equipment, provisions and goods you intend to load into it, as well as the type of water conditions you expect to experience.

What will the boat be used for?

Fishing? Cruising? Water-skiing? Sailing? The design, construction, stability, flotation and maintenance will all be factors in the safety and performance of your vessel.

Where do you plan to go boating?

Boats designed for use on inland or sheltered waters are not usually suited for use in open waters or along the coast where waves are larger.

What engine power does the boat need?

Boats have both minimum power needs and maximum power limitations. Don't overpower a boat to gain more speed – a bigger engine may be unsafe by unbalancing the boat and lowering the freeboard. It is an offence to fit an engine that exceeds the manufacturer's specifications.

Is the boat fitted with built-in buoyancy?

Boats fitted with appropriate internal buoyancy, such as foam, will remain afloat when capsized or swamped. This improves the chances of rescue and survival in the event of an incident, particularly in isolated areas or offshore.

Most boats built on or after 1 July 2006 must have an Australian Builder's Plate attached which gives safety information including buoyancy performance.

Buying a second-hand boat

Buying a second-hand boat can be a good way of getting into boating. While the price of a second-hand boat should reflect its condition and specifications, extra care is required.



















Unless you are experienced or specially trained it may be a good idea to get a person with appropriate marine knowledge to conduct an assessment before you make any decision to buy a second-hand vessel.

Get to know Marine Rescue NSW

Marine Rescue NSW is the State's volunteer marine rescue organisation and provides boating safety education, marine radio communications and emergency search and rescue services for recreational boaters. Get to know how Marine Rescue NSW can help make your boating safer and more enjoyable. To locate your local base, visit www.marinerescuensw.com.au.



SAFETY EQUIPMENT

Safety equipment table – to be carried on board		Enclosed waters	Open waters
Symbol	Item	Quantity	Quantity
	Lifejacket type: 1 (level 150 or 100); 2 (level 50); 3 (level 50S)	1 per person*	
	Lifejacket type 1 or level 150 or 100		1 per person*
	Anchor and chain/line	1	1
	Bailer/bucket (vessel with open bilges) or bilge pump (vessels with covered bilges)	1 1**	1 1**
	Compass (magnetic)		1
	Distress signal – orange smoke hand-held distress flare		2
	Distress signal – red hand-held distress flare		2
	EPIRB – 406MHz (required if two nautical miles or more offshore)		1
	Fire bucket (if no bailing bucket carried suitable for fire fighting)	1	1
	Fire extinguisher (vessels with electric start, electric motors, battery, gas or fuel stoves)	1**	1**
	Map/chart of area (paper not electronic)		1
	Marine radio (required 2 nautical miles or more offshore)		1
	Paddle or oars/rowlocks in vessels under 6m unless a second means of propulsion is fitted	1	1
	Safety label	1	1
	Sound signal (air horn/whistle/bell)	1	1
	V sheet (orange)		1
	Water (suitable for drinking)		2L per person
	Waterproof torch (floating)	1	1

* Lifejackets must be suitable for the intended wearer, in good condition, accessible, and inflatable units serviced at least every 12 months (or at longer intervals in accordance with manufacturer's instructions).

** Additional bilge pumps and fire extinguishers may be required for larger vessels.



NOTE: This table does not include lifejacket wearing requirements – refer to table on page 20.

**NAVIGATION LIGHTS MUST BE DISPLAYED BETWEEN SUNSET
& SUNRISE & DURING TIMES OF RESTRICTED VISIBILITY**



Modified requirements

Canoes/kayaks	Exempt from carrying safety equipment on all waters, but hand-held marine radio or mobile phone in waterproof pouch strongly recommended.
Sailboards	Exempt from carrying safety equipment on all waters.
Kiteboards	Exempt from carrying safety equipment.
Racing shells, surf rescue boats, surf boats and surf skis	Exempt from carrying safety equipment.
Rowboats, dinghies, small unpowered inflatable boats	Exempt from carrying safety equipment on enclosed waters if the vessel is: <ul style="list-style-type: none"> • less than 3m in length; and • not a tender; and • not carrying an engine or fuel; and • not more than 200m from nearest shore; and • operating between sunrise and sunset; and • built so as to float if swamped or capsized.
Other inflatable boats (if under 5m, built to stay afloat if swamped or capsized and not used as a tender).	Exempt from carrying anchor and line, bailing bucket, fire extinguisher and torch when in enclosed waters or in open waters less than 400m from shore between sunrise and sunset only. Exempt from carrying the above items plus flares and map or chart when in open waters between 400m and 2 nautical miles from shore between sunrise and sunset only.
Tenders	Exempt from carrying other safety equipment if the vessel carries a paddle or oars, a waterproof torch if operating between sunset and sunrise, a bucket, bailer or bilge pump.
Sailing vessels	<ul style="list-style-type: none"> • If less than 6m in length and in enclosed waters is not required to carry an anchor. • Not required to carry bucket/bailer if it has a permanently enclosed self draining hull. • When engaged in organised sail training, is not required to carry safety equipment if a power driven vessel capable of use for rescue purposes is in attendance. • Not required to have a Safety Label.



NOTE: This table does not include lifejacket wearing requirements – refer to table on page 20.

NAVIGATION LIGHTS MUST BE DISPLAYED BETWEEN SUNSET & SUNRISE & DURING TIMES OF RESTRICTED VISIBILITY



SAFETY EQUIPMENT

Modified Requirements – continued

Off the beach vessels (means an unballasted, sail-only vessel, including centreboard dinghy, windsurfer, skiff or multihull vessel, but not including a vessel with a cabin or a fixed keel)

Not required to carry safety equipment if the vessel does not have sufficient storage room.

Dragon boats/outrigger canoes

For more information on safety equipment requirements please refer to Schedule 5, Part 2 of Marine Safety (General) Regulation 2009.

PWC

Exempt from carrying safety equipment. For tow-in surfing the PWC must be equipped with: a rescue sled, second kill switch wrapped around the handlebars, two-way communication device, dive fins, safety knife, tool kit, quick release floating tow rope with a minimum length of 7m, bow tow-line with a minimum length of 7m.



NOTE: This table does not include lifejacket wearing requirements – refer to table on page 20.

**NAVIGATION LIGHTS MUST BE DISPLAYED BETWEEN SUNSET
& SUNRISE & DURING TIMES OF RESTRICTED VISIBILITY**


the **SYDNEY** international
BOATSHOW

1-5 August 2013
Sydney Convention and Exhibition Centre
& Cockle Bay Marina, Darling Harbour


Proudly owned & organised by Boating Industry Association

www.sydneyboatshow.com.au www.bia.org.au



Lifejackets

Lifejackets are the most important piece of safety equipment on any recreational vessel.

A lifejacket must be carried for each person on board all vessels, unless exempt. It must be the correct size for the wearer and in good working condition. But it can't save your life unless you're wearing it.

Penalties may apply to the owners and masters of vessels found not carrying lifejackets, or if there are not enough lifejackets for everyone on board. Penalties may also apply if occupants are not wearing lifejackets when they are required to do so.

More importantly, **if you are not wearing your lifejacket, it cannot save your life.** Between mid 1999 and December 2011, only 15 of the 221 people killed in boating accidents in NSW were wearing lifejackets. Many could have survived, had they been wearing a lifejacket.

For more information about lifejackets visit www.lifejacketwearit.com.au



Types of lifejackets

There are 3 main types of lifejackets, all built to different standards of buoyancy and purposely designed for different kinds of marine activities. Roads and Maritime Services sets out the types of lifejackets required in various situations here.

All lifejackets used in NSW must comply with an accepted Australian or International Standard and if the lifejacket complies to a standard, this will be stamped on the label. If there is no stamp, don't buy the lifejacket.



Keep a record of the expiry dates for Type 1 inflatable lifejackets and follow the manufacturer's instructions for regular servicing.



Type 1 Lifejacket

Also known as a Level 150 or Level 100 PFD

These provide the highest level of buoyancy and are designed to keep the wearer's head above and out of the water when unconscious. They provide the greatest performance and are mainly used when boating in open waters and alpine waters. There are two kinds of type 1 – those with fixed, in built buoyancy and those which are inflated by manual activation, or when the lifejacket comes in contact with water.



Type 2 Lifejacket

Also known as a Level 50 PFD

These are buoyancy vests that are not designed to keep the wearer's head above and out of the water, but are made using high-visibility colours and in comfortable styles. They are mainly used when boating in more sheltered areas such as enclosed or inland waters.



Type 3 Lifejacket

Also known as a Level 50 S PFD

These are buoyancy vests with the same overall buoyancy as a type 2 lifejacket, however they are not required to be made in high-visibility colours. This makes them popular for use in aquatic sports such as wakeboarding and waterskiing, where comfort and style are important.



Type 1 Inflatable Lifejacket

These lifejackets are built to the same buoyancy standards as traditional type 1 lifejackets but rely on CO₂ for inflation. This means they are lighter and less cumbersome than conventional foam lifejackets and are quite versatile – they're even made as wet weather jackets and windproof vests.

While inflatables are great because they are comfortable to wear, boaters should be particularly aware of the added maintenance requirements that come with this style of jacket as well as the need for detailed crew and passenger briefing on their operation.

Inflatable lifejackets must be serviced at least every 12 months or at longer intervals in accordance with the manufacturer's instructions. Note: For new inflatable lifejackets this period commences from date of purchase.



As lifejackets spend much time in a harsh boating environment where they are often subject to heat, sun and salt, they are easily subject to damage. Roads and Maritime Services requires inflatable lifejackets to be serviced at least annually, unless the manufacturer specifies and permits a longer period. Note: For new inflatable lifejackets the servicing period commences from date of purchase.

Keep all servicing receipts and certificates of servicing as documentary evidence of the service occurring. Failure to do so makes verifying servicing impossible and you could be in breach of the safety equipment requirements.

Keeping a safety equipment log for your vessel is a good way to record replacement. Roads and Maritime Services can also provide automatic reminder notices by Email to remind you when your gear needs to be serviced or replaced, call 13 12 56 or visit www.rms.nsw.gov.au/alerts/alert.html to set one up now.

Servicing inflatable lifejackets

The emergence of affordable, comfortable and stylish lifejackets is a major step forward in boating safety. Inflatable lifejackets are growing rapidly in popularity because of their convenience and affordability. One aspect of inflatables that boaters are often unaware of is the need to regularly service them.



Manufacturer's servicing

Some manufacturers require you to have your lifejacket serviced by them or by their authorised agent. This will ensure that the jacket is in good working order and functions properly. When the jacket is serviced, checks will be carried out to ensure the bladder, reflective tapes, buckles and straps are in working order, and that the inflation system and oral inflation tube are operating correctly. Contact the manufacturer or the place of purchase for further details.

Self servicing

Other manufacturers allow you to 'self service' your lifejacket, provided you do so in accordance with their instructions.

If the manufacturer allows self servicing you should be competent to do so, otherwise we recommend you get it serviced professionally.

This is a higher level of inspection and replacement of parts that exceeds 'self maintenance'

If you are self servicing, follow the manufacturer's instructions carefully and make sure the recharge kit matches your jacket. An example of one of the manufacture's self servicing instructions is here. If there is a service record in the inside of the jacket, sign and date the service record with a permanent marker. If not, make a paper record of your own and keep a copy handy on board the vessel.

Self servicing is only valid if the manufacturer allows it and if you keep all servicing receipts and certificates of servicing as documentary evidence of the service occurring. Failure to do so makes verifying servicing impossible and you may be in breach of safety requirements.



Step by step guide on how to self check your inflatable lifejacket



Step 1

Check for visible signs of wear and damage. Ensure all fastenings and buckles are in good working order.

Step 2

Following manufacturer's instructions, reveal the inflation system and oral inflation tube. Inflate bladder using oral tube and leave overnight in a room with constant temperature. If bladder loses pressure, immediately take jacket to an accredited service agent for further tests. Do not attempt to repair jacket yourself.

Step 3

Use cap attached to the oral inflation tube to deflate bladder. Invert cap and press down on valve at the top of the oral tube. Do not insert other objects into top of tube as they may damage the valve. Roll or press jacket to deflate fully.

Step 4

Remove CO₂ cylinder and inspect. The cylinder should be intact with no rust or corrosion. Weigh cylinder on kitchen or letter scales, ensure weight corresponds to the minimum gross weight engraved on cylinder $\pm 2g$. If cylinder is rusted, corroded, has been pierced or is not the correct weight it should be replaced immediately. On auto inflation jackets also ensure auto components are armed and in date. Refit cylinder to inflation system, tightening it by hand until firm. Do not over tighten.





Step 5

Repack jacket as per manufacturer's instructions. Ensure manual inflation toggle is accessible and unlikely to be caught when being worn.



Style

There are now many different brands on the market so it is important to choose one that suits your needs. Whether it is a jacket or vest, a yoke or a belt bag inflatable style, ensure you read and understand all the instructions. Familiarise yourself with the inflation procedures and the care required for your jacket while not in use.

Manual or automatic inflation?

This will depend of what you are most comfortable with and in what circumstances the jacket is being used. The benefit of an auto inflating jacket is that as soon as the inflation mechanism gets wet the jacket will inflate, whereas a manual jacket's CO₂ inflation is only activated by hand.

Poor swimmers may be more comfortable with an auto jacket, but remember a large amount of spray may activate the jacket while on deck. It is recommended that non swimmers and children under 12 years of age do not wear an inflatable. It is also strongly recommended that inflatable lifejackets not be worn on personal watercraft (PWC).

What if my inflatable has been activated?

Once activated, the CO₂ cylinder is pierced and cannot be used again. On an auto jacket, auto components may also need to be replaced. Cylinders and auto components are available from dealers, but it is wise to have spares on the boat or in the garage just in case.





What lifejackets must I carry on my boat?

It is a legal requirement that most recreational vessels in NSW must carry an appropriate size and type of lifejacket for each person on board. They must be stored or placed to allow quick and easy access. Lifejackets must be either visible to passengers or their location clearly marked by an unobstructed and clearly visible sign saying LIFEJACKETS (red lettering on a white background). Stickers are available free.

LIFEJACKETS

Open (ocean) waters (including crossing ocean bars)

Unless there is a requirement that a lifejacket must be worn, a lifejacket Type 1 must be carried for everyone on board for all vessels except Outrigger Canoes which are permitted to carry a lifejacket Type 1, 2 or 3.

Enclosed waters (excluding alpine waters)

Unless there is a requirement that a lifejacket must be worn, a lifejacket Type 1, 2 or 3 must be carried.

Alpine waters

Unless there is a requirement that a lifejacket must be worn, a lifejacket Type 1 or 2 must be carried.

When must lifejackets be worn and what type of lifejacket can be worn?

On 1 November 2010, new compulsory lifejacket wearing requirements came into effect. Lifejackets are required to be worn in the circumstances shown overleaf, along with the type of lifejacket that can be worn.





What lifejacket am I required to wear on my recreational vessel?

Boating activity/Vessel type	Situation	Lifejacket options
Children under 12 years of age	<ul style="list-style-type: none">At all times in a vessel under 4.8 mWhen in an open area of a vessel 4.8m to 8m that is underway<ul style="list-style-type: none">On enclosed watersOn open (ocean) watersOn alpine waters	Type 1, 2 or 3 Type 1 Type 1, 2 or 3
On all boats less than 4.8m (unless specified below)	<ul style="list-style-type: none">All occupants on enclosed waters when:<ul style="list-style-type: none">Boating at nightBoating alone*At all times on open watersAt all times on alpine waters In addition to the above: <ul style="list-style-type: none">At all times if the vessel is being used more than 200m from the shore to transport persons or goods between the shore and a vessel, or between vessels.	Type 1, 2 or 3 Type 1, 2 or 3 Type 1 Type 1, 2 or 3 Type 1, 2 or 3
All towing	Anyone being towed at all times on all waters	Type 1, 2 or 3
Canoes and kayaks	<ul style="list-style-type: none">On enclosed waters more than 100m from shoreOn open waters at all timesOn alpine waters at all times	Type 1, 2 or 3 Type 1, 2 or 3 Type 1, 2 or 3
Off the beach sailing vessel (e.g. catamaran & centreboard boats)	All occupants on open and alpine waters at all times	Type 1 or 2
Sailboarding	When more than 400m from shore: <ul style="list-style-type: none">On enclosed watersOn open and alpine waters	Type 1, 2 or 3 Type 1, 2 or 3
Kiteboarding	<ul style="list-style-type: none">On open waters when more than 400m from shore & kiting aloneOn Alpine waters when more than 400m from shore & kiting alone	Type 1, 2 or 3 Type 1, 2 or 3



Boating activity/Vessel type	Situation	Lifejacket options
PWC (jetski)	<ul style="list-style-type: none"> On enclosed waters at all times On open and alpine waters at all times Tow-in-surfer on open waters 	Type 1, 2 or 3 Type 1, 2 or 3 Type 1, 2 or 3
Crossing coastal bars	All vessels, everyone on board	Type 1**
Skipper's responsibility	<ul style="list-style-type: none"> When the skipper considers a "heightened risk" situation exists: <ul style="list-style-type: none"> On enclosed waters On open and alpine waters 	Type 1, 2 or 3 Type 1 or 2

* 'Alone' means:

I) solo

II) with one or more people aged under 18 who are not the holder of a boat licence

III) the person's vessel is not near other vessel(s) that are not able to render immediate practical assistance in an emergency.

** Unless specified elsewhere in this table.

Other essential equipment

Anchors

Choose the right size and type of anchor for your vessel and the nature of the sea bed. For example, an anchor designed for rocky bottoms may not hold in sand or mud.

Bilge pump

Vessels with covered bilges are required to be fitted with a bilge pump, which should be protected by a strainer to prevent choking of the pump suction.

Bucket

Depending on the size of the vessel, at least one solidly constructed bucket of metal, robust canvas or plastic must be carried with lanyard attached. It is useful as a safety item for both bailing water out and fighting fires.

The bucket can also be used as a sea anchor.

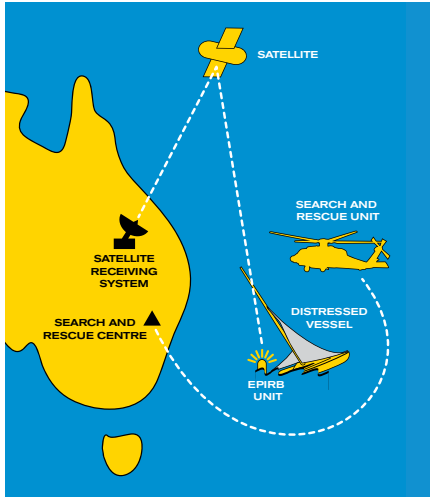
Compass and chart

Any boat being operated offshore is required to have a compass. Even if your boat is fitted with satellite navigation equipment, a good marine compass will indicate the course back to shore if the electronic equipment fails, or rain, fog or sea haze obliterates the land from view.

An appropriate chart or map that identifies prominent shore marks and offshore reefs and shoals is also required on all vessels offshore. Charts and maps help to determine your position, which can be of particular importance in an emergency.

GPS (Global Positioning System) receivers are becoming increasingly popular as a navigation aid but should never be relied on as the sole source of information regarding your position and course. Always carry a chart and check your position visually, and never navigate solely on the basis of the GPS at speed or at night.

Boating maps are available from Roads and Maritime Services offices and service centres or from www.rms.nsw.gov.au.




EPIRB

An Emergency Position Indicating Radio Beacon (EPIRB) suitable for marine use, must transmit on 406 MHz and conform with all relevant standards. A 406 MHz EPIRB only complies if it conforms with Standard AS/NZS 4280.1 (It is the “1” which indicates compliance).

Any 406 MHz EPIRB **must be properly registered** with the Australian Maritime Safety Authority (AMSA) and have an AMSA registration sticker affixed.

A 406MHz EPIRB is a simple and effective alerting and locating device that is compulsory for all vessels operating more than two nautical miles from the shore. It is also recommended for all vessels operating in remote locations or areas of high risk. The EPIRB should be accessible but stowed to avoid inadvertent activation. Do not stow the EPIRB in the bottom of a locker.

 **NOTE:** A Personal Locating Beacon (PLB) does not qualify as a replacement for a 406 MHz EPIRB. It may be carried in addition to an EPIRB as an extra safety precaution.



Fire extinguisher

Fire extinguishers carried must be appropriate for the type of fuel carried on board the vessel.

Flares

Flares signal that you are in trouble and provide an exact location for searching aircraft or vessels. Ignite them only when rescuers are in view and can spot your flare.

A minimum of two red hand flares (for night or day use) and two orange smoke flares (for day use) are required to be carried on all vessels operating offshore, although some exemptions may apply.

You should be able to locate and ignite the correct flare in total darkness.

Most flares have a use-by date of three years and they must be replaced before the expiry date. Penalties apply.

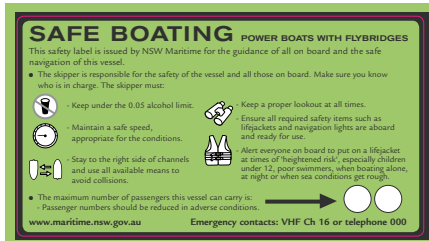
 **NOTE:** It is an offence to set off flares except in an emergency.



Paddle or oars/rowlocks

Oars and/or paddles must be carried on most vessels under 6 metres in length unless a second means of propulsion is fitted.

Owners of larger vessels should consider some means of auxiliary power as an effective safety device.



This label replaces the previously issued NSW Maritime 'Capacity Plate' and must be affixed in an area of the vessel where it can best be seen by the vessel Master, crew and passengers.

Safety Label

A Safety Label, which replaces the previous Capacity Plate, must be displayed clearly on all powered vessels (except PWC) regardless of whether the vessel is fitted with an Australian Builders Plate (ABP).

The label must be placed where it can be seen by the skipper and all persons onboard the vessel.

The label indicates the maximum number of people to be carried on a particular vessel, as well as important safety information.

The capacity is determined by the ABP, the manufacturer or, if not specified, by the table on the reverse of the Safety Label.

Safety labels are available from Roads and Maritime Services centres.

The maximum number of persons for good conditions is shown. A reduction in the maximum number must be made in adverse weather conditions or when on open waters. If not, the master may be guilty of negligent navigation.

In determining whether your vessel complies with the capacity limits, the following applies:

- Children up to one year of age are not counted (although you still require safety equipment for them).
- Each child between the ages of one and 12 years equals one half of an adult.
- Capacity of a person is assessed at 75kg per person with an additional allowance of 15kg per person for personal gear.

Sound signal

You must have some means of providing a sound signal, such as an airhorn, whistle or bell.

“V” sheet

The V sheet is a fluorescent orange-red coloured sheet (1.8 x 1.2 metres) with a large black V printed in the middle.

V sheets are required to be carried by all vessels operating on open (ocean) waters. They can be spread over the deck of a boat or flown as a flag to indicate that you are in trouble.



Waterproof floating torch

A floating waterproof torch must be carried on all vessels at all times. A torch is a valuable safety device for signalling, for use as a navigation light on small vessels at night and when working on the engine.

Spare bulbs and batteries should be carried.



Other recommended safety equipment

First aid kit

It makes good sense to carry a complete first aid kit aboard, appropriate to the size of the boat.

Tool kit

Although not part of the safety equipment requirements, every vessel should have a tool kit. The basic items in a tool kit include a spark plug spanner and spark plugs (for petrol engines), small spanner, pliers, phillips head and standard screwdrivers, spare fuel line, electrical wiring, insulation tape and a can of water repellent.

Care of equipment

Safety equipment is generally durable and long lasting. Keep small, storable items like flares, "V" sheet, EPIRB, torch and other bits and pieces in an accessible, sealed, waterproof container.

Make sure items like the radio and fire extinguisher are protected from saltwater.

You must look after your lifejackets – don't use them as cushions or fenders and keep them away from oil and fuel. Ensure they are accessible in a dry, well ventilated area and let everyone on board know where they are.



NOTE: Remove new lifejackets from their plastic.

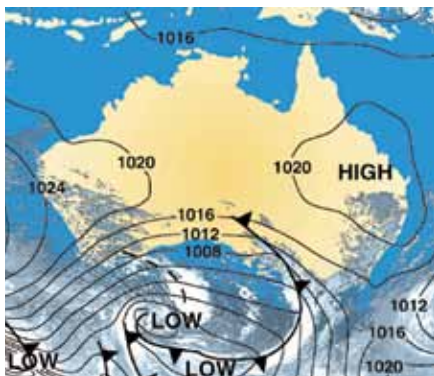


Children under 12 must wear a lifejacket at all times in smaller craft (see table on page 20)



Before you head out on the water consider these simple tips to assist in trouble free boating:

- Check that your boat is in good condition.
- Check that you have all the required safety equipment on board. Ensure all safety equipment is in good condition and easily accessible in the event of an emergency and everybody aboard knows its location.
- Report your trip. Let someone know where you are going, how many people are on board and when you intend to return.
- Make sure you and your crew know how to handle the boat, especially on the waterway that you're using. If in doubt, get information from locals or Roads and Maritime Services.
- Check the weather before you go out. Register for a Maritime Alert system based on official weather data.
- Make sure you have sufficient water and fuel for the duration of the trip.
- Go easy on the drink – waves, wind and weather multiply the effects of alcohol. Far too many boating fatalities involve alcohol.
- If crossing a bar, log on to view live web camera footage for a number of coastal bars in NSW at www.rms.nsw.gov.au.



Weather

Before heading out in your boat, check the weather forecast. Once on the water, it is important to monitor regular weather reports, especially if changes are predicted. The movement of fronts is sometimes difficult to forecast and the predicted time of arrival may be revised.

The Bureau now provides forecast maps and tables as well as the worded forecasts. The maps display the forecast wind and wave conditions across the coastal waters zone. Point and click on the map to see the forecast for that point. Visit www.bom.gov.au/forecasts/graphical/marine/nsw/.

Warnings for strong winds (winds averaging 25 to 33 knots), gale force winds (34 to 47 knots) and storm force (48 knots or more) are issued when necessary and updated every six hours.

Special messages are included in coastal waters forecasts when waves are expected to break dangerously close inshore. For details visit www.bom.gov.au/marine/about/dangerous-surf-messages.shtml.

The Bureau of Meteorology (BOM) broadcasts forecasts and warnings on HF radio bands, via voice and fax.

☛ Warnings are available by phoning 1300 659 218 or checking the BOM website www.bom.gov.au/marine for information.

A number of organisations also broadcast this information on marine band radios (27 MHz, VHF and HF bands) at regular intervals or on request. They include Sydney Ports and Marine Rescue NSW.

Roads and Maritime Services provides forecasts on phone 13 12 36 or our website, www.rms.nsw.gov.au, which also includes information from a number of coastal bar cameras.

See www.bom.gov.au/marine/ for full details.



Keep in touch

Communicate

Tell someone:

- Where you are going.
- How many people on board.
- When you will return.

Log on

Use your marine radio to log on with a coastal radio base before you leave and to ensure your radio is working. Tell them where you are going, estimated time of return, vessel details and how many people on board.

You should also consider leaving your details with a responsible contact person.

Report in if the trip is extended or altered in any way.

Log off

Remember it is important to log off when you return.

Know your boat

Basic boat handling

Setting off

Start your engine, allowing it to warm up before you set off. Untie any mooring ropes from the jetty or wharf, leaving them tied to the boat, coiled and ready for future use. Make sure all ropes are inside the boat and not trailing in the water where they can be caught in the propeller.

Check that the area is clear of traffic before moving away, taking note of any speed limits or 'no wash' signs that may be in the area.

Be careful not to create excessive wash when passing people fishing, passive craft or moored boats to avoid rocking them about.

Keep to the right side of the channel (see the section on Navigation Marks and Signs for more information).

Kill-switch lanyard

Always wear a kill-switch lanyard when driving a vessel under power. The lanyard is attached to your arm and stops the engine if you fall overboard or lose control of the steering

Hatches and exterior doors

To assist in evacuation during emergencies, hatches must be capable of being opened from both the inside and outside of the vessel (if built after 1/1/1991). All hatches must be unlocked while the vessel is underway.

Slowing down and stopping

Boats don't have brakes, so give yourself plenty of time to stop. In a powerboat ease off the throttle and move into neutral, using short bursts in reverse gear to slow down and come to a final halt.

Remember, some craft are more difficult to handle when in reverse. You may need an occasional forward boost to gain better control.

Steering

When steering a boat with a wheel, get to know the feel of the wheel and the rudder position before you set off.

Using a tiller is simple, though different to a wheel, providing you remember that pushing to the right will make the boat head left and vice versa.

Be patient and plan ahead – the boat will take a few seconds to respond.

Tying up

To keep your boat secure you need to tie up with rope to both the bow and stern. Many mooring sites have bollards or rings to tie up to – choose ones a short distance beyond the bow and/or stern of your boat. Run your ropes about 45 degrees from your boat, loop them back onto the boat and tie securely, but not too tightly.

Be aware of the rise and fall of the tide.

Make sure you know how to use your ropes properly. Keep them coiled, free of knots and ready for use.



Mooring

Slow down almost to a stop and carry out all your manoeuvres as slowly as possible. Wind and currents should be considered on approach.

Move your boat very slowly, pointing the bow towards the mooring buoy, then use reverse to stop the boat just before the bow hits the buoy. Put the engine into neutral.

Anchoring

When anchoring, lower the anchor to the bottom and let the vessel go astern until sufficient line is let out – this normally means three times as much line as the depth of water. If the weather deteriorates, increase the ratio to 5:1 or more.

Always anchor by the bow not the stern, and never anchor in a channel or where submarine cables are signposted.

NEVER anchor a small boat, or vessel not equipped for it, by the stern as this is likely to result in swamping and flooding.

You should have a length of chain between the anchor and the anchor line to cushion the vessel's motion and help the flukes to dig in. The chain also stops the anchor line chafing on the bottom. The bigger the vessel, the more chain you require.

In choosing your anchoring position, you should take into account local tides, possible

wind changes and swing room required to keep your vessel away from any other vessels or hazards nearby. These factors are particularly important at crowded anchorages, or if you plan to stay overnight or leave your vessel unattended for even a brief period.

If the water is fairly shallow, you may have to periodically adjust the amount of line you have out to allow for changes in depth caused by tides.

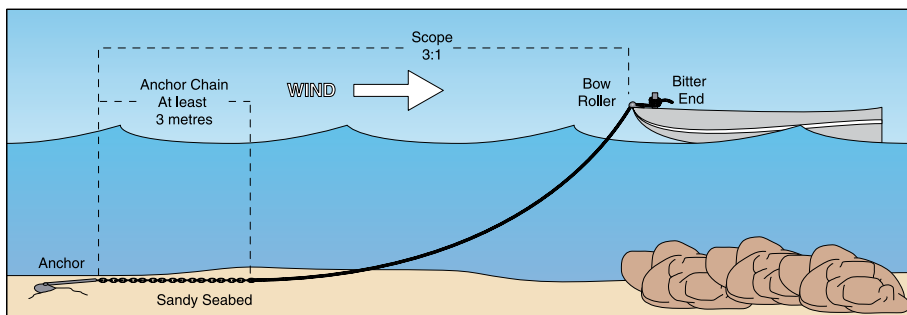
Do not anchor in sensitive habitats such as seagrass. Areas of seagrass are usually visible as dark patches on the sea bed. Damage from an individual anchor can potentially set off progressive seagrass loss over a wide area.

Historic shipwrecks are also easily damaged by anchors and anchoring in their vicinity should not be attempted.

Don't anchor on bombores, shallow rocks, reefs, banks and shoals.

Common anchoring mistakes include letting the anchor go without securing the line to the boat, or getting the line wrapped around a foot.

If you break down, you should attempt to remain in the one location by anchoring, or if conditions make this difficult, setting a sea anchor or drogue.



Anchoring ratio guide



Loading your boat

Overloading/stability

Overloading can contribute to the capsize or swamping of a vessel.

Never load your boat with passengers or cargo beyond its safe carrying capacity. Too many people or too much gear can cause the boat to become unstable, resulting in capsize or swamping.

Always balance the boat to maintain proper trim and use the vessel's Safety Label or Australian Builder's Plate to determine the maximum number of persons you can safely carry in calm weather.

Always stow heavy items as low as possible in the boat. Make sure they are secure. Ensure loads are distributed evenly to maintain appropriate freeboard and trim of your vessel.

Going aboard small vessels

When moving onto or off small craft remember:

- Step aboard as near amidships as practicable, crouch down and hold onto something.
- Never jump into a vessel or pause with one foot aboard and the other foot ashore.
- If you move about in the vessel, keep to the centreline and crouch down to lower your centre of gravity.

Kids and boats

Preparing children for boating

If you take your children boating, teach them emergency procedures. It will improve their confidence and your peace of mind.

Children under the age of 12 years must wear lifejackets in the following circumstances:

- At all times when in a vessel less than 4.8m in length.

- When in an open area of a vessel 4.8m to 8m in length that is underway.

Make sure that the lifejackets are well fitting.

Other children should be encouraged to wear an appropriate lifejacket at all times, especially when in open areas of a boat where it is possible to fall directly overboard.

Teach them to swim and practise emergency positions like HELP and Huddle.

Teach them to stay with a capsized boat or an easily seen floating object, making them easier to be seen by rescuers.

Show them around the boat and where all emergency items are located. If they are old enough to understand, show them how to use equipment such as radios, EPIRBs and flares, stressing the importance of not using them unless real trouble exists and the penalties that exist for misuse.

Teach them about stability and loading the boat, how to get in and out of dinghies and small boats.

Stop children from having any part of their body out of the boat when it is underway. It's illegal and penalties apply.

Teach them the rules about keeping a good lookout, avoiding collisions and reducing wash.

Children under the age of 18 must not be aboard any vessel travelling at 60 knots or more, unless approved under an aquatic licence.

A website has been developed to teach kids and their families about safe boating; for details visit www.boatforlife.com.au.

REMEMBER:

Slip, Slop, Slap.

Use sun-protective clothing, sunscreen and hats – and wear a lifejacket.





Know the rules

All masters must be aware of the International Regulations for Preventing Collisions at Sea. A summary of these rules is given in this section.

Safe speed

All vessels must travel at a safe speed at all times.

A safe speed cannot be expressed as a maximum or minimum number of knots because it varies with circumstances and conditions. The master (skipper) must continually assess the safety of the vessel's speed.

A safe speed is one at which the vessel can be stopped in time to avoid any danger which arises suddenly. In judging a safe speed the master must consider a number of issues including:

Visibility – drive slowly in rain, fog, mist, smoke or glare.

Special caution is required at night because many potential hazards may not be lit or may not be easily seen. Background shore lighting may confuse you.

Other vessels – slow down on busy waterways and when near moored or anchored vessels, working vessels showing special signals and large vessels which have difficulties in manoeuvring.

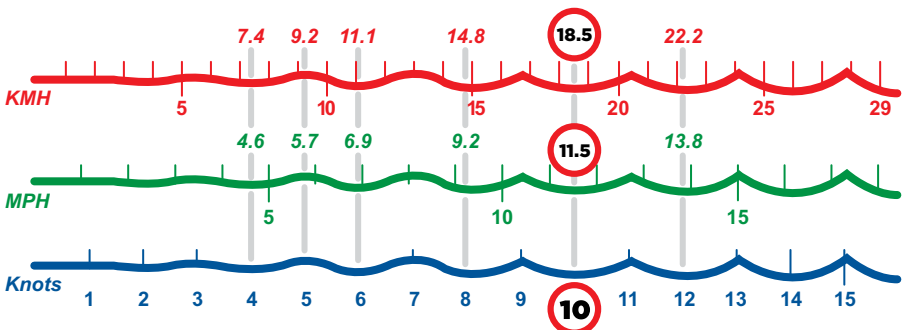
Navigation hazards – slow down in shallow areas or in unfamiliar waterways.

Water depth can vary and change frequently. Not all hazards may be marked or lit and signs, buoys, marks or lights may have shifted or been vandalised.

Wind, waves and currents – may adversely affect the manoeuvrability of a vessel.

Manoeuvrability of the vessel – stopping and turning ability depends on the speed travelled, wind and current and the boat's design (such as hull shape, engine and propeller type and number).

If your vessel does not have a speedometer, you must be able to determine if you are exceeding a local speed limit. For example, if your boat is planing in a restricted speed zone it is likely that you are exceeding the speed limit, so slow down.



10 knots or more, keep at least 30m clear of other vessels, land or structures and 60m from swimmers or non-powered vessels.

Slow down and keep the waves friendly



Proper lookout

A good lookout must be kept by sight and hearing.

The master must be fully aware of the boating environment, especially in bad weather, restricted visibility or darkness. Don't forget to look all around – even behind you.

Special care should be taken when operating your boat in areas where high speed vessels operate, such as Sydney Harbour. The situation can become dangerous very quickly due to rapid closing speeds, even if your vessel is travelling slowly.

For example a vessel going at 20 knots will cover more than 100 metres in less than 10 seconds and the speed of your boat may further decrease your time to react to avoid a collision.

Don't confuse the lookout duties of the master with those of the observer when the boat is towing a person on skis, tubes, etc.

The master is responsible at all times for keeping a lookout for dangers.

Bow riding is illegal

Bow riding means extending any part of your body outside the perimeter of a vessel that is underway.

NOTE: The offence relating to bow riding relates to both the operator of a power-driven vessel and the person on board the vessel who extends any part of their body outside the perimeter of the vessel.

\$100 – \$250 on-the-spot fine to the master and/or the offending person





Giving way

The master must continuously assess the risk of collision with other vessels. Power vessels must give way to:


- Sailing vessels.
- Vessels approaching head on (by altering course to starboard).
- Vessels approaching from the right (starboard) hand side (ie, crossing).
- Vessels displaying the special lights and signals shown in this chapter.
- Large vessels restricted in their manoeuvrability.
- Any vessel being overtaken.
- Vessels engaged in fishing activities and showing appropriate signals.

A vessel drifting is deemed to be underway and has no special right of way. It is required to comply with the International Regulations for Preventing Collisions at Sea.

Do not create a dangerous situation by forcing your right of way. Always keep a safe distance off other vessels so the vessel can be stopped or manoeuvred to avoid any sudden danger.

The faster the speed, the greater the safe distance must be.

When altering course make your intentions clear to others as early as possible.

 **NOTE:** In a collision, all masters involved can be held responsible even if the give-way vessel does not give way, because all masters are required to exercise caution and take avoiding action if the other vessel does not.

Sound signals

Special sound signals exist for vessels to indicate their manoeuvring intentions when they are in sight of one another.

1 short blast

I am altering course to starboard (the right).

2 short blasts

I am altering course to port (the left).

3 short blasts

I am operating engines astern (stopping/slowing or reversing).

5 short blasts

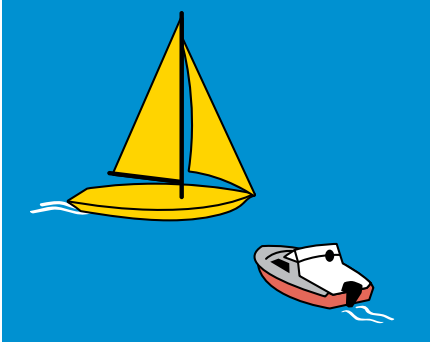
I am unsure of your intentions and I doubt whether you are taking sufficient action to avoid collision.





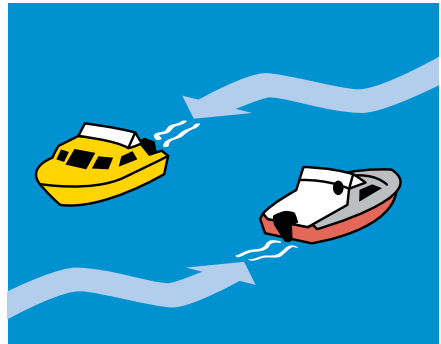
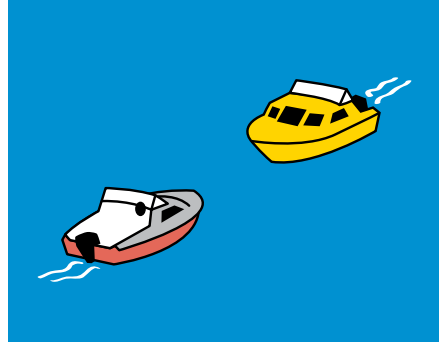
Power gives way to sail

A power driven vessel must give way to a sailing vessel unless the sailing vessel is in the process of overtaking it.



Power driven vessels meeting head on

When two power driven vessels meet head on, each must alter course to starboard (to the right) and pass at a safe distance.



Action to avoid collision

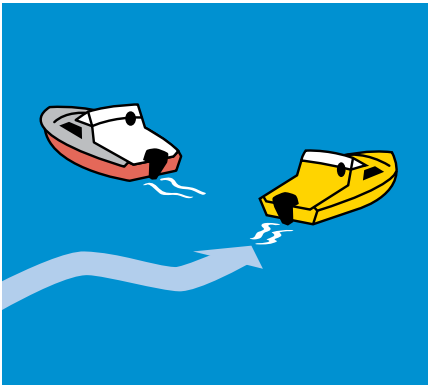
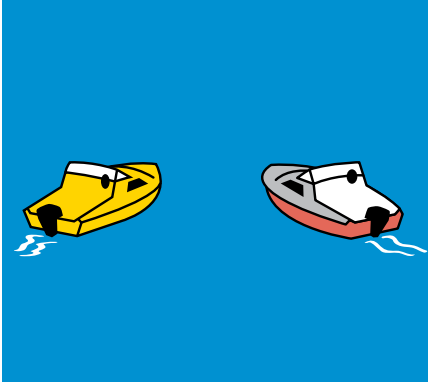
The give-way vessel must avoid a collision by changing course substantially, by slowing down, or stopping and allowing the vessel which has right of way to pass clear ahead. This must be done as early as possible.

NOTE: The master of the vessel which has right of way must maintain a lookout, maintain course and speed and be prepared to take action to avoid a collision if necessary.



Power driven vessels crossing

In crossing situations, give way to the right.



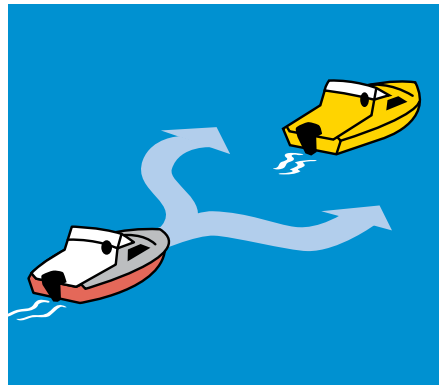
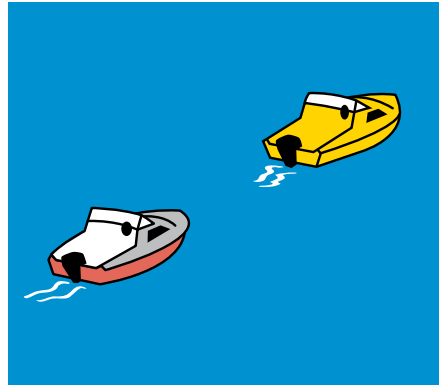
Vessels overtaking

Any vessel (including a sailing boat) which is overtaking another vessel must keep well clear of the vessel being overtaken.

You can overtake another vessel on either side but only when it is safe and you must stay well clear.

In narrow channels you must be particularly careful when overtaking.

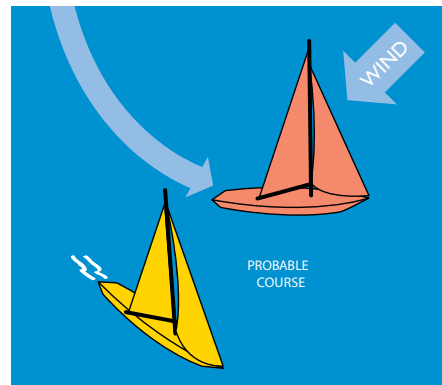
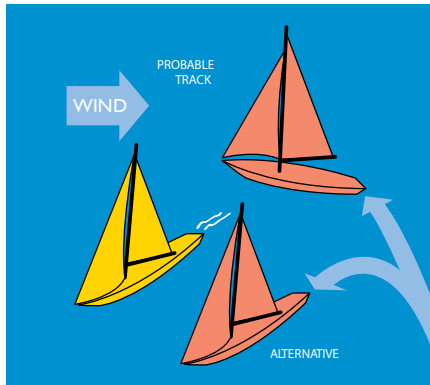
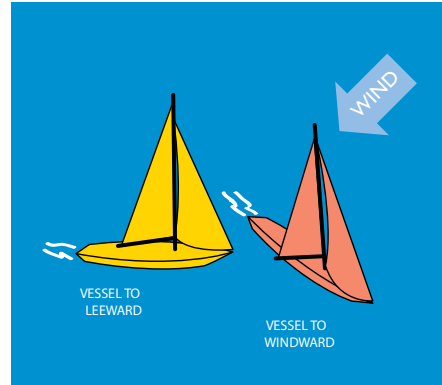
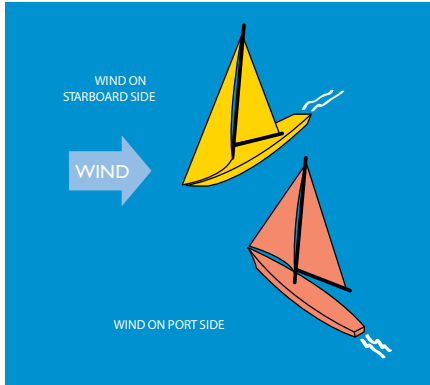
In all instances, make sure you do not cut in front of the vessel you have overtaken.





Sailing vessels and sailboards

When two sailing vessels have wind on different sides, the vessel with wind on the port side gives way. In the following scenarios, the red vessel gives way.



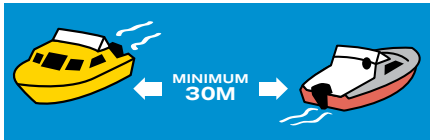
NOTE: If a collision appears inevitable, the skipper of each vessel must take proper action to avert the collision.



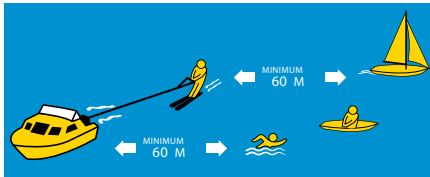
Distance off

When driving a vessel at a speed of 10 knots or more **or** towing a person you must keep the vessel and the person being towed a minimum distance of:

- **30 metres** from power-driven vessels, any moored vessel, land and structures (including jetties, bridges, moorings and navigation markers) or, if that is not possible, a safe distance.



- **60 metres** from persons or non-powered vessels (sailing and passive) that are underway or if that is not possible, a safe distance.
- **100 metres** from a dredge or work barge, if you are travelling faster than 4 knots.
- **A safe distance** from any vessel towing a person.



Safe distance

A **safe distance** between a vessel and a person or thing (including another vessel) is a distance that will ensure that the vessel will not cause danger or injury to the person or damage to the thing, having regard to all relevant safety factors including weather conditions at the time, visibility, speed of the vessel and obstructions to navigation that are present.

It should be noted that where a skipper is issued a penalty for breaching the distance off requirements referred to above and claims that even though this distance off was breached, the distance off was a 'safe distance', the onus is on the skipper to prove this in court.

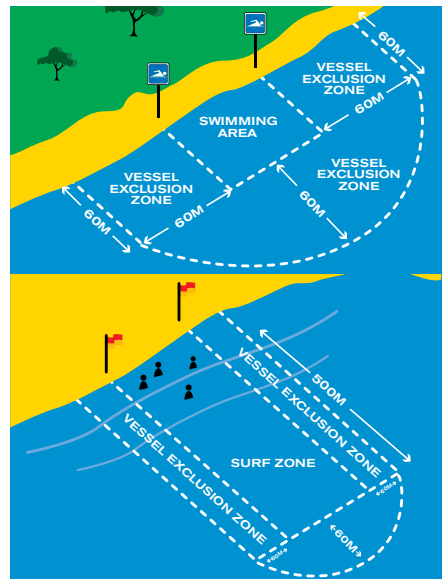
Designated swimming areas

Remember the same rules apply for PWC as other vessels operating near surf zones/swimming areas.

A designated swimming area in a surf zone is defined as the area extending 500 metres out from shore between surf patrol flags or signs.

In all other areas a swimming area is defined as the area extending 60 metres out from shore between signs for swimmers.

A person must not operate a power-driven vessel within 60 metres of a swimming area and the flags or signs marking such zones unless it is a vessel operated by Surf Life Saving NSW or Council lifeguards or unless permitted to do so by a sign.





Mooring areas

On many waterways in NSW, areas are set aside for the mooring of vessels. These vessels are not required to be lit at night and the masters of other vessels must be aware of the location of such moorings.

Check local maps or charts, or contact your local Roads and Maritime Services centre for details of mooring areas. When navigating near, in or through a mooring area:

- Drive slowly and keep wash to a minimum.
- Keep a lookout for people in the water, small dinghies, and trailing ropes.
- When travelling at 10 knots or more you must stay at least 30m from any moored vessel.

Diving activities

The diver's flag – white and blue no less than 400mm x 400mm in size and rigid – must be shown when people are engaged in diving or snorkelling activities from a vessel. It is to be flown in a vertical position 1m above the superstructure and visible through 360°. If this flag is flown off a float/buoy, it must be at least 2m above the water level. It is recommended that this flag be shown when diving/snorkelling from shore.

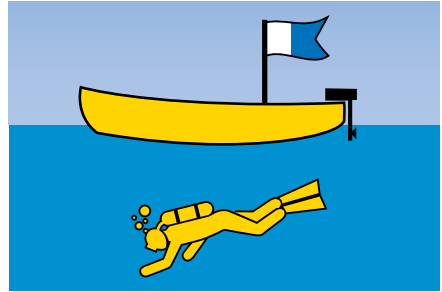
As divers may not always be in close proximity, it is important that as soon as you see a dive flag you slow down, keep well clear and keep a good lookout.

If you are within speaking distance of the dive master, get their instructions as to a safe direction to travel to avoid any possible encounters. If there is no dive master about then it's your responsibility to keep a good lookout at all times for any divers above and below the surface and then determine a safe distance.

If you see a snorkeller in the water or their float/flag, remember to remain a safe distance.

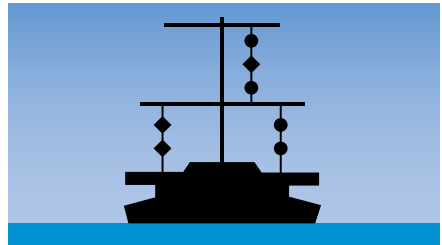
If you are travelling at a speed of 10 knots or more, keep a minimum of 60 metres from persons in the water.

When you see a diver's flag slow down, keep well clear and keep a lookout.



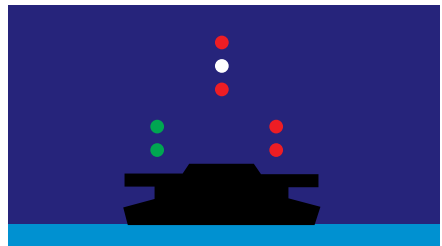
Dredges

When driving your vessel you must not create wash that may damage or unreasonably impact on a dredge.



**Safe side
to pass
(Diamonds)**

**Obstruction
this side
(Balls)**



**Safe side to
pass
(Green – Go)**

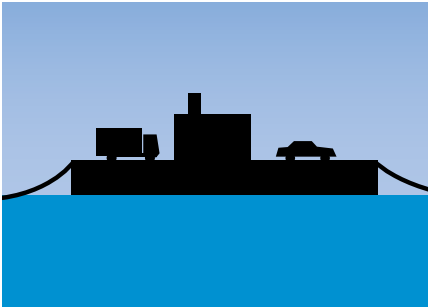
**Obstruction
this side
(Red – Danger)**



Vehicular ferries

In some areas vehicular ferries drag themselves across channels using wires or chains. Because these wires/chains are often below the water you may not see the danger.

You must slow down to 4 knots or less when within 100 metres of the wires or chains of a vehicular ferry when it is underway and disengage power when crossing the wires or chains.



Always pass astern of the ferry. Preferably wait until it has reached the shore to avoid becoming entangled in the wires.

A vehicular ferry underway will display an all-round flashing light. You should give way, as it is significantly restricted in its ability to manoeuvre.

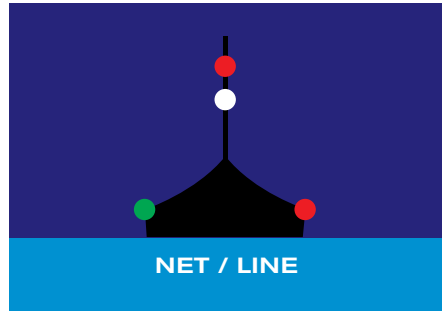
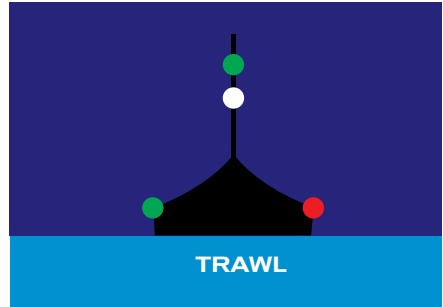


Commercial fishing vessels

Licensed fishing vessels (LFB) display special shapes and lights when their manoeuvrability is restricted by their fishing apparatus.

You should keep clear of these vessels when you see such shapes or lights or notice they are working with nets and lines.

(Contact your local Fisheries office for more details about the rights of commercial fishing vessels).





Port hand markers

Port markers are red and have a can shaped topmark or buoy.

If lit, a port hand mark shows a flashing red light.

Port markers may be any of the shapes shown below.

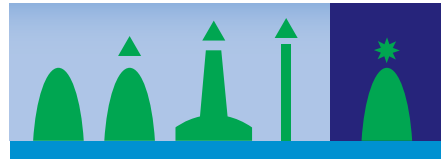


Starboard hand markers

Starboard markers are green and have a cone shaped buoy or topmark.

If lit, a starboard hand mark shows a flashing green light.

Starboard markers may be any of the shapes shown below.



Navigation marks and signs

A system of buoys, poles and lights is used to assist safe navigation. Each type of mark has a unique combination of colour, shape, topmark and light. You must be able to identify these marks and pass them safely on the correct side.

An interactive guide to safe navigation, including marks and signs as well as vessel lights, is available online at www.rms.nsw.gov.au.

Lateral marks

Port and starboard marks are referred to as lateral marks.


When both port and starboard marks are placed near each other, you travel between the two.

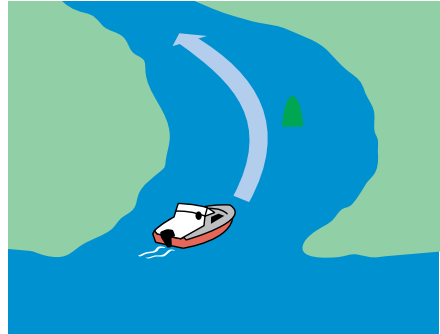


Single lateral marks

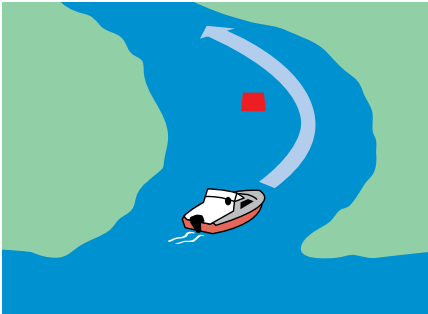
Often lateral marks are not placed in pairs, so you will need to decide on the safe side to pass.

The safe side to pass a lateral navigation marker is determined by your direction of travel to or from the sea.

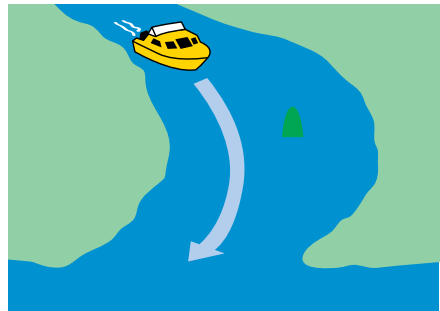
 **NOTE:** Heading upstream means in a direction away from the sea. Heading downstream means in a direction towards the sea.



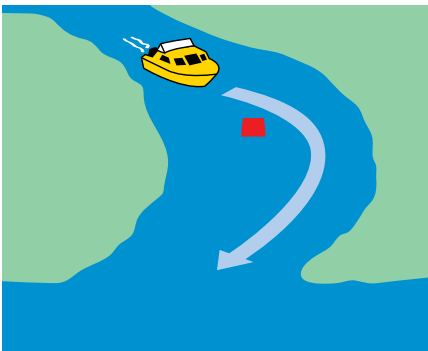
Keep **green** (starboard hand marks) on your **right hand side** (to starboard) when going upstream.



Keep **red** (port hand marks) on your **left hand side** (to port) when going upstream.



Keep **green** (starboard hand marks) on your **left hand side** (to port) when going downstream.



Keep **red** (port hand marks) on your **right hand side** (to starboard) when going downstream.



GREEN to GREEN
when going upstream



GREEN to RED
when seas are ahead



Channels and rivers

Extreme caution should be exercised when driving a boat because not all shallow areas and navigation hazards may be marked. This is important on rivers and estuaries where shallow areas may shift.

Be careful at bends. Keep a good lookout for boats coming the opposite way. Do not cut corners.

In channels or narrow stretches of water the following rules apply:

- Keep to the starboard side (right-hand side) of the channel.
- Do not get in the way of larger vessels operating in the channel and watch for unexpected alterations of course as they try to follow the deepest water route.
- Do not anchor or fish in channels where you may obstruct other vessels.

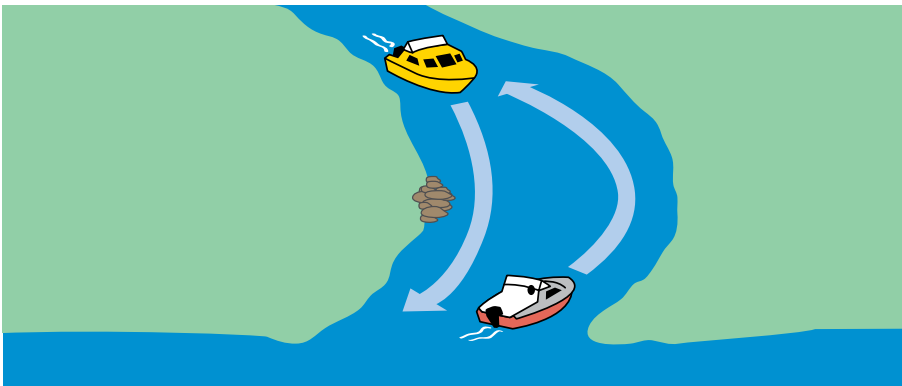
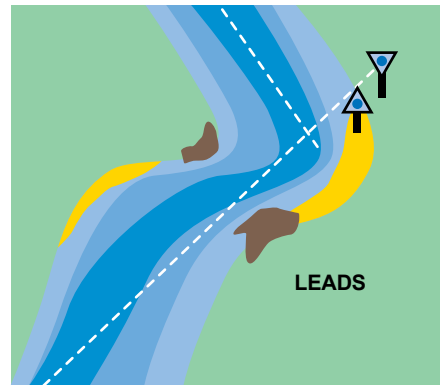
 **NOTE:** All regulations for avoiding collision still apply in channels.

Leads

Leads are often used to guide vessels into a port or through sections of a waterway. By moving your vessel to a position so that both leads are lined up, the course should be a safe one.

At night, major leads are lit. Move your vessel to ensure that the lights are vertically above each other. All leads are shown on maps and charts, so it is essential to consult your chart for relevant leads and other navigation aids before entering unfamiliar waters.

The leads at major ports are usually highly visible blue triangular or vertical lights mounted on bright orange or red triangular boards.





Cardinal marks

Cardinal marks are used to indicate that deeper water lies in a compass direction away from a danger such as a reef, shallow areas, etc. They are painted in combinations of yellow and black as shown.

Think of a clock face when remembering the lights on cardinal marks.

Three flashes = east,

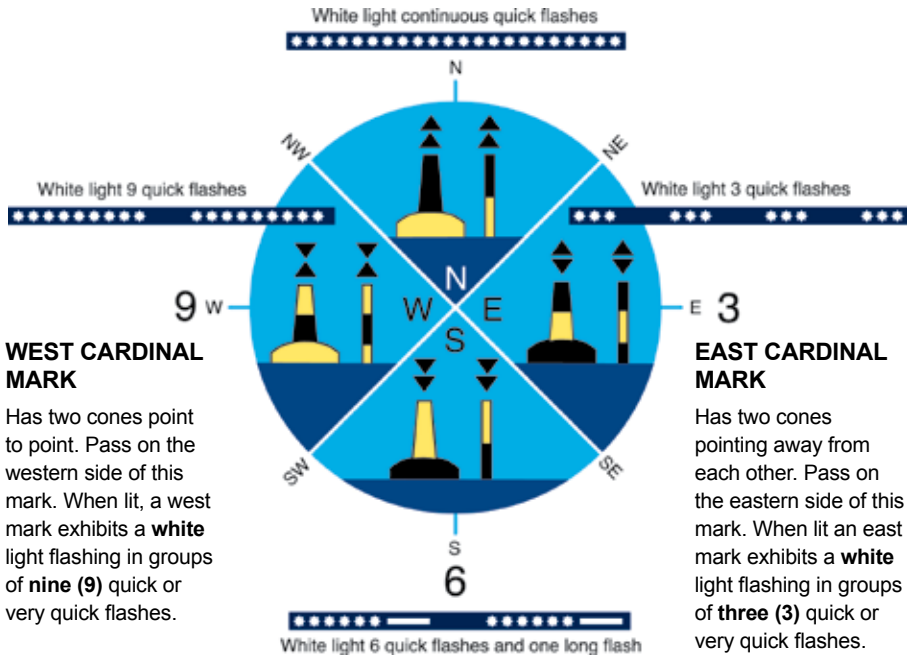
six flashes = south,

nine flashes = west.

Continuous flashes = north.

NORTH CARDINAL MARK

Has two cones pointing up. Pass on the northern side of this mark. When lit, a north marker exhibits a **continuous** (very) quick **flashing white** light.



WEST CARDINAL MARK

Has two cones point to point. Pass on the western side of this mark. When lit, a west mark exhibits a **white** light flashing in groups of **nine (9)** quick or very quick flashes.

EAST CARDINAL MARK

Has two cones pointing away from each other. Pass on the eastern side of this mark. When lit an east mark exhibits a **white** light flashing in groups of **three (3)** quick or very quick flashes.

SOUTH CARDINAL MARK

Has two cones both pointing down. Pass on the southern side of this mark. When lit a south mark exhibits a **white** light flashing in groups of **six (6)** quick or very quick flashes followed by a long flash.



Speed signs

In some areas, speed restriction signs are used for safety reasons in NSW. These usually show 4 or 8 knots.



A. 4 knots

(about 7 kmh or a fast walking speed)



B. 8 knots

(about 15 kmh or a fast jog)



C. 8 knots

(example of older sign being replaced)



Restrictions for boating traffic passing under the Spit Bridge on Sydney Harbour



Travel at a speed which creates minimal wash when you see this sign and when near moored or anchored vessels. Look behind occasionally to see if your boat is creating wash that affects other boats or the shore. Adjust your speed if necessary.

Wash

The operator of a vessel must not cause wash that damages or impacts unreasonably on:

- Any dredge or floating plant.
- Any construction or other works in progress.
- Any bank, shore or waterside structure.
- Any other vessel, including a vessel that is moored.


 **NOTE:** Penalties apply

Regardless of signs, you should not navigate your vessel in such a way as to produce excessive wash that endangers other vessels or impacts unreasonably, as this is an offence.



No Wash signs

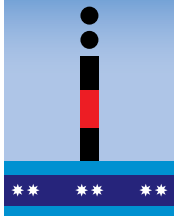
“Wash” is the wave effect created by a vessel moving through the water. No Wash signs are placed in some areas where the wash from a vessel is likely to cause damage to the foreshore or vessels, or injury or annoyance to people.

 **NOTE:** Travelling at the speed shown on a speed restriction sign does not guarantee you are not creating wash.



Other buoys and signs

Isolated danger



Indicates specific dangers with generally safe waters all around (eg a wreck). You can pass them on any side but do not pass too close. If lit, it shows a white light flashing in groups of two.

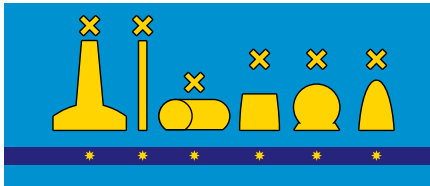
Special marks

Indicates special features or areas such as:

- tide poles
- spoil grounds or
- underwater pipes.

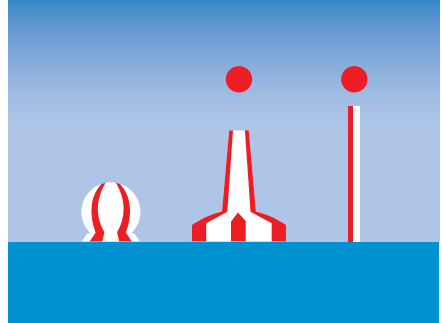
They can be utilised as lateral marks by using can or conical shaped buoys. If so they must be passed as lateral marks: can (eg port hand going upstream) conical (starboard hand).

These marks, if lit, show a yellow light at night which may flash in any rhythm.



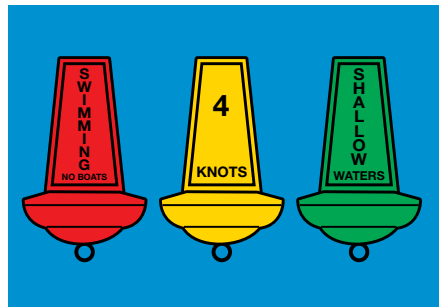
Safe water marks

These are not common in NSW. However, they may be used to mark the division of large shipping channels. They may show a white flashing light at night. Where the mark is used to identify a turning point or centre line it should be passed to port.



Aquamark minibuoy

Used in some areas as alternatives to conventional buoyage. They often have advisory messages on them and penalties may apply for breaching the requirement displayed.



Submarine cables

Anchoring is prohibited within 200 metres of submarine cables. If an anchor becomes snagged near one of these signs, it should not be retrieved – cut the anchor line.



Overhead power lines

As clearance height can vary according to water levels, it is most important that masters know the heights of their masts and understand the height level given on any sign.

Most of the existing signs on the water give the clearance of the power lines as the clearance above Mean High Water Springs or the average of very high tides. It is important to know that this clearance height may be reduced during king tides or floods.

However a new crossings signage system is progressively being introduced on NSW waterways. The new signage advises the maximum vessel height which can be navigated under an overhead crossing. It is important to note that clearances may be reduced during floods.

To assist boaters Roads and Maritime Services has developed a sticker which you can use to help you remember the height of your vessel above the water line. You are encouraged to place the sticker close to the steering position of your vessel.

Extra caution is required during the changeover period from the old to the new system and when launching/retrieving vessels with a mast on shore. Always keep a lookout for overhead power lines.

Bridges

Bridge heights on maps are measured at the Mean High Water mark, so you should allow for higher than average tides at certain times of the year. Also consider your vessel may require more room when unloaded.





BE BRIGHT AT NIGHT

BE BRIGHT AT NIGHT

Boating at night demands extra care and caution.

- Show appropriate nav (navigation) lights between sunset and sunrise.
- Know the system of lights for vessels and nav markers.
- Always keep a proper lookout.
- Keep to a safe speed for the conditions. Slow down at night.
- Remember: wear a lifejacket in a boat of less than 4.8m or if you feel the conditions are risky.

For more information see our
website or call the info line.

**YOU'RE THE SKIPPER
YOU'RE RESPONSIBLE!**

Info line: 13 12 56
www.rms.nsw.gov.au




Transport
Maritime



Night safety

Be bright – be safe at night

When night falls it is a completely different world on the water and so vessels that operate from sunset to sunrise, whether at anchor or underway, must carry and exhibit the correct lights.

 **BOATING AT NIGHT:** Go slow, be seen, keep a lookout and be bright.

Go slow

When fog, glare, smoke or darkness restricts your visibility, you must slow down to a safe speed. A safe speed is one at which you can stop and avoid a collision, considering the circumstances and conditions at the time.

You wouldn't drive fast on a dark road without headlights – the same applies on dark waterways – be bright.

Remember – the faster you go, the faster you approach hazards and the less time you have to react. Hitting a hazard at speed can have a greater impact on you, your passengers and your boat.

Be seen

You may be able to see others but can they see you? At night, every type of craft on the water needs lights in order to be seen. Whether you are paddling, rowing, sailing or motoring, everyone needs to be able to recognise where you are and what you are doing.

Make sure you have the right lights for your craft and that they work properly. Use them as soon as the sun goes down or when visibility is poor. Your lights should be mounted in a position that gives you optimum night vision and allow others to see you from every direction.



Photo courtesy of City of Sydney



My Boating Life
com.au

MyBoatingLife.com.au covers just about everything there is to know about recreational boating in Australia. Make it your homeport. Create your own dashboard today.

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You must carry a working waterproof floating torch. It may help others see you if you shine your torch on your sails or superstructure.

Make sure you don't adversely affect your night vision, or the vision of other boat skippers.

Navigation lights checklist

Check your lights before heading out.

- Check switches are on.
- Check navigation lights are on and working.
- Physically check each light is on.
- Turn off cabin lights as it may reduce your ability to see.
- If the vessel has a flybridge and weather permits, it is generally preferable to drive from there as you will have a better all round view.
- If you anchor at night, show an all-round white light where it can best be seen.

Keep a lookout

Navigating at night requires special care – it can be like looking into a black hole. Look and listen at all times, as a number of hazards such as logs, moored boats or sandbanks are unlit.

Navigation lights may not be as bright as other lights and background lights may hide something that is closer. If it is a large ship, the lights might be high and you may not realise that you are looking at the sides of a black hull.

If you have the slightest doubt, stop, ensure you are lit and have a good look around you.

LOOKOUT AT NIGHT

Is that a vessel(s)?

How big is it?

What direction is it travelling in?

How fast is it moving?

How far away is it?

Does it have priority?

What is our relative position?

Know your waterway

Navigation markers can aid you in safe passage of a waterway. These aids to navigation can indicate where prominent hazards are, but should be coupled with reference to a map or chart and use of local knowledge of the area, particularly in the dark.

Different lights

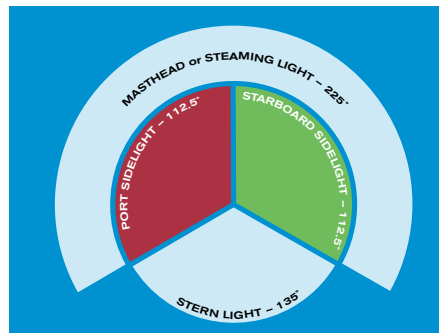
All round white light: a white light showing an unbroken light over an arc of the horizon of 360 degrees.

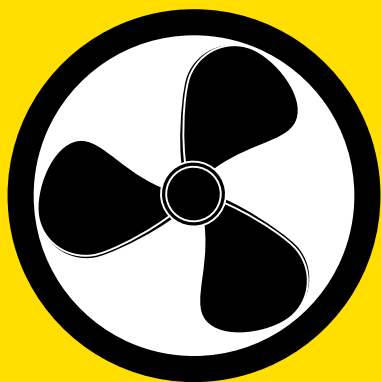
Masthead light: a white light placed over the fore and aft centreline of a vessel, showing an unbroken light over an arc of the horizon of 225 degrees and fixed to show from anywhere ahead, to just behind the beams of the vessel.

Sidelights: a green light on the starboard (right) side, and a red light on the port (left) side of a vessel. Each shows an unbroken light over an arc of the horizon of 112.5 degrees, and is fixed to show from ahead to just behind the beams of the vessel on its respective side.

On a vessel of less than 20 metres in length, the sidelights may be combined in one light unit, carried on the fore and aft centreline of the vessel.

Sternlight: a white light placed near the stern, showing an unbroken light over an arc of the horizon of 135 degrees, fixed to show from behind the vessel.





TAKE CARE BE PROP AWARE

TAKE CARE BE PROP AWARE

Boat propellers pose a risk that is easily ignored because they are under the water, 'out of sight and out of mind'.

So always watch the prop and remember:

- Ensure the prop area is all clear before starting the engine.
- Keep a proper lookout, especially when near swimmers.
- Stay out of designated swimming areas.
- Observe 'distance off' rules.
- Keep all arms and legs inside the boat.
- Wear a kill-switch lanyard when boating alone.

For more information see our
website or call the info line.

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Transport
Maritime



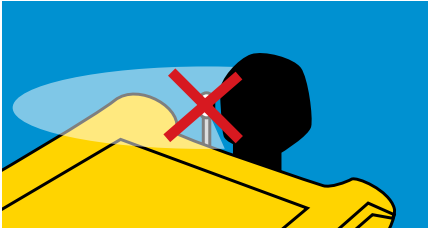
Range of visibility

Vessels under 12 metres

- Masthead light – 2 miles
- Sidelight – 1 mile
- Stern light – 2 miles
- All round lights – 2 miles

Vessels 12 metres to 20 metres

- Masthead light – 3 miles
- Sidelight and stern light – 2 miles
- All round lights – 2 miles

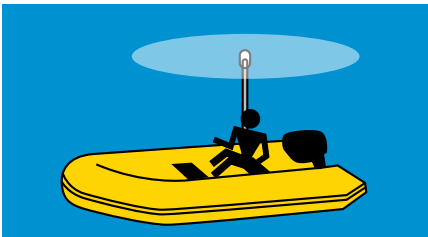


Placement of lights

Navigation lights should be positioned so they are not obscured by the vessel's superstructure or interfered with by deck lights.

Masthead

The masthead and/or all round white light must be fitted (if practical) on the centreline (bow to stern) of the vessel.



Power vessels underway

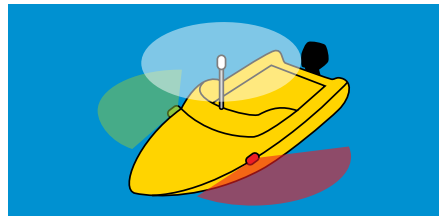
Vessels under 7 metres and less than 7 knots

Powered vessels of less than 7 metres in length, with a maximum speed of 7 knots or less, shall exhibit a white light visible all round and if possible, separate and/or combined sidelights.

Vessels under 12 metres

- Separate or combined sidelights; a masthead light and a stern light; or
- Separate or combined sidelights and an all round white light.

The masthead or white all round light shall be carried at least one metre above the sidelights.



Vessels 12 metres to 20 metres

- A masthead light, separate sidelights and stern light; or
- A masthead light, combined sidelights and stern light.

The masthead light shall be carried at least 2.5 metres above the gunwale. Combined sidelights shall be carried at least one metre below the masthead light.





Sailing vessels underway

Sailing vessels while underway (being motor driven) under power shall exhibit navigation lights applicable to power driven vessels.

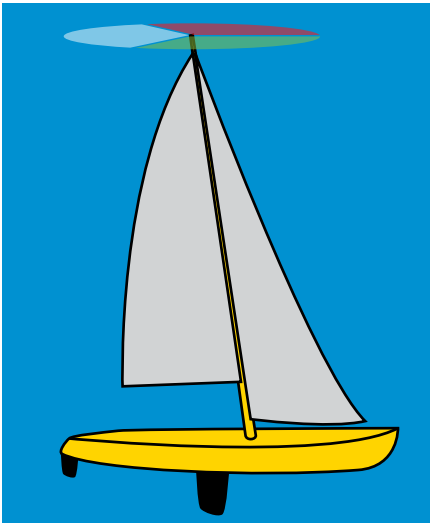
Sailing vessels under 7 metres

Sailing vessels of less than 7 metres in length, or vessels being rowed, should if practicable exhibit the lights required for sailing vessels over 7 metres.

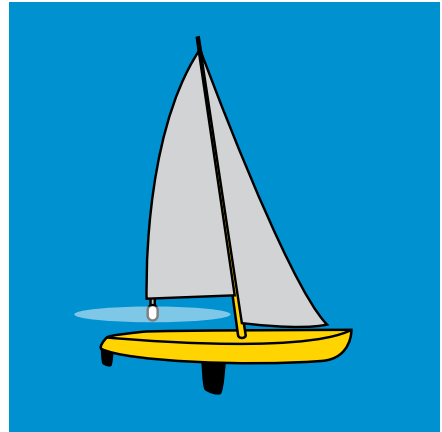
If not they should have ready use of an electric torch or lighted lantern showing a white light which shall be exhibited in sufficient time to prevent collision.

Sailing vessels 7 metres to 20 metres

- A combined lantern, that is at or near the top of the mast and incorporates sidelights and stern light; or
- Separate sidelights and stern light.



NOTE: The use of tricoloured lights alone in areas affected by backlighting is not recommended. In these cases it is recommended to use deck level navigation lights.



Sailing vessels over 20 metres

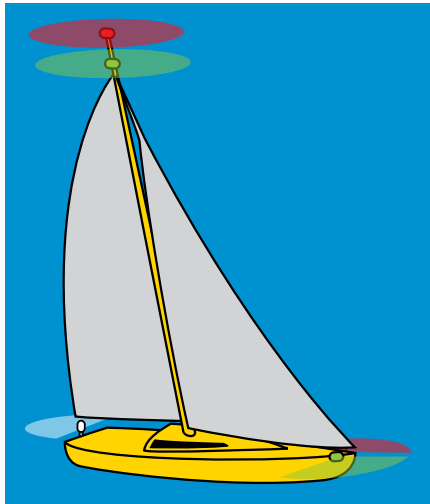
Must exhibit sidelights and stern light and may carry the optional red and green all round lights. However, these vessels may not carry a combined lantern.





Optional lights for sailing vessels

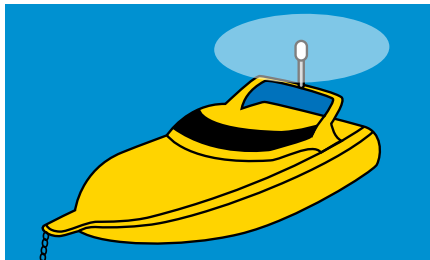
A sailing vessel of any length which is fitted with sidelights and a stern light (but not a combined lantern) may, in addition, carry two all round lights in a vertical line at or near the top of the mast. The upper light shall be red and the lower green.



Power and sailing vessels at anchor


Vessels less than 50 metres in length at anchor shall exhibit an all round white light, placed where it may be well seen.

Anchor lights must always be shown from sunset to sunrise. If you are at anchor in a busy area, then show additional lights to ensure you are seen and keep a good watch.



Rowing/Paddle vessels

Such craft must have a torch or lantern ready to display in time to prevent a collision. Craft that are more than 4 metres long should exhibit two all-round lights, either continuous or a combination of continuous and flashing white lights, positioned at either end, in accordance with the Code of Conduct for Rowing.

 **NOTE:** There are many other combinations of lights used on vessels. The lights shown relate to the activity the vessel is engaged in, ie. fishing, dredging, not under command.

A simple rule of thumb for a small power boat is to stay clear of any vessels exhibiting additional lights.



Keep clear of larger vessels



Special areas

Open waters

Handling a vessel at sea

The way a boat handles at sea will depend on:

- Its hull design and strength.
- The amount of power used to propel it.
- Wave direction.
- The way the boat is steered.
- Weight distributed in the vessel.

Bomboras

When boating along the coastline, particularly when close to a shoreline, be aware of bomboras. Bomboras are shallow areas such as those created by rocks or reefs that cause waves to break.

It is advisable to check maps and charts, talk to locals and be aware of the existence of bomboras. The danger posed by these formations can be higher in good weather, as a bombora may not be identifiable because it may not always have breaking waves.

Boaters need to be cautious anywhere bomboras may exist.

Head seas

Generally, the best way to tackle bigger waves is to take them bow on or about 30 degrees off each bow.

Too much power will result in the boat leaping over the crests and crashing down into troughs. This slamming action is not good for either the boat or the people on board.

Too little power may mean that the waves break onto or over the vessel.

Control the speed and direction steered to achieve the most comfortable and safest ride.

Beam seas

The danger from travelling beam on to waves is that rolling is increased. The amount of rolling can be reduced by varying the angle to the seas.



The bow is the strongest part for taking on waves. Make sure everyone is wearing lifejackets

Watch out for waves that are larger than others and consider changing course or speed to ride over or with it.

Following seas

Travelling with a following sea has the greatest potential for disaster, with broaching sideways and swamping/capsize a real possibility. Steering power is reduced by following seas and judicious use of the throttle controls is critical.

As in crossing a bar, you should attempt to maintain a position on the back of waves, using throttle to keep ahead of waves breaking behind the boat.



Remember when conditions worsen

- Ensure all persons are wearing lifejackets.
- Ensure the boat is as watertight as possible.
- Use throttle control and steering to reduce the impact of waves.
- The bow of a boat is the strongest part for taking on waves.
- If caught in rough weather, report your situation to rescue authorities.
- Secure all moveable items in the boat so that they do not become missiles.
- Ensure all people are holding on firmly.
- Have an EPIRB ready for use in case of capsized.
- Stay with the capsized boat unless you are very close to shore.


Handling a vessel in rough weather/hazards

Like other hazards on the water, rough weather can generally be avoided by obtaining a weather forecast prior to setting out.

A sudden unpredicted squall, however, can catch even the most careful boater, so you should always prepare and plan for the worst and keep a good lookout for telltale clouds and white cap waves.

If you are close enough, run for the shore, a safe harbour or the lee of an island, where the wind cannot generate large waves.

Sudden squalls usually only last for a short period and sometimes precede a change in wind direction, usually blowing at much stronger speeds than the wind that will follow.

 **NOTE:** If you doubt your chances of safely running back to harbour you may prefer to ride out the initial onslaught by keeping your bow into the wind and waves.

The main thing is to keep a speed sufficient to allow you to steer the vessel, but no faster. Without power to maintain steerage, a vessel will drift side on (beam on) to the sea and be vulnerable to capsize.

A sea anchor or a strong bucket tied to the bows will help to keep you pointing into the waves should your engine fail.

 **NOTE:** Always wear your lifejacket at times of heightened risk.

Seaplanes

When on the water, seaplanes are just like any other vessel. They are subject to all the restrictions and privileges of other boats and conduct their operations accordingly.

Don't be alarmed if a small seaplane alights or takes off in the waterways near you. Seaplane pilots are specially trained and qualified to operate upon the water. Like other boat operators, they hold marine boating licences to operate a vessel at speeds in excess of 10 knots.

Avoid making sudden changes of direction which might confuse the pilot or obstruct the seaplane's path.

Bar crossings

Shallow sand bars which can form at the point where rivers, creeks, lakes or harbours meet the sea are locations for experienced vessel drivers only. Any channel through such bars can change frequently. Even in apparently calm conditions vessels can be swamped, damaged or wrecked on bars and lives have been lost.

Avoid crossing a bar on a run-out tide as this is when dangerous waves are most likely to occur.



Check the conditions before you cross ... this skipper made it, just!

Knowledge and experience

Do not attempt to cross any bar without experience and local knowledge. You should:

- Spend considerable time watching the bar conditions in all combinations of weather and tide.
- Cross the bar with other experienced skippers before trying it yourself.
- Obtain and read a copy of the bar crossing brochure from Roads and Maritime Services.

Preparation & planning

Prior to crossing any bar it is recommended that the following checks should be made.

- Know the times of the tide and obtain an up-to-date weather forecast (especially expected wind conditions).
- Observe the bar conditions – be prepared to cancel or delay the crossing.
- If unfamiliar with the bar, obtain local advice, e.g. from the local Marine Rescue NSW unit.
- Check the vessel – especially steering and throttle controls, watertight hatches and drains. The vessel must be seaworthy,

suitable for the conditions and able to take some impact from waves.

- Ensure that all loose items can be stowed away in lockers or tied down to prevent movement.
- Check that all watertight hatches can be closed and sealed properly, drain holes are free and bilge pumps work.

On the water prior to crossing

Secure all loose gear and equipment. Brief your passengers/crew about the dangers – put on a lifejacket type 1.

Check all watertight hatches are closed and secured but not locked.

Assess the bar conditions – have they changed since your last inspection?

When crossing coastal bars, you should not lose your nerve in the white water. Once committed, keep going.

Trying to turn around in the middle of a bar entrance can be disastrous. Try to take waves as close to head on as possible.



Going out

The outgoing vessel must meet the incoming wave energy. Do not hit waves at high speed – an airborne vessel is out of control and can cause damage and injury. Do not allow waves to break onto your vessel.

As a guide:

- Idle towards the breaking waves watching for any lulls.
- If a flat spot occurs speed up and run through it.
- If the waves keep rolling in, motor to the break zone.
- Gently accelerate over the first part of broken water.
- Apply more power and run to the next wave, heading for the lowest part (the saddle) if possible because this is the last part to break.

- Back off the power just before meeting the next swell.
- Pass slowly through the wave and accelerate again to the next wave.
- Repeat the process until through the break zone.

Coming in

Be aware the conditions may have changed.

If dangerous, consider alternatives:

- Wait for conditions to abate.
- Wait for change of tide.
- Seek alternate safe harbour.

The vessel should travel at the same speed as the waves. The aim is to travel in on the back of a swell, staying ahead of waves breaking behind the vessel.





You should:

- Approach the break zone and try to pick the spot with the least activity.
- Keep any leads in transit; breakers may obscure your vision of the entrance.
- Choose a set of waves suitable for your entry.
- Position the vessel on the back of a swell and maintain speed, ensuring that:
 - You do not overtake the wave and run down its face.
 - You stay ahead of any wave behind you.
 - When the wave ahead of you has broken, accelerate through the white water.
- Beware of steep pressure waves bouncing back off the entrance or shore.
- Adjust speed to counter any pressure waves or any outgoing current.

Roads and Maritime Services has a number of initiatives on bar crossings including the brochure *Bars 'n' Boats – A Safety Guide*, a list of coastal bars and a bar crossing safety checklist sticker.

Roads and Maritime Services also has a network of web cameras to assist in trip preparation. Check the Roads and Maritime Services website for up-to-date information at 15 locations along the NSW coast and in the alpine area.

Inland waterways

Boating on inland waterways such as rivers, creeks and dams demands special care. Many of these areas present issues not encountered in coastal waters, including submerged trees and other snags.

Inland waterways are often murky and constantly changing; if you don't have a depth finder play it safe and reduce speed.

Familiarise yourself with the area using maps and wherever you can, talk to local operators. They can often provide valuable knowledge such as how the current runs after rain and water depth following drought.

Keep a good lookout for objects ahead or above you, such as overhead powerlines and low level bridges.

Strong currents in major rivers and creeks can flow at fast rates and affect the manoeuvrability of vessels. Never underestimate the power of even a moderate current, which can exert a strong force that may trap vessels such as canoes against rocks. Extra caution is required following heavy rain or flooding.

Be careful in dams subject to water releases and stay well clear of spillways. These can be extremely dangerous due to turbulence as the water flows through spillway gates. Boats can easily become caught in the turbulence and trapped.

Also remember that during release periods the foreshore can become soft, trapping vehicles during launch and retrieval.

Rivers and dams may look peaceful, but low water temperature and remote locations could prove risky should trouble occur.

Remember not to overload your vessel.





Wind and waves

The surface of the water in shallow dams and storage areas can become extremely rough in windy conditions. Waves are generally short and steep, and can be as high as those encountered in coastal areas.

- Always get a wind/weather report before boating.
- Keep a constant lookout for signs of:
 - changing weather
 - white caps/disturbance on the water
 - cloud development.

If the conditions deteriorate, put on your lifejacket and head for shore. Remember it is better to be on the shore a long way from home, than a long way from shore in such conditions.

Communication

If you are going to go boating in remote locations, have a good reporting plan in place. Always tell someone where you will be launching from and going, how many people are with you and when you intend to return.

Phone or radio coverage is not always possible, making assistance difficult if problems occur.

Alpine waters

Alpine waters mean Lake Burrinjuck, Lake Eucumbene, Lake Jindabyne, Khancoban Pondage, Swampy Plains River, Mannus Lake, Pejor Dam, Yass River, Googong Reservoir and navigable waters within Kosciuszko National Park (including Blowering and Talbingo Reservoirs).

Alpine waters present their own unique boating challenges. As with other inland waters, many hazards are not marked and as water levels fluctuate, more hazards may develop just under the surface.

The most common vessel operated in these areas is the small open runabout which is reasonably inexpensive to buy, easy to tow and used as a fishing platform. The majority of these vessels, however, are designed for calm water conditions only.

Wearing a lifejacket is compulsory for all persons in a vessel less than 4.8 metres in length. For other situations refer to page 20.

Alpine weather

There is no specific boating forecast provided by the Bureau of Meteorology for alpine waters. Any person boating in those areas needs to review the available general weather conditions and forecasts and determine how they may affect the waterway they propose to operate on.

Remember that weather conditions in high altitudes can change dramatically within a matter of minutes and proper trip preparation is essential.

Cold water

Winter brings a greater risk of hypothermia to boaters exposed to the elements. Capsizing in cold water can be life-threatening. So plan and prepare to avoid hypothermia:

- Minimise your capsize risk.
- Check the weather. If in doubt, don't go out.
- Wear warm and wet weather gear.
- Wear a lifejacket.
- In the water, don't swim. Remain with your craft in the "huddle" position.
- Remember, alcohol increases the body's heat loss.



Sydney Harbour

Sydney Harbour is a unique waterway that is used extensively by a diverse range of recreational and commercial boats including large ships, ferries, charter boats, cruisers, yachts, runabouts, sailing skiffs, dinghies, sailboards, rowing shells, kayaks and dragon boats.

The Harbour is an extremely busy waterway that requires you to be aware of your responsibilities and to take care when boating, especially in busy navigational channels, and make allowances for commercial activity.

There is a need to consider paddlers, rowers and sailors as well as accommodating the needs of commercial operators and those wishing to cruise, ski and fish on the Harbour.

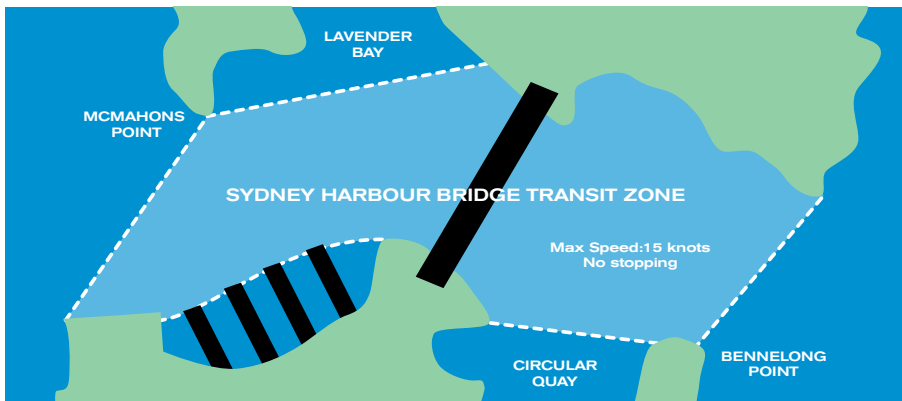
The number of vessels on the Harbour is increasing each year, providing a greater challenge in managing the potential for additional conflict and incidents to ensure safety on the waterway.

There is a continuing need for an understanding and commitment to water safety by all people using the Harbour. The different types of boating may not always be compatible and can lead to potential conflicts: for example, people sailing in organised events and commercial vessels operating to timetables.

Sydney Harbour Bridge Transit Zone

Roads and Maritime Services has established the Sydney Harbour Bridge Transit Zone. The transit zone has a 15 knot maximum speed limit in the vicinity of the Harbour Bridge, between a line drawn between Bennelong Point, and Kirribilli Point to Millers Point and Blues Point but does not include Walsh Bay, Sydney Cove or Lavender Bay north of a line between Blues Point and the southern extremity of Milsons Point ferry wharf.

Within this zone, anchoring or drifting are prohibited other than in an emergency. This means that vessels may only travel through this area to reach an area alongside or outside of the transit zone.

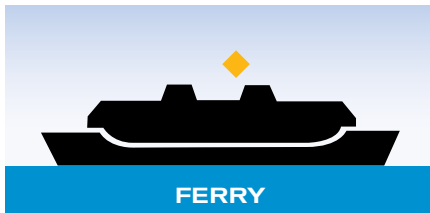




Priority over sail

Some commercial ferries on Sydney Harbour display an orange diamond shape which grants priority (right of way) over sailing vessels. This is an exception to the 'power gives way to sail' rule.

Do not attempt to cross the path of an approaching ferry displaying this signal.



High speed ferries (on Sydney Harbour)

These craft carry the normal lights for a power driven vessel underway and, in addition, they exhibit an all-round flashing yellow light when they are travelling at speed.



The main message to skippers of smaller craft is ... Keep Clear

Sydney Harbour Control

VHF Ch16/13 (24 hrs). Nav warnings/Met broadcast VHF Ch13 (5 min. past the hour). Unless otherwise directed, sailing vessels and motor vessels are not to impede the passage of commercial shipping/naval vessels inside the shipping channels. Navigation Collision Regulations 1983 apply.

NOTE: The use of a PWC is prohibited in Sydney Harbour (including all tributaries such as Parramatta River).

Big ships and small boats

Large vessels are restricted to particular channels and cannot deviate from their set course. These vessels are restricted in their ability to alter their course due to their size and need a large area to turn and stop. Their stern swings out wide when negotiating a turn and they lose steerage if they travel too slowly.

The main safety tips for small boats around shipping and ferry channels are:

- Recreational boats, both power and sail, should keep well clear of large vessels and ferries.
- Do not cross ahead of large vessels or ferries unless well clear. Even when hundreds of metres away, your boat may disappear from the ship master's view from the bridge.
- Remember, large vessels tend to travel much faster than they appear to be – give yourself plenty of room.
- Do not cross close astern of a large vessel or ferry.
- Always keep to the starboard side of a channel.
- Do not cross a channel if you are going to impede a vessel which has to use the channel.

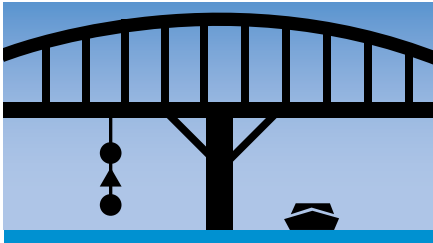


Roads and Maritime Services provides more information regarding big ships and small boats on its website, including map sections showing the shipping channels. Visit www.rms.nsw.gov.au.

Channel blocked/closed

These signals mean vessels should NOT navigate in that part of the channel.

- Bridge span blocked
- Channel is blocked
- Port closed



Active radar reflectors

Active radar reflectors emit a signal to nearby radar receivers. The signal is amplified and returned to the transmitting vessel.

This makes vessels more visible on radar receivers from greater distances and may reduce the chance of being involved in an incident. It may also assist rescue operations in the event of an incident.

Active radar reflectors need to be mounted high enough on a vessel to be effective (e.g. up the mast) and they require a power source. Consequently they may not be suitable for some smaller vessels.

While ARR are not mandatory on NSW navigable waters, they may be a good inclusion to improve your visibility to other vessel operators.

Recreational boat users beware

- It is important recreational boaters maintain a proper lookout at all times and do not impede any commercial vessel in its navigation.
- Recreational boaters must make clear their intentions to an approaching vessel well in advance. For the master of a large ship who is unclear of your intentions, you should indicate that you are getting out of the way of a large vessel at least one kilometre in advance of that vessel.
- It is important that you do not anchor in the navigation channel.
- Ensure that at all times you can be seen clearly. Dull aluminium tinnies can be difficult to see, especially in overcast and poor conditions. Wear bright clothing and be seen. After sunset and in restricted visibility ensure you have the correct navigation lights fitted and they are in proper working order. Your lights must be bright and must be visible for a distance of kilometres. Lights not only tell the other vessel what sort of vessel you have, but also what you are doing and where you are going. Make sure that if someone 'interprets' your lights, they are getting the right message.



Water-skiing, wakeboarding and towing

Towing activities include water-skiing, wakeboarding, aquaplaning (including on 'sea biscuits') and similar sports.

The towing vessel

- Must have current registration.
- Must have a minimum crew of two – the master (driver) and an observer (also applies to PWC when towing unless tow-in surfing).
- Must have a safety label (or PWC behaviour label).
- Must carry appropriate safety equipment.
- The towed person must be at least 7m behind the boat.


The driver

- Must hold a General Licence if the vessel will be operated at 10 knots or more, or PWC Licence when operating a PWC at any speed.
- Is responsible for the safety of the vessel and towed people and for maintaining the minimum distances off applicable to the boat and the skier(s).
- Must not be under the influence of alcohol or a drug.
- **Must not tow more than three persons at once.**



The observer

- Must be 16 years of age or older, or the holder of a Young Adult Licence.
- Must not suffer hearing, sight, or other disabilities which could affect the performance of observation duties and must not be under the influence of alcohol or a drug.
- Has the prime responsibility of observing the towed people and reporting all matters affecting them to the master.
- Tells the driver about other vessels approaching from behind.
- Should be familiar with the standard hand signals.

 **NOTE:** When towing the observer must face backwards to watch the person being towed whilst the driver faces forward to maintain lookout.

The towed person

- Must wear a lifejacket (see page 20).
- Must maintain the minimum distances off and, when returning to shore, must do so safely.
- Must not be under the influence of alcohol or a drug.

Distances off

When towing at any speed keep both the vessel and the towed person at least:

- **30 metres** from power-driven vessels not towing skiers, moored vessels, the shore, and structures (including jetties, bridges, moorings and navigation markers) or, if that is not possible, a safe distance.
- **60 metres** from persons (e.g. fallen skiers and aquaplaners, swimmers) and non-powered vessels (sailing and passive) or, if that is not possible, a safe distance.



- If towing aerial equipment (e.g. parafling) keep both the vessel, towed person and equipment at least:
 - **300 metres** from any bridge, cable, wire, pipeline or structure.

NOTE: These distances apply when approaching other vessels or persons from any direction including when following another vessel.



No towing areas

In some areas water-skiing and wakeboarding etc may be prohibited and signs may be displayed. In other areas, water-skiing may not be possible because of the location of hazards or a safe distance cannot be maintained.

Towing prohibited

- Towing is prohibited between sunset and sunrise.
- 'Teak' surfing (being pulled through the water while holding the swim platform of a vessel) is prohibited at all times.

Canoes and kayaks

Canoes and kayaks are classified as vessels and must comply with NSW marine legislation. An understanding of the safe boating rules that apply to canoes and kayaks will help paddlers enjoy their sport in safety.

Conflict between canoes and kayaks and power vessels may occur when the available water is restricted, particularly in busy waterways such as Sydney Harbour.

Lifejackets

Lifejackets are required to be worn when paddling more than 100 metres from the nearest shore on enclosed waters and at all times on open (ocean) waters.

The operator of the canoe or kayak is responsible to ensure that all persons on board comply.

Other safety equipment is not required, with the exception of a torch, between sunset and sunrise. Additional equipment is recommended for activities such as sea kayaking.



Paddle Smart

When Paddling You MUST

- Keep safe, stay right**
 - Where possible paddle outside the channel
 - Don't paddle in the centre of the channel or river
- Keep a proper lookout**
 - Use your eyes and ears to keep a good lookout
 - Take care when entering or crossing channels
- Keep clear of larger vessels**
 - Cross behind, not in front
 - Remember powerboat wash can capsize small craft
- Wear a lifejacket**
 - When more than 100m from shore or on open (ocean) or alpine waters

ALL REGULATIONS FOR AVOIDING COLLISIONS APPLY.
SHOW REQUIRED LIGHTS AT NIGHT.

Info Line: 13 12 56
www.rms.nsw.gov.au



Safety in canoes and kayaks

Paddle craft are small and sit low in the water, making it difficult for skippers of other vessels to see them in some situations. Take care when operating near other vessels and when crossing channels. It is important to be clearly visible while on the water. Suggested precautions to take:

- Attach a high visibility flag to your canoe/kayak.
- Wear highly visible clothing.
- Paddle in tight formation.
- Stay close to shore line.
- Keep to the starboard side of the channel, and

- Paddle during daylight hours or, if paddling in restricted visibility or between sunset and sunrise, exhibit two all round continuous or flashing white lights, one attached to the canoe or kayak at or near the forward end and the other one attached at or near the aft end. The light is to be visible in clear conditions from a distance of 1km and may be masked so as not to interfere with the vision of the occupants, provided at least one light is visible from any direction.

Paddle craft are lightweight and narrow, resulting in poor stability. Take care when boarding paddle craft, and placing any large or heavy items on board.

Be careful of sudden movement within the craft that may affect stability, as stability is largely dependent on the placement and movement of persons onboard.

Paddle craft are very portable and may be used in diverse areas from busy harbours through to remote inland waterways. Be sure to familiarise yourself with the particular hazards that may be present before embarking on a canoe or kayak trip (see the section on special areas in this handbook).

If you intend paddling in remote areas, tell someone where you are going and when you intend to return. Carry a hand held marine radio or mobile phone in case of emergency.





Sailboarding/kitesurfing

Sailboarding (sometimes referred to as windsurfing) and kitesurfing (sometimes referred to as kiteboarding) are surface water sports that combine elements of surfing with sailing and kiting, harnessing the power of the wind.

Both sailboards and kiteboards are classified as vessels and therefore come under NSW marine legislation.

Distance off

When travelling at 10 knots or more, sailboarders/kitesurfers and their equipment, including kite and lines, must:

- Maintain a minimum distance of **60m** from any persons or non-powered vessels or **30m** from powered vessels and any objects in the water or, if that is not possible, a safe distance.
- Stay out of a designated swimming zone (see page 34).

Lifejacket

An appropriate lifejacket must be worn when sailboarding more than **400m** from the nearest shore.

An appropriate lifejacket must be worn when kitesurfing on open waters more than **400m** from shore and kiting alone.

No-go/Caution areas

Sydney Harbour is a no-go zone for sailboarding and kitesurfing.

At Pittwater off Station Beach, caution is required as this is a seaplane landing and take-off area. Appropriate warning signs have been established north and south of the seaplane wharf.

Other locations may have no-go areas imposed by local signage. Visit Roads and Maritime Services' website to view relevant boating maps for details.

Safety tips

- Take extreme care when launching.
- Keep a proper lookout at all times.
- Maintain proper distances off when operating in the vicinity of surfers outside the designated surf zone.
- Keep a proper lookout at all times for obstructions, other craft or swimmers.
- Look all around – even behind you.
- Carry a hand held marine radio or mobile phone in case of emergency.

Give way

Power driven craft must give way to sailcraft such as sailboards/kiteboards unless the sailboarder/kitesurfer is in the process of overtaking.

A sailboarder/kitesurfer overtaking any other craft (power or sail) must keep well clear of the vessel being overtaken.





Personal watercraft

Personal watercraft (PWC) is the term used to describe vessels otherwise known by trade names such as Jet Skis, Waverunners and Sea Doos. Regardless of the type of PWC it is important to remember PWC are just another form of powerboat and are generally subject to similar regulations and laws. However, there are also some special rules that apply to the use of these craft.

- A PWC Driver's Licence is required to drive a PWC at any speed.
- All PWC must be registered if used on NSW waterways.
- All persons on a PWC must wear a lifejacket at all times.

 **NOTE:** Penalties apply to PWC owners if their craft is driven by a person who does not hold a current PWC licence.

FOR DETAILED INFORMATION ABOUT PWC REFER TO THE PWC HANDBOOK. ALSO AVAILABLE ON WEBSITE.



(1) PWC Exclusion Zone

The PWC Exclusion Zone includes the waters of Sydney Harbour, including the waters of all tidal bays, river and tributaries (includes Parramatta River, Middle Harbour and Lane Cove River).

PWCs are not permitted to be driven in the Exclusion Zone at any time, unless exempt. Penalties apply.

(2) PWC Restriction Zone

This zone encompasses the bays, rivers and other waterways within the Sydney basin area which lies between Port Hacking, Wamberal and the Blue Mountains, but does not include open (ocean) waters.

PWC are not permitted to be operated in an 'irregular manner' within 200m of the shoreline of the above. Examples of operating in an irregular manner are:

- Driving in a circle or other pattern.
- Weaving or diverting.
- Surfing down or jumping over or across any swell, wave or wash.

This means that PWC are required to be operated generally in a straight line within 200m of the shoreline.

(3) No Go PWC areas

There are some areas throughout the State in which PWC use is prohibited. PWC are not permitted to be driven in these areas at any time, unless exempt.

Visit Roads and Maritime Services' website to view PWC operating areas or the relevant boating maps for details.

Penalties apply.




(4) All other navigable waters

In all navigable waters, other than (2) and including all of the NSW coast, 'operating in an irregular manner' is not permitted within 200m of the shoreline where one or more dwellings are visible within 200m of that shore.

After sunset

Driving a PWC between sunset and sunrise is prohibited, regardless of whether navigation lights are fitted.

 **NOTE:** Operating in an irregular manner does not apply when a PWC is towing a water-skier or aquaplaner. However, as soon as towing activity is finished the operating in an irregular manner rule comes into effect.



Boating Industry Association

**Look for the
BIA Member
symbol**

Businesses throughout all segments of recreational boating can be found as members of the Boating Industry Association.

These businesses have pledged to abide by the association's Code of Practice.

Consider dealing with a BIA member first

Look for the BIA member logo or visit our website

www.bia.org.au





Communication and rescue

Emergency words

All calls are repeated three times.

MAYDAY

A mayday call denotes an emergency involving imminent danger to a vessel and the people on board. If you hear a mayday call you should not transmit, but continue to monitor the radio.

If a shore station such as the local Marine Rescue NSW unit fails to respond to the call, you should attempt to relay the message and render any assistance.

An example of a mayday message could be: "Mayday, Mayday, Mayday this is Phantom, this is Phantom, this is Phantom, a 5m red half-cabin, I am three miles off Red Head, we have been swamped by a wave and we are sinking. There are four people overboard. Over."

PAN PAN

Pan Pan is an urgency message that indicates a vessel is in trouble but not in immediate danger, for example: "Pan Pan, Pan Pan, Pan Pan, this is Phantom, this is Phantom, this is Phantom, a 5m red half-cabin, I am three miles off Red Head, we have been disabled by a wave and require a tow. There are four people onboard. Over."

SECURITE

Securite messages (pronounced "say-cure-e-tay") generally prefix navigational safety messages such as weather reports or navigation hazard updates, for example: "Securite, Securite, Securite, all ships, all ships, all ships, this is Coast Radio Sydney, Coast Radio Sydney for a renewal of a strong wind warning please switch to channel VHF 67. Out."

Search and rescue

Before a search can be initiated, someone must know that you are either in trouble or overdue. So tell someone where you are going, how many people are on board and when you expect to return.

It is strongly recommended that you log on and log off with Marine Rescue NSW.

There are a number of ways that a search and rescue agency can be alerted, including radio distress calls, distress flares, overdue reports and activation of an EPIRB.

AusSAR, a division of the Australian Maritime Safety Authority (AMSA), is Australia's national search and rescue authority and runs the Rescue Co-ordination Centre (RCC Australia) in Canberra.

RCC Australia can be contacted 24 hours a day on 1800 641 792.

Under federal regulations, operators of VHF and MF/HF radios are required to hold an operating certificate. The normal certificate for VHF recreational operators is the Marine Radio Operators VHF Certificate (MROVCP). Marine Rescue NSW offers this course, or check www.vhfradioonline.com for more details.

Operators of 27 MHz equipment are not required to hold a certificate but are strongly encouraged to obtain one for their own and other users' safety.

Fire and fuels

Fuel fires aboard small vessels spread rapidly and generate intense heat. Few people are able to successfully combat them.

The answer to the issue lies in preventing fires rather than fighting them.

Petrol/other fuel

A number of fires or explosions occur immediately after vessels have been refuelled. By using common sense and taking proper precautions, boating fires can be prevented as follows:



BE SAFE GOING OFFSHORE

BLUE WATER

BE SAFE GOING OFFSHORE

A good skipper will always treat the ocean with respect, so it's essential to plan and prepare. Remember:

- Check the weather forecast and your safety gear.
- Plan for any change of conditions by anticipating wind, waves, tides and safe havens.
- You must have a marine radio and a 406 MHz EPIRB distress beacon when more than 2 miles offshore.
- Wear your lifejacket.
- Always let someone know where you're going and when you plan to return.

For more information see our [website](#) or call the info line.

**YOU'RE THE SKIPPER
YOU'RE RESPONSIBLE!**

Info line: 13 12 56
www.rms.nsw.gov.au



Transport
Maritime



Have an approved fire extinguisher, service it regularly and know how to use it.

- Keep the bilge, engine compartment and engine clean and free of combustible materials.
- Check engine compartments are properly ventilated (especially on hot days and when recently refuelled.)
- Use a 'blower' or ventilation system prior to starting the engine or operating any electrical equipment.
- Be careful when using fuel stoves and lamps – don't store your extinguisher close to the stove or engine compartment.
- Check your fuel system regularly for leaks.
- Check the electrical system for faults and keep all components in a clean state.
- Don't fill your fuel caddies in the boat; take them ashore when fuelling.
- Clean up fuel spills quickly.

LP gas

Liquefied Petroleum Gas (LPG) is non-corrosive and clean-burning. It can cause suffocation if inhaled in sufficient volume.

When buying or selling a boat fitted with LPG burning appliances you should ensure that the gas cylinders have been inspected and that the equipment and hoses are in safe working order.

LPG has the same characteristics as water and will flow downwards and gather in the bilge.

Gas storage bottles should be located in a well-ventilated space. You should:

- Ensure all LPG installations are performed and serviced by a licensed gas fitter.
- Ensure all appliances are firmly secured and protected from draughts.
- Ensure cylinders and appliances are suitable for marine use.

In the event of fire, remove LPG cylinders from the heat source. If this is not possible, keep the cylinder cool by spraying water onto it. If flames are threatening to engulf a gas cylinder the vessel should be evacuated.

In the event of a gas leak stop all motors, close all cylinder valves, turn off all appliances and ventilate the vessel. Do not operate any electrical switches until the air is clear.

Leakages can lead to suffocation or explosion. To assist in early detection of leaks a strong odour has been added to LPG, but you should consider installing a gas detector.

Biofuels

In the interests of promoting the use of cleaner, greener, locally made fuels in NSW, the State government has taken steps to ensure the broader use of biofuels.

Biofuels are suitable for most applications where they are cycled quickly. Although marine engine manufacturers are producing new engines capable of using biofuels, boat owners need to be aware there are still significant safety and fuel management issues.

Implications for petrol engine owners

Normally ethanol blended fuel is not recommended in a marine application because ethanol absorbs water readily and it may separate from the petrol, resulting in engine failure. Ethanol is a solvent and may cause problems for carburettors, fibreglass fuel tanks, rubber fuel lines, fittings, seals and filtration systems, particularly in older engines and non-standard engines.



Implications for diesel engine owners

Biodiesel exhibits poor oxidation stability and is a medium for microbial growth. Both of these factors contribute to its breakdown, which can result in accelerated engine wear, the breakdown of engine lubricants and blockages of oil and fuel filters. Its solvent properties can result in damage to certain components including seals and hoses.

To avoid petrol with ethanol, buy either higher octane rated fuel which doesn't contain ethanol or regular unleaded petrol from a marina. Diesel blends of up to five per cent biodiesel do not require labelling, so always ask your marina operator before you fill your tank.

Person overboard

If someone falls overboard from a small open runabout, make sure that everyone onboard keeps the person in sight while you manoeuvre to pick them up.

In bigger craft and when operating offshore, throw over a lifejacket or marker immediately. If you lose sight of them this will act as a starting point for a search.

Keep the person in sight at all times; tell passengers to act as lookouts. Quickly establish your position either by reference to shore marks or by a GPS position. An accurate position will be essential if the search requires outside assistance.

Once the person is alongside, stop the engine and make sure that the weight in the vessel is redistributed before attempting to bring them on board. Consider bringing them over the stern if the vessel is unstable.

Propeller strikes

Boat propellers pose a risk that can too easily be ignored because they are 'out of sight and out of mind'. A strike from a propeller can cause serious injury or even death.

Propeller-related injuries are preventable and the skipper should take precautions to ensure the safety of all on board.

Spinning props a 'hazard zone'

The skipper should consider the area around the prop as a 'hazard zone' and be vigilant in ensuring that no part of any person comes near a spinning prop. Being aware of this hazard zone is particularly important for people involved in tow sports like water-skiing and wakeboarding and where powerboats are used near swimmers or children such as sailing schools or surf clubs.

Propeller precautions

Roads and Maritime Services recommends some basic safety guidelines as follows:

- Inspect the area near the stern to ensure the area is all clear before starting the engine.
- Turn the engine off near people in the water as some propellers may continue to spin, even in neutral.
- Keep a proper lookout at all times when underway, especially when near swimmers.
- Stay out of designated swimming areas.
- Observe 'distance off' rules and keep clear of people in the water, passive craft and other vessels.
- Brief any person driving the powerboat on the risks.
- Keep all arms and legs inside the boat and not over the bow or sides – bowriding and 'teak surfing' (holding onto the stern of a boat that is underway) are illegal in NSW.
- Wear a kill-switch lanyard whenever driving a vessel under power. A kill-switch lanyard is attached to the arm and stops the engine when pulled out.





PLAN AND PREPARE COLD WATER KILLS

Winter brings a greater risk of hypothermia to boaters exposed to the elements. Capsizing in cold water can be life-threatening. So plan and prepare to avoid hypothermia:

- Minimise your capsize risk.
- Check the weather. If in doubt, don't go out.
- Wear warm clothes and wet weather gear.
- Wear a lifejacket.
- In the water, don't swim. Remain with your craft in the "huddle" position.
- Remember, alcohol increases the body's heat loss.

For more information see our
website or call the info line.

**YOU'RE THE SKIPPER
YOU'RE RESPONSIBLE!**



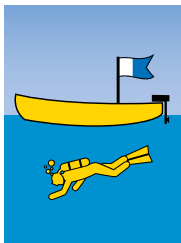
Skippers can also consider technology such as wireless engine cut-off switches, propeller guards and alternative propulsion systems. The best action, however, is for skippers to take care, keep a proper lookout at all times and keep people out of the 'hazard zone'.

Divers and swimmers

Make sure you keep a good lookout for snorkellers, spearfishers, divers and swimmers.

Be especially alert when you see the "Alfa" flag which means there are divers or snorkellers below.

If you are diving or snorkelling from a vessel you must display this flag and it is strongly recommended that you use the Alfa flag at all times while snorkelling, diving and ocean swimming.



Hypothermia/cold shock

Hypothermia is the effect of heat loss from the body's core. Hypothermia occurs when a person's body temperature is lowered to less than 35°C and affects your brain, heart and other internal organs.

While your body begins to cool as soon as you enter the water the full effect of hypothermia can take around 30 minutes.

Some of the effects of hypothermia are a reduction of blood flow to the hands, feet and surface of the body, intense shivering in the early stages as the body tries to maintain its core temperature and no shivering in the later stages.

To reduce the risk of hypothermia wear warm, preferably woollen, clothing under wet weather gear.

Various techniques have been developed to prolong survival time, including:

- **HELP** (Heat Escape Lessening Posture) – limit body heat loss by holding your arms down to your sides and up across your chest, and raising your knees and holding them together.
- **Huddle** – by huddling close together with other people, so that your chest and arms are protected, you can reduce the rate at which your body loses heat and increase survival time by up to 50 percent. This is the most effective method of reducing the onset of hypothermia if there is a group in the water.



Huddle Position HELP Position

Cold shock is the sudden uncontrolled reaction when a person first enters cold water. Breathing and heart rates accelerate sharply and the person may have difficulty in avoiding inhalation of water. The effects of cold shock subside quickly but can be life threatening in the first few moments. Wearing a lifejacket gives a person support at such a critical time.

If you do fall in, avoid panic. Try to grab hold of the vessel or a floating object until you regain control of your breathing. Try to get yourself out of the water if possible. Stay with the vessel and only swim to shore if it is very close.



Treating hypothermia

Hypothermia can be mistaken for drowsiness. There are, however, some signs and symptoms which will allow you to make an immediate evaluation:

- **Adults:** cold to touch; pulse slow, weak or imperceptible; breathing slow and shallow.
- **Children:** cold to touch; quiet and lacking appetite.

To treat hypothermia you must act quickly but gently. Never give the patient alcohol or an unwrapped hot-water bottle. The best method of treatment is to allow the patient to warm naturally where possible and you should:

Remove all wet clothing when warm, dry clothing or blankets are available.

Allow the patient to warm gradually with the aid of warm towels and blankets or gentle sources of warmth, including body heat.

Transport the victim to medical aid without delay. Their survival could depend on it.

Keep an aluminium “space blanket” on board.

Carbon monoxide

Carbon monoxide is a colourless and odourless gas produced when carbon based fuel, such as gasoline, diesel, propane, charcoal, or oil burns. High concentrations of carbon monoxide can be fatal within minutes.

Symptoms of carbon monoxide poisoning include irritated eyes, headaches, nausea and dizziness. As these symptoms are similar to seasickness and intoxication those affected may not receive the medical attention they need.

Boaters need to be aware of the sources inside and outside the vessel that produce carbon monoxide such as engines, generators and fuel burning cooking equipment.

Owners of vessels fitted with a rear vented exhaust system should remind passengers and swimmers that the rear deck and swim platform areas should be avoided when engines are running due to the levels of carbon monoxide.

Following is a list of things to do if you suspect a person has been affected by carbon monoxide. Remember to proceed with caution. The victim may be in an area that has high exposure to carbon monoxide, placing you and others in danger.

- Evaluate the situation and ventilate the area if possible.
- Evacuate the area and place the affected victim(s) in fresh air.
- Observe the victim(s) and administer oxygen if possible.
- Contact medical help. If the person is not breathing perform cardiopulmonary resuscitation (CPR) until help arrives.
- Shut off the potential source of carbon monoxide if possible. Correct ventilation problems and/or repair exhaust problems as appropriate.

Incident reporting

If a boating accident occurs in any port or navigable water in NSW, the master of the vessel must:

- Stop the vessel immediately.
- Give any assistance which may be necessary.
- Produce any licence.
- Give details to any person having reasonable grounds for requesting them (e.g. other persons involved in the accident).
- Details must include the master's name and address and any distinguishing number (that is, registration number or permit number) which is required to be displayed on the vessel.



If requested by a Roads and Maritime Services officer or any Police officer, provide the following details:


- Full identification.
- Time, place and nature of accident.
- Name and registration number of every vessel involved in the incident.
- Name and address of every person who was concerned with or witnessed the accident.
- Extent of any injury or damage resulting from the accident.
- Produce a boat driver's licence or certificate of competency.

Where the accident has resulted in the death of, or injury to, a person; or damage in excess of \$5000 to a vessel, or any other property,

a written report must be forwarded to Roads and Maritime Services within 24 hours setting out the particulars, unless these have already been given to a Roads and Maritime Services officer.

Vessel Incident Report Forms

Vessel Incident Report forms are available from any Roads and Maritime Services operations centre, or download from Roads and Maritime Services' website, the Police, and Marine Rescue NSW.

 **NOTE: Penalties apply for not reporting an accident to Roads and Maritime Services.**

Emergency Contacts: Tel 000 or VHF16



Log On with us for safer boating

Log On with your local Marine Rescue unit and you're making sure that someone responsible knows you're on the water and when you're due to return. If an emergency prevents you from **Logging Off**, Marine Rescue can start a search without delay.

When you contact the Marine Rescue radio base, the operator will ask you for details about your boat, your plans for the day and other information that will help in case of an emergency. This is a free service. **All you need to do is call or radio in to Log On.**

When you return after your day out, make another call to **Log Off** and tell us you're back safely.



MARINE RESCUE NSW - Volunteers saving lives on the water

www.marinerescuensw.com.au

Other licences

Aquatic licences

An aquatic licence is required by any person or organisation conducting, promoting or organising a race, competition or exhibition or any other activity which restricts the availability of navigable waters for normal use by the public.

Penalties apply for conducting such an event/activity without an aquatic licence.

Applications for aquatic licences, supporting documentation and an appropriate fee must be submitted to Roads and Maritime Services a minimum of four weeks prior to commencement of the event/activity, otherwise the application may be refused or a late fee payable.

If the aquatic licence requires the exclusive use of an area of water then a 'special event' may have to be declared, and Roads and Maritime Services may require a fee for placing a required notice in the local newspaper.

Mooring licences

A mooring is used to secure a vessel in a particular location. There are various types of moorings including:

- Private – Licence permits you to moor your vessel on navigable waters subject to a range of conditions and is renewable annually.
- Commercial – Licence issued to a company or other legal business entity trading to provide marine type services to the boating public subject to a range of conditions.
- Emergency – Used by Roads and Maritime Services or Water Police to store vessels in emergency situations.
- Courtesy – Freely available for use by the general boating public on a 24 hour basis.

Private mooring licences, subject to availability, allow a vessel to be secured to a mooring in a particular location. Private mooring licences are only issued with respect to a specific vessel and to individuals.

The individual must:

- Nominate a vessel of at least 5.2 metres registered in their name; and
- Be the sole owner or equal majority shareholder of the vessel.

In high demand areas where mooring sites are not readily available, applicants will be placed on a priority waiting list in strict order of application date. When a mooring site becomes available, the person on top of the priority list will be offered the site. An annual mooring fee is payable and is based on the mooring location and length of vessel.

Prior to changing a vessel associated with a mooring licence, the licensee must notify Roads and Maritime Services in writing and pay a change of vessel fee.

Hire and drive licences

This information is provided for anyone wishing to become a 'hire and drive' licensee and anyone wishing to hire a vessel.

A person conducting a hire business must be licensed by Roads and Maritime Services.

The term 'hire and drive' applies to a vessel that is made available to the public for hire for recreational use and is:

- A powered vessel less than 7.5m in length, including 'tinnies' and PWC; or
- A passive (unpowered) vessel less than 10m in length, such as a rowboat, canoe, kayak, pedalcraft, inflatable, sailboard, catamaran or sailing vessel.

Licensing of these businesses is required to ensure that hire vessels are of a suitable standard and that hire operators follow appropriate and consistent procedures before hiring a vessel to a member of the public.

Hire and drive licensees are required to display their licence in a prominent place at the hire premises and all hire vessels must display a unique identifying number and details of the licensee, such as the company logo.

If you suspect a hire operator is not licensed, or you have a complaint regarding a hire and drive operator, call Roads and Maritime Services' Infoline on **13 12 56**.

People hiring a hire and drive vessel must observe the marine regulations and safety requirements at all times. In particular, hirers must comply with lifejacket carrying and wearing requirements.

For further information visit the hire and drive section at www.rms.nsw.gov.au.

Environment

The pollution of our waterways can spoil not only the environment but also boating and other on-water activities. Recreational and commercial boaters have a responsibility to properly dispose of vessel waste.

The *Marine Pollution Act 1987* and the *Protection of the Environment Operations Act 1997* set out requirements to prevent pollution and protect the NSW marine environment.

Sewage Disposal

It is illegal to discharge raw sewage into NSW waterways. Roads and Maritime Services officers can issue on-the-spot fines for polluting the water. Serious matters may be dealt with in court.

Passenger-carrying commercial vessels and houseboats in NSW are required to install holding tanks to prevent the discharge of raw sewage.

Recreational boaters with an onboard toilet should also install a holding tank.

Raw sewage from a holding tank or portable toilet should be deposited at appropriate

pumpout facilities and never into NSW waterways. Public pump-out facilities are provided in many locations throughout NSW. Some marinas also provide private pumpout facilities for clients.

For details, visit the Roads and Maritime Services website www.rms.nsw.gov.au or call the Infoline **13 12 56**.

An approved onboard sewage treatment system can also be used, but remember certain areas are declared as 'no-discharge zones'. Treated sewage should never be discharged in inland waterways, coastal lagoons, marine parks or aquatic reserves or within 500 metres of moorings, marinas, anchorages, swimming beaches or aquaculture sites.

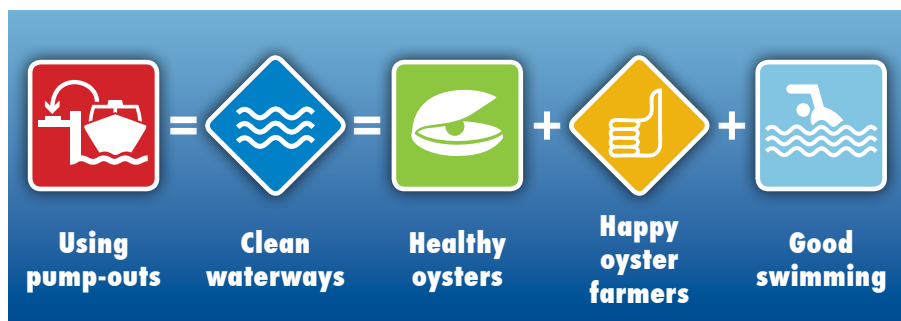


Disposal of Other Waste

It is illegal to pollute NSW waterways in any way and sensible environmental practices on and around the water will go a long way towards preserving NSW waterways for future generations. For example:

- Collect all your rubbish on board and dispose of it properly ashore.
- Wipe cooking utensils and plates clean with a paper towel before washing.
- Use low or non-phosphate soaps in sinks and showers.
- Keep bilges clean to prevent pollutants being discharged overboard.
- Remove your boat from the water and clean it in places where debris can be captured and disposed of properly.

More information is contained in the *Leave Only Water in Your Wake* pamphlet, available from Roads and Maritime Services.



Using local sewage pump-out facilities keeps you and your oysters clean, healthy and happy

Shellfish Harvest Areas

The NSW shellfish industry is the largest aquaculture industry in the state; however the success of this industry is totally dependent on water quality to deliver a safe product to consumers. The majority of NSW estuaries have designated areas for commercial shellfish harvest and the discharge of treated sewage in these areas could have a devastating impact on the industry. Please use sewage pump-out facilities for vessels and on-shore toilets where available to ensure the highest level of water quality protection for the commercial and recreational harvest of shellfish.



Be aware of restrictions on vessel noise and wash

Noise

The main thing to consider under noise control legislation is the concept of offensive noise, which is based upon how a “reasonable person” would react.

In deciding whether the noise from a motor vessel is offensive, the following factors are considered:

- The character of the noise.
- The quality of the noise.
- The noise level.
- The effect the noise has on activities.
- The time of the noise event, eg. early morning.
- The waterside land use.

Noise also disturbs wildlife. Care should be taken to reduce noise in the vicinity of waterbirds and other animals.

Bank erosion and wash

The wash from a vessel can erode banks in sheltered waterways. The larger the wake, the greater the potential for bank erosion.

Roads and Maritime Services has introduced wash restrictions in areas where vessel wash has potential to erode shorelines. Every skipper must comply with “no wash” signs.

Wakeboarders and skippers of larger powercraft should take extra care to ensure they minimise the impact of wash from their vessels.



STOW IT DON'T THROW IT

Pollution not only spoils the environment, but also boating and other water activities for everyone. So remember:

- Plastic products thrown into the water can last for a very long time. They can cause damage to marine life, people and boats.
- Plastic bags can be mistaken for jellyfish, a source of food for some sea life and can be fatal.
- Plastic bags can also block engine intakes.
- So stow all your rubbish on board and then dispose of it properly once you are back ashore.

For more information see our
website or call the info line.

**YOU'RE THE SKIPPER
YOU'RE RESPONSIBLE!**

Info line: 13 12 56
www.rms.nsw.gov.au



Transport
Maritime



Seagrass beds are easily damaged by anchors, propellers and marine jet drives

Seagrasses

Seagrass beds provide food and shelter to a wide variety of fish and invertebrates. They also help bind the sea floor and improve water quality.

Seagrass has already been lost in some areas through the effects of water pollution, foreshore development and the recreational and commercial use of our waterways. You can help to preserve our seagrasses by adhering to the following:

- Do not drive your boat across shallow, weedy areas, as boat propellers and jet propulsion units may damage seagrass.
- Do not anchor on seagrass beds.

- If you need to replace your mooring and it is currently over a seagrass bed, contact your local Roads and Maritime Services office to discuss other options.

Aquatic weeds

Aquatic weeds include freshwater plants such as *Salvinia*, *Cabomba* and alligator weed, as well as the marine seaweed *Caulerpa taxifolia*, which has been found in several estuaries along the South and Central Coasts of NSW.

Aquatic weeds can seriously harm the environmental and recreational value of rivers, estuaries and lakes. These weeds are often highly invasive and can smother and choke water bodies by forming large floating mats,



Caulerpa taxifolia



Propeller heavily fouled in aquatic vegetation

dense submerged thickets or stands along the bank. A single infestation of *Salvinia* once smothered 80 km of the Hawkesbury River.

Aquatic weeds can deplete oxygen levels, reduce sunlight penetration and displace native plants. The associated affects on water quality and available habitat can reduce the abundance and diversity of fish and other aquatic animals and displace waterbirds. In some cases, boating restrictions are required to minimise the spread of aquatic weeds, while heavy infestations can make boating impossible.

Dense weeds can be spread in a variety of ways. Propellers and anchors can cut plants into fragments that are then easily spread by currents. Fragments can be introduced to new waterbodies via vessels, trailers and fishing equipment. A single plant fragment can start a new infestation, and some weeds can survive for several days out of water – especially in damp conditions amongst ropes, diving equipment and fishing gear etc.

If you are boating in a *Caulerpa* infested area or on freshwater rivers, lakes and dams you should:

- Avoid shallow weedy areas or places with heavy aquatic plant growth where possible.
- Obey any local vessel exclusion zones or fishing closures.
- Inspect all ropes, anchors and fishing gear before and after use.
- Clean your boat, trailer and all equipment after removal from the water and before moving to another waterway.
- Learn to recognise aquatic weeds and be observant for new or unusual weeds.

If you suspect a new weed infestation in freshwaters, contact your local council weed officer or the NSW Department of Primary Industries on **1800 680 244** or email **weeds@dpi.nsw.gov.au**. Further information on freshwater weeds can be found at **www.dpi.nsw.gov.au/agriculture/pests-weeds/weeds**.



Heavy infestation of floating weed

If you suspect a new infestation of *Caulerpa* or other marine weed, contact the Department of Primary Industry's Aquatic Biodiversity Unit Pest Hotline on **(02) 4916 3877**.

Further information on *Caulerpa* and other marine pests is available at **www.dpi.nsw.gov.au/fisheries/pest-diseases/marine-pests**.

Protected aquatic animals

All native mammals, birds and reptiles are protected in NSW. Vessel operators must keep an active lookout to avoid harming these animals.

Protected aquatic animals include whales, seals, dolphins, penguins and turtles, as well as a variety of water birds.

Boat-based whale watching has become a popular activity. To safeguard whales and minimise danger to vessels, there are certain rules governing vessel speeds and approach distances around whales (see diagram).

All vessels (powered and un-powered) must stay at least 100 metres from a whale (300m if whale is with calf) and maintain a slow 'no wash' speed while within 300 metres.



Little penguins are another endangered species and parts of Sydney Harbour have been declared 'critical habitat' to better protect them. Special rules apply in this area during the penguins' breeding season (1 July to 28 February), including restrictions on anchoring, fishing and vessel access in the Spring Cove area.

For further details about the protection of whales, penguins, seals and other aquatic animals, visit the Environmental and Heritage website at **www.environment.nsw.gov.au**.

Whale and dolphin watching

Whale approach distances



Dolphin approach distances



Advice to skippers

- Go slow when within 300m of whales and 150m of dolphins
- No more than three vessels at a time should approach whales or dolphins. Wait for your turn and don't barge in
- Start your approach at an angle of at least 30 degrees to their direction of travel
- If a whale approaches your vessel:
 - Slow down to 'no wash' speed
 - Move away or disengage your vessel's gears
 - Make no sudden movement
 - Minimise noise

DCEP 2008



Transport
Maritime

Boat Maintenance

It is important to ensure your vessel is in good order by inspecting the key features of the vessel each time before you leave home or the ramp, mooring or wharf. The major causes of breakdown at sea are engine failure, fuel shortage or contamination, mechanical failure and battery failure.

The vessel checklist

- On entering the vessel, and before operating any switches or engines, check for petrol and/or LPG odours; fix any faults before you go out.
- Ensure the vessel is well ventilated to prevent carbon monoxide build up from exhaust systems.
- Inspect the bilges. If there is more bilge water than usual, find and rectify the fault.
Note: when pumping bilges be aware of the environment. Polluting the waterways is an offence.
- Check fuel, engine oil and coolant levels. Top up if required. Examine batteries, terminals etc. Do the same for the second engine if carried.
- Check the fire extinguisher is in good condition.
- Ensure there is sufficient fresh water and food for the length of the voyage with some extra in case of emergency.
- Make sure your lights are in working order; it may be a daylight outing, but you could be delayed in returning.
- Fuel should be fresh (not last year's) and you should have enough fuel for the full trip plus reserve.
- Self-draining holes should be clear.
- Ropes and lines should be in good condition and stored ready for use.
- Steering cables and connections must be in good working order.

- Inspect the battery.
- Check that appropriate anchors are on board and are properly rigged, stowed and ready for use.
- Have one appropriate and accessible lifejacket for each person on board.
- Children should have suitably-sized lifejackets and look at means of rigging lifelines in open areas so that children have enough handholds.
- If you have a radio, make sure it is on and working. The best way to do this is to report the details for your vessel and voyage to a coast radio station or local base station.
- Have up-to-date charts showing ports along your route.
- Ensure you have a complete first aid kit.
- Essential tools and spare parts should be in good condition.
- Keep a sharp knife in a handy place; you may need it to cut ropes etc.
- Have a rescue quoit or lifebuoy ready for use.
- Have a whistle, mirror, marker dye, flares for emergency signalling.
- Do not overload your vessel.
- Don't forget the bung!

Recommended spare parts

(minimum suggested items)

O = outboard powered vessels

I = inboard powered vessels

Y = yacht

- pulley belts (IY)
- 'D' shackles (OIY)
- fuses for motor and radio (OIY)
- propeller (O)
- spark plugs (OI)
- starter cord (O)
- fuel filter (OIY)

- shear pins for propeller/spare nuts and bolts (OIY)
- roll of waterproof electrical tape (OIY)
- spare fuel line (OI)
- electrical wire (OI).

Recommended tool kit

(minimum suggested items)

- bolt/wire cutters (Y)
- adjustable spanners (OIY)
- small metal file (OIY)
- screwdrivers (OIY)
- hacksaw and blade (OIY)
- pliers (OIY)
- wire brush (OIY)
- water displacement spray (OIY)
- spark plug spanner (OI).

Motor maintenance

Regular maintenance will help to ensure some of the following parts won't let you down.

Water pump: replace regularly especially if you have been operating in the shallows and stirring sand or mud. Water pump impellers also deteriorate if not used for lengthy periods.

Fuel filters and lines: filters become clogged and lines can harden with age and exposure.

Propellers: the bushing of the propeller can fail especially if it has hit sand or rocks. Always carry a spare shear pin.

Spark plugs: plugs can break down unexpectedly. Carry spares.

Gear box oil: snagged fishing line on the drive shaft is a common cause of leaking gear box seals. Water in the gear box will eventually cause it to fail. Regular oil changes will prevent this.

Some of the causes for engine failure are minor, so you should be able to troubleshoot a problem. Take time to learn how to:

- Change the filter and primer bowl.
- Clean and change spark plugs.
- Check for spark.
- Check and replace fuses.
- Change the propeller.
- Clean battery terminals.

Don't be a backyard mechanic – have all major servicing done by a qualified mechanic.



Boating offences

Penalty notices

If an offence such as speeding is committed, authorised officers (Roads and Maritime Services or Police) may issue a penalty notice requiring payment of a penalty within a prescribed period.

Serious offences

Serious or repeat offences under the marine legislation may result in proceedings in a court after the issue of a court attendance notice.

Such offences may include dangerous or negligent navigation.

Alcohol and drug offences

Breath testing, including random breath testing (RBT), can be conducted on the operator of a vessel while it is underway (including drifting).

RBT does not apply when a vessel is moored, berthed or at anchor. Driving under the influence of alcohol is an offence, and be aware Maritime Boating Safety Officers can issue a court attendance notice. A designated driver (skipper) should remain under the legal limit when out on the water in case you need to move your vessel.

Permissible concentration of alcohol limits are as follows:

- **less than 0.02** for commercial vessel operators.
- **0.00** for recreational vessel operators aged under 18 years.
- **less than 0.05** for recreational vessel operators over 18 years.

The operator of a vessel includes anyone steering or exercising control over the course or direction of a vessel and includes the observer in a ski boat or PWC, as well as the person being towed.

 **NOTE: Penalties apply.**

Naval vessels

For safety reasons, people are prohibited from climbing, attaching themselves to or helping another person to attach themselves to a naval vessel.

A 'moving exclusion zone' has also been introduced for naval vessels while on NSW waters. This zone extends **200m** from the bow and **60m** either side of a naval vessel whilst it is underway.

A 'distance off' of **60m** from a naval vessel that is moored, anchored or berthed also applies at all times.

 **NOTE: Penalties apply.**

Other offences

A boat driving licence or certificate of competency may be cancelled or suspended in other instances including after a conviction for negligent and/or dangerous navigation, for causing a nuisance or overloading, or if it is believed the holder is not a 'fit and proper' person to hold the licence, for instance, for repeat offences.

Registration of a vessel may be cancelled or suspended if the vessel has become unsafe or unseaworthy, if it is found to be not a true vessel and is being used as a wharf or pontoon, or if it is environmentally hazardous.

**YOU'RE THE SKIPPER
YOU'RE RESPONSIBLE!**



GO EASY ON THE DRINK

When you're in a boat, the combination of wind, waves and the sun can all magnify the effects of alcohol and affect your judgement and skills.

Remember:

- The blood alcohol limit on water is 0.05 for recreational vessel operators over 18 years – the same as on the road.
- Random breath testing also applies on the water.
- Go over the limit and you could really get in over your head.
So go easy on the drink.

For more information see our
website or call the info line.

**YOU'RE THE SKIPPER
YOU'RE RESPONSIBLE!**

Boating terms

“Jargon” or specialised language has been developed over the years to refer to specific aspects of boating and provide clear and concise communication. You don’t need to know all of the terminology, but a working knowledge will prove useful.

Terminology definitions

Abeam

Abreast of, or at right angles to, the fore and aft line of the vessel.

Aft

Towards the “stern”, or rear of the vessel.

Bar

A shallow area formed by sand, mud, gravel, or shingle, near the mouth of a river or at the approach to a harbour which is often dangerous.

Bombora

A shallow area where waves may break.

Bow

The front of the vessel.

Chart datum

The level below which soundings are given on some charts and maps above which are given the drying heights of features. Datum is also the level above which tidal levels and predictions are given in Tide Tables.

Conditions of heightened risk

In relation to a vessel, means conditions when tides, river flows, visibility, rough seas, adverse weather or an emergency cause a risk to the safety of persons onboard the vessel.

Draft

The minimum depth of water a vessel needs to float in.

Ebb tide

The falling or run-out tide.

Enclosed waters

Any port or inland navigable waters in New South Wales.

Fairway

Any navigable channel.

Flood tide

The rising or run-in tide.

Give way

Reduce speed, stop, go astern or alter course so as to keep out of another vessel’s path.

Go astern

Reverse engines or travel backwards.

Gunwale

Pronounced “gunnel”, the top edge of the vessel’s sides.

Heave to

Steering into the wind and sea making minimum headway.

Knots (speed)

One knot is a speed of one nautical mile per hour, or 1.852 km/hr.

Leads (transits)

Marks used in channels and at bar entrances which when in line indicate the centre of the navigable channel.

Lee shore

The shore onto which the wind blows.

Leeward

Downwind side.

Open waters

Navigable waters which are not enclosed waters. Sometimes referred to as "ocean" waters.

Open vessel

A vessel that has no part of, or not more than one-quarter of, the area between its gunwales permanently covered so as to hinder water from entering the vessel.

MHWS

Mean High Water Springs is an average value of high tides used on some signs. Makes no allowance for unusual tide conditions.

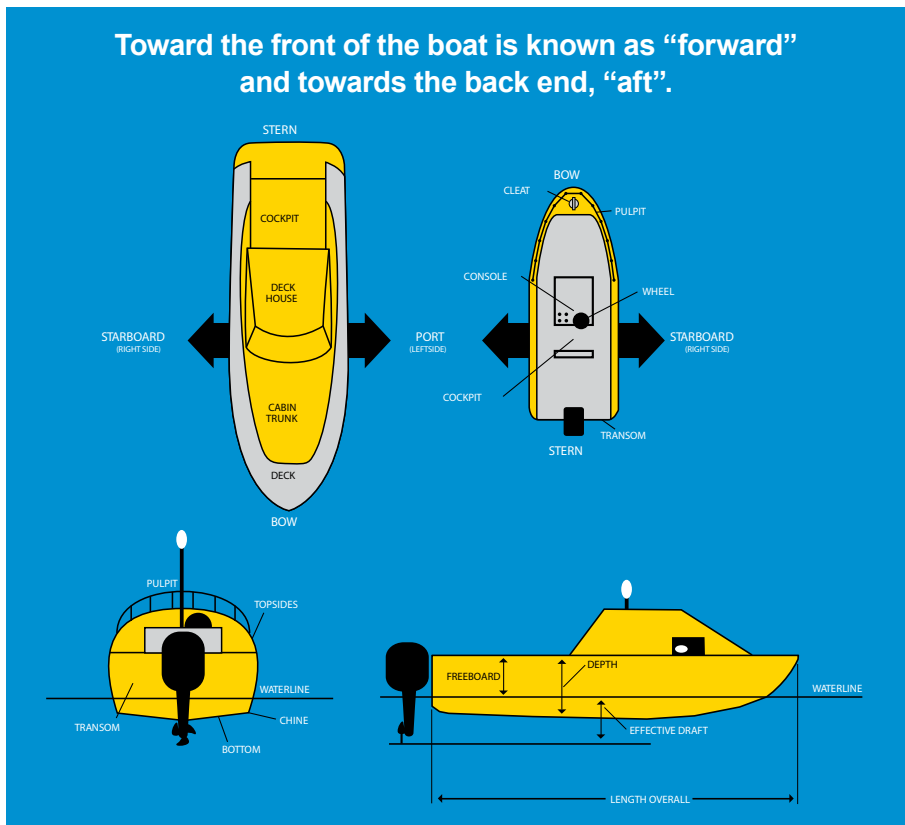
Port

Includes:

- A. any harbour or haven, whether natural or artificial, or any estuary, channel, river, creek or roadstead; and
- B. any navigable water in which vessels may lie for shelter or for the shipment or unshipment of goods or passengers.

Port side

The left hand side of a vessel when you are looking forward from the stern and the side on which a red sidelight is displayed.



PWC

A personal watercraft is a vessel designed to be operated by a person standing, sitting astride or kneeling on. It uses waterjet propulsion and has an engine in a watertight compartment.

Sailing Vessel

A vessel propelled only by sails; when a vessel is under sails but being propelled by engines it is classed as a power driven vessel.

Sea anchor

A parachute like device used to reduce speed and stabilise the vessel in adverse conditions.

Sidelights

Lights to be shown at night when underway, showing an unbroken light over an arc of 112.5 degrees from right ahead to 22.5 degrees abaft the beam.

Spring tide

A tide of relatively large range occurring near the times of New or Full Moon.

Stand on

Continue on the same course and speed.

Starboard side

The right hand side of the vessel when you are looking forward from the stern and the side on which a green sidelight is displayed.

Stern

The back or rear of the vessel.

Tender

- under 3m
- positive buoyancy
- used to transport persons or goods not more than 200m from shore to vessel and vice versa, and between vessels.

Underway

Not at anchor or made fast to the shore or ground. If you are drifting you are underway.

Windward

The direction from which the wind blows (upwind).

Roads and Maritime Services Boating Handbook

The Boating Handbook is produced by Roads and Maritime Services, the NSW Government Authority responsible for marine safety and regulation of commercial and recreational boating.

While care was taken with the production of this handbook, its purpose is to act as a general guide and to provide information in the form of a broad overview only. Roads and Maritime Services does not accept responsibility for errors or omissions and will not be held liable for any damage or injury arising out of the use or interpretation of any of the material provided in this handbook. For formal legal interpretation, refer to the Marine Legislation at www.legislation.nsw.gov.au or seek independent legal advice.

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This quiz may help you develop a better understanding of the rules for safe boating. For more questions and to test your knowledge, visit the online quiz at www.rms.nsw.gov.au

1. When you are driving a vessel at a speed of 10 knots or more or towing a person, what is the MINIMUM distance you MUST keep from a person or non-powered vessel?

- A. 30 metres.
- B. 60 metres.
- C. 100 metres.
- D. 200 metres.

2. You are driving a power boat at night and you see a vessel off your port bow (in front of you, to your left). Who should give way?

- A. The other vessel.
- B. The vessel that you are driving.
- C. The driver of the slowest boat.
- D. The driver of the smaller vessel.

3. When travelling UPSTREAM (away from the sea) at night, on which side should you keep a flashing green light to stay within the channel? Keep it on:

- A. Your port (left hand) side.
- B. Your starboard (right hand) side.
- C. Either side (it does not matter).
- D. Stay in the middle of the channel regardless of the mark.

4. You are driving a vessel at a speed of 10 knots or more or towing a person, what is the MINIMUM distance you must keep from a power vessel or structure (bridge, pylon, jetty)?

- A. 30 metres.
- B. 60 metres.
- C. 100 metres.
- D. 200 metres.

5. When is it COMPULSORY to carry a waterproof torch on NAVIGABLE waters?

- A. Only when travelling at night.
- B. Between sunset and sunrise.
- C. At all times.
- D. Only if going more than 2 nautical miles offshore.

6. Which of the following activities CAN be undertaken by the holder of a young adult boat licence?

- A. Operate any vessel (excluding PWC) under 20 knots while towing a person.
- B. Operate any vessel (excluding PWC) under 20 knots after sunset and before sunrise.
- C. Operate any vessel (excluding PWC) under 10 knots while towing a person.
- D. Operate a Personal Watercraft under 10 knots.

7. What is the minimum distance you must anchor your vessel from a submarine cable?

- A. 200 metres.
- B. 50 metres.
- C. 300 metres.
- D. 100 metres.

8. Flares, 'V' sheet, map and a compass are some of the COMPULSORY items you need on your boat when:

- A. More than 2 nautical miles offshore.
- B. More than 400 metres from any shore.
- C. Operating in 'open' waters.
- D. Weather conditions are poor.

9. An efficient sound signalling device is required to be carried:

- A. Only by vessels proceeding to open waters.
- B. Only by power driven vessels over 8 metres in length.
- C. On all vessels.
- D. Only on vessels operating after sunset.



10. A navigational marker shows a white light flashing quickly in groups of nine flashes. What does it mean? Deeper water is to the:

- A. North.
- B. East.
- C. South.
- D. West.

11. What MUST you do when driving a vessel within a NO WASH ZONE?

- A. Travel at no more than 8 knots.
- B. Travel at a speed shown on a speed restriction zone.
- C. Not tow a water-skier or aquaplaner.
- D. Travel at a speed which creates minimal wash to ensure that your wash does not affect other people or persons.

12. You hear a 'mayday' call on the radio. Your first response should be to:

- A. Monitor the radio. If a shore station fails to respond, attempt to relay the message.
- B. Render assistance immediately.
- C. Ignore the message. Emergency services will respond.
- D. Activate your EPIRB.

13. As the master when crossing a coastal bar it is COMPULSORY to:

- A. Ensure that everyone onboard is wearing an approved lifejacket Type 3.
- B. Notify a coastal radio station of your intention.
- C. Ensure that everyone onboard is wearing an approved lifejacket Type 1.
- D. Proceed only if the bar is flat.

14. The number of persons permitted to be towed behind a vessel is:

- A. Determined by the number of handles on the apparatus being towed.
- B. Whatever the manufacturer states is permissible.
- C. Maximum of three persons.
- D. Whatever the vessel's master (driver) thinks is safe.

15. The responsibility of the master (driver) is to:

- A. Maintain a proper lookout and avoid collision.
- B. Ensure the safety of those onboard the vessel.
- C. Ensure that all safety equipment is accessible and stored onboard correctly.
- D. All of the above.

16. When is a reduction of the maximum number of persons shown on a safety label recommended?

- A. Only when boating in adverse weather conditions.
- B. Only when operating a commercial vessel.
- C. When there are children onboard.
- D. When boating in poor weather conditions or when operating on open waters.

17. What does the word 'securite' indicate when said three times at the start of a message?

- A. A vessel is in trouble but not in immediate danger.
- B. A navigation safety message such as a weather warning is about to be transmitted.
- C. There has been a security breach onboard a vessel.
- D. There is an emergency situation onboard a vessel.



18. What is the MAXIMUM permissible blood alcohol level for a person aged OVER 18 years when driving a recreational vessel in NSW?

- A. Under 0.08.
- B. Under 0.02.
- C. Under 0.05.
- D. Nil.

19. When should you switch on and display navigation lights on a vessel underway?

- A. Only when it is dark.
- B. From sunset to sunrise and in restricted visibility.
- C. At night only when travelling on open waters (the sea).
- D. At night in port areas only.

20. What is the minimum age of an observer when water skiing/ aquaplaning if NOT the holder of a young adult boat licence?

- A. 14 years.
- B. 15 years.
- C. 16 years.
- D. 18 years.

21. Who should be encouraged to wear a lifejacket at all times?

- A. Children and poor swimmers.
- B. Elderly persons.
- C. Persons with medical conditions (eg heart or breathing problems).
- D. All of the above.

22. You are driving a vessel at high speed and your vision is suddenly affected by sun or spray. Your immediate reaction should be:

- A. Slow down or stop.
- B. Continue driving at speed in anticipation that you will regain your vision.
- C. Increase speed and manoeuvre vessel to find a direction to minimise spray and the effect of the sun.
- D. Alter course to port and continue at speed.

23. For environmental reasons, where should you avoid driving your boat?

- A. Deep river channels.
- B. Shallow weedy areas which may contain endangered seagrasses.
- C. Boundaries between murky and clear water.
- D. Bar crossings.

24. A good way to minimise the impact of vessel waste on the environment is by:

- A. Minimising soap and detergent use onboard.
- B. Keeping your bilges clean to prevent pollutants being discharged overboard.
- C. Wiping cooking utensils and plates clean with a paper towel before washing up.
- D. All of the above.

25. What is the safest way to move about in small craft?

- A. Crouch down and keep to the centre of the vessel.
- B. Crouch down and keep to the right of the vessel.
- C. Stand up and keep to the centre of the vessel.
- D. Stand up and keep to the left of the vessel.

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Our Safety Ambassadors:
Andrew 'ET' Ettingshausen (trailerboats)
& Pete Goss (offshore) ...

Visit www.boatforlife.com.au

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Transport
Maritime





26. When returning over a coastal bar or travelling with a large 'following sea' offshore, the SAFEST option is to:

- A. Maintain a position behind the wave, but not too close.
- B. Maintain a position just in front of the wave.
- C. Proceed at speed through the waves.
- D. Maintain a position on top of a wave.

27. What do cardinal marks indicate?

- A. Special features such as underwater pipes.
- B. Deeper water in a compass direction away from danger.
- C. Specific dangers such as wrecks.
- D. Large shipping channels.

28. The maximum speed a young adult licence holder can drive a powerboat during daylight hours is:

- A. 15 knots.
- B. 20 knots when accompanied by a general licence holder.
- C. 20 knots if not towing a water skier.
- D. 40 knots.

29. Where should you drive a vessel in a channel?

- A. On the port (left-hand) side.
- B. In the middle of the channel.
- C. On the starboard (right-hand) side.
- D. On any side – it does not matter as long as a collision does not occur.

30. You have an emergency onboard your vessel and you assess that you need flares to signal for assistance. When would you ignite the flares?

- A. As soon as you realise you need assistance.
- B. Every hour.
- C. When you see an aircraft, or when people on shore or in other boats are in visual range.
- D. Between sunset and sunrise.

31. You see a blue and white swallow tail alfa flag displayed on a vessel. This means:

- A. There are divers in the vicinity so slow down, observe distance off requirements and keep a good lookout.
- B. There are explosives in the vicinity so slow down, observe distance off requirements and keep a good lookout.
- C. The vessel is having difficulty manoeuvring so slow down, observe distance off requirements and keep a good lookout.
- D. None of the above.

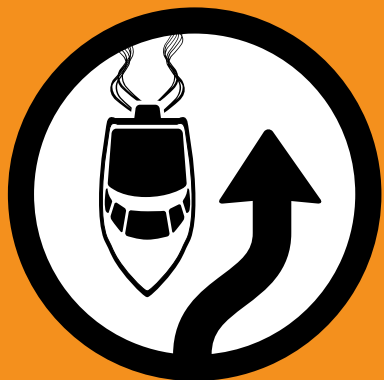
32. When going out for a trip you should always:

- A. Log on and log off with a Marine Rescue NSW radio base.
- B. Tell someone responsible where you are going and when you intend to return.
- C. Call a Marine Rescue NSW radio base for a free radio check.
- D. All of the above.

Answers

1. B. 2. A. 3. B. 4. A. 5. C. 6. C. 7. A. 8. C. 9. C. 10. D. 11. D. 12. A. 13. C. 14. C. 15. D. 16. D. 17. B. 18. C. 19. B. 20. C. 21. D. 22. A. 23. B. 24. D. 25. A. 26. A. 27. B. 28. B. 29. C. 30. C. 31. A. 32. D.

This quiz is a guide only and does not reflect the actual Licence Test.



ALWAYS KEEP TO THE RIGHT

ALWAYS KEEP TO THE RIGHT

Boating is all about having fun and enjoying our waterways.

But it also means keeping a proper lookout at all times.

- Always keep to the right, entering a narrow passage or on a sharp bend.
- Keep watch for other boats, especially kayaks and dinghies.
- Watch for swimmers, floating debris and whitewater that indicates submerged reefs and rocks.

For more information see our website or call the info line.

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Info line: 13 12 56
www.rms.nsw.gov.au



Transport
Maritime



Roads and Maritime Services

Licensing and Registration:
13 22 13 (8.30am – 5pm
Monday to Friday,
8.30am – noon Saturday)

Other Maritime Products:
13 12 56 (8.30am – 4.30pm,
7 days a week)

Areas not covered by NSW
telephone exchange:
(02) 9563 8557

Contact Us

Head Office
33 James Craig Road
Rozelle Bay NSW 2039
Locked Bag 5100
Camperdown NSW 1450

Ph: **02 9563 8511**
Fax **02 9563 8522**

Opening Times: Mon – Fri,
8.30am–4.30pm.

Email Us

For information requests;
suggestions or comments on our
website, please email
enquiries@rms.nsw.gov.au

Phone Payments (24 hours)

Licences; Registrations;
Mooring NSW

Phone: **13 12 36**

Areas not covered by NSW
telephone exchange:
(02) 9563 8556

Oil spills

For oil spills for inland waters

NSW Fire Brigade
Phone: **000**

For marine oil spills

Northern Region – From
Queensland border to Catherine
Hill Bay. Contact Newcastle Port
Corporation (24 hours)

Phone: **02 4985 8222**

Sydney Region – From
Catherine Hill Bay to Garie
Beach. Contact Sydney Ports
Corporation (24 hours)

Phone: **02 9296 4000**

Southern Region – From
Garie Beach to Victorian border.
Contact Port Kembla Port
Corporation (24 hours)

Phone: **02 4274 4571**

Australian Maritime Safety Authority (AMSA)

Phone: **02 6279 5000** –
Head Office

1800 641 792 – Maritime Search
& Rescue & Environment
(24 hour)

Weather Information

NSW Phone: **13 12 36**

Emergency Contact Numbers

For life threatening emergencies
call **000**

NSW Fisheries – Sydney

Phone: **02 9527 8411**

Illegal fishing activity should be
reported to your local fisheries
office. If they are not available,
phone 24 hour fisherman's watch.

Phone: **1800 043 536**

Sydney Ferries

Phone: **131 500**

Sydney Water

Service difficulties
and emergencies
(24 hours)

Phone: **132 090**

Water Police

Marine crime and information
can be reported
(anonymously if requested).

Phone: **1800 658 784**

Marine Rescue NSW

Headquarters

Phone: **02 8071 4848**

Mon to Fri, 8.00am-5.00pm

For contact details of
local units, visit
www.marinerescuensw.com.au

Environment

NSW Environment
Protection Authority

Phone: **131 555**

To report pollution and other
environmental incidents, or
to get information about the
environment.

Crime Stoppers

Phone: **1800 333 000**

To report crime information.

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www.rms.nsw.gov.au
13 12 56

Roads and Maritime Services

The information in this handbook is intended as a guide only and is subject to change at any time without notice. It does not replace the legislation.

December 2012

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