



Roads &
Maritime

Boating Handbook



WEAR A LIFEJACKET

THERE'S ONE FOR YOUR FAVOURITE ACTIVITY



With modern lifejacket styles, you'll be able to wear one all day without it getting in the way. Wearing a lifejacket could help save your life.

Find the right lifejacket for your favourite activity
in 3 easy steps at lifejacketwearit.com.au

WEAR A LIFEJACKET IT NEVER RUINED A DAY ON THE WATER



RULE CHANGES FOR BOATING ON NSW WATERWAYS

Welcome to this new edition of the New South Wales Boating Handbook, updated to include rule changes introduced on 1 July 2016 by the *Marine Safety Regulation 2016* and 7 October by the *Marine Safety Act 1998*.

Changes to promote safety and reduce red tape include:

- Reforms to boat driver licensing, including streamlining licence classes and application requirements, simplifying the fee structure and the introduction of a 10-year boat licence
- Vessels no longer need to display a registration label or trade plate
- New lifejacket standards and simplified requirements for wearing lifejackets
- More rigorous safe distance and speed requirements
- Broader restrictions on bow riding
- Changes to some penalty levels and disqualification periods
- Changes to streamline the administration of aquatic licences
- Introducing a camera recorded offence scheme.

This handbook includes the information you will need to become familiar with the rules changes and how they may affect you and your family and friends.

The purpose of this handbook is to help you understand the key rules for safe and responsible boating on NSW State waterways. This includes comprehensive details of the safety equipment you must carry on board and the importance of wearing a lifejacket.

This handbook also provides detailed information about proper preparation, safe navigation and what to do in an emergency. A recurring theme is the importance of being aware of other people and vessels on the water, and minimising the impact of your boating activities on them. An example would be maintaining a safe distance and speed and minimising the wash caused by your boat.

By exercising care and courtesy, you will help to make boating safer and more enjoyable for everyone.

For more information visit rms.nsw.gov.au/maritime or call **13 12 36**.



Lifejacket wear rules apply on NSW waterways. See the Safety equipment chapter for full details.

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ABOUT THE BOATING HANDBOOK

This handbook is an interpretation of the law using plain English and specific boating terminology. It is produced by Roads and Maritime Services, the NSW Government authority with responsibilities for marine safety and regulation of commercial and recreational boating.

The boating rules and regulations provide a framework for the safe use of vessels on NSW waterways. Applicable legislation can be accessed via the Roads and Maritime website at rms.nsw.gov.au/maritime.

Whether you are a new or experienced skipper, this handbook provides practical information on the NSW boating rules including boat driving licence and vessel registration requirements and penalties for on-water offences. It is essential reading for anyone learning to drive a vessel. It is also a good way for experienced boaters to keep up to date with any changes to the rules and is informative for interstate or overseas visitors who want to navigate NSW waterways.

Laws change, so make sure you have the most recent boating handbook and stay in touch with any updates by visiting the Roads and Maritime website at rms.nsw.gov.au/maritime.

Remember, boating safety is a responsibility we all share on the waterways.

'You're the skipper, you're responsible' is a key boating safety message for recreational vessel operators. The term 'skipper' is used often throughout this handbook as a substitute for the more formal terms of vessel 'master' or 'operator' used in the legislation.

For newcomers to boating, some nautical terms may at first seem like a foreign language. This boating jargon has been developed over the years to provide more concise and clear communication about specific aspects of boating. For definitions of commonly used boating terms, refer to the glossary on page 108.

ABOUT ROADS AND MARITIME SERVICES

Roads and Maritime is an operating agency within the Transport cluster, responsible for implementing strategy and delivering services to the public in a cost-effective manner to enable safe and efficient journeys throughout NSW.

Core maritime services include vessel registration and licensing, regulation of our waterways and ensuring compliance with rules and regulations, provision of safety management services and delivery of maritime environmental solutions.

Boating fees and charges paid by the NSW boating community directly support the delivery of boating related services and infrastructure, through the operation of the 'Waterways Fund'.

While care was taken with the production of this handbook by Roads and Maritime Services, its purpose is to act as a general guide and to provide information in the form of a broad overview only. Roads and Maritime 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 legislation.nsw.gov.au or seek independent legal advice.

The contents of this handbook are also reproduced on the website rms.nsw.gov.au/maritime.

For permission to reproduce or transmit any of the content of this handbook, email the details of the proposed use of the material to Roads and Maritime via the contacts page of the website.

Roads and Maritime reserves the right to run Community Service Advertisements from not-for-profit boating safety related organisations.

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 get a boat, do some research and talk to other boat operators, manufacturers or 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.

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 carry out an assessment before you make any decision to buy a second-hand vessel.



Boat shows are an excellent opportunity to gather information about the diversity of boats and brands on the market.



Licences and registration



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BOAT DRIVING LICENCE

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

Anyone who is the operator of a power-driven vessel operating recreationally on NSW waters at a speed of 10 knots (approximately 18.5 km/h) or more must have a boat driving licence.

This is the speed at which most accelerating boats will start to plane or 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.

A PWC is a vessel with a fully enclosed hull that may be driven standing up, lying down, sitting astride or kneeling, and includes jet powered surfboards.

TYPES OF BOAT DRIVING LICENCES

There are two types of boat driving licence:

- A general boat driving licence is required to drive any powered recreational vessel (other than a PWC) at 10 knots or more
- A personal watercraft (PWC) driving licence is required to drive a PWC. A PWC licence also allows the holder to drive any other powered recreational vessel at 10 knots or more.

A person must be 12 years of age or older in order to hold a general boat or PWC driving licence.

Restrictions apply to licence holders under 16 years of age (see opposite column).

Restrictions on licence holders from 12 to under 16 years of age

The holder of a general boat driving licence, PWC driving licence, or an interstate licence under 16 years of age must not do any of the following:

| |
|---|
| <ul style="list-style-type: none">• Drive at a speed greater than 20 knots |
| <ul style="list-style-type: none">• Drive in any race, display, regatta, exhibition or similar operation |
| <ul style="list-style-type: none">• Drive any vessel, other than a PWC, at a speed of 10 knots or more:<ul style="list-style-type: none">– Without the holder of a general boat driving licence who is 16 years of age or older being present in the vessel, or– Between sunset and sunrise, or– While the vessel is towing anyone. |
| <ul style="list-style-type: none">• Drive a PWC between sunset and sunrise (this rule applies to all PWC driving licence holders, see page 87) |
| <ul style="list-style-type: none">• Drive a PWC at a speed of 10 knots or more:<ul style="list-style-type: none">– Without the holder of a PWC driving licence who is 16 years of age or older being present on the PWC, or– While the vessel is towing anyone. |

Exemptions may apply in accordance with an aquatic licence.

LICENCE PERIOD

A general boat driving licence or PWC driving licence is available for one, three, five or 10 years. Licences are initially issued as paper licences, followed by a plastic licence card.



Anyone who is operating a powered vessel recreationally on NSW waters at 10 knots or more must have a boat driving licence.



OBTAINING A BOAT DRIVING LICENCE

To obtain a general boat driving licence, applicants must:

- Provide evidence of having completed the necessary practical boating experience
- Successfully complete the general boat licence knowledge test.

To obtain a PWC driving licence, applicants must first obtain a general boat driving licence and then successfully complete the PWC licence knowledge test.

On completion of the requirements listed above and proof of identity (see page 11), the relevant boat driving licence will be issued to applicants on payment of the licence fee.

For more information on how to get a boat licence, call **13 77 88** or visit the boat driver licensing section of our website at rms.nsw.gov.au/maritime.

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

How to comply with practical boating experience requirements

The following options are available as methods to satisfy the practical boating experience requirements:

Option 1

Practical boating experience can be gained by completing a boat driving licence practical logbook. When first applying for a general boat driving licence, applicants must carry out, in the company of an experienced skipper, a minimum of three trips in a powered vessel (excluding PWC) operating under power.

An experienced skipper is a person who holds a valid NSW general boat driving licence which has been valid for at least three years, or holds a certificate of competency in force under the National System (see page 14). Licence holders under 18 years of age 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 night time navigation.

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

The logbook is available free of charge from any registry, service centre, Government Access Centre (GAC) or online from our website.

Only trips carried out within the 12 months prior to the issue of a boat driving licence will be recognised for the purpose of satisfying practical boating experience requirements. For those wanting to obtain a PWC driving licence, the general boat driving licence practical logbook requirements suffice and there is no need for additional practical logbook entries.

Option 2

Applicants can also satisfy the practical boating experience requirement by completing practical boating training conducted by a Recognised Training Provider (RTP).

RTPs are engaged by Roads and Maritime to conduct training and testing on its behalf. Participation in these courses satisfies the practical boating experience requirement of the licence application process.

The RTP practical boating experience training programs and courses include both theory and on-water components. There may be circumstances where the RTP cannot conduct the on-water training component, eg applicants' proximity to a waterway.

In these cases, the RTP can complete the theory component, along with the Roads and Maritime knowledge test, but you will need to complete the on-water training component by the use of a logbook with an experienced skipper.

Fees and conditions apply to attend practical boating training conducted by an approved RTP.

Roads and Maritime provides a list of approved RTPs on our website at rms.nsw.gov.au/maritime.

How to comply with boat licence knowledge test requirements

Applicants for a boat driving licence must demonstrate the level of competency required by passing an appropriate boat driving knowledge test. The test can be completed at a registry, service centre or GAC, or an RTP as part of the practical boating training.

All the information needed for a general boat licence knowledge test is included in this handbook. You can test your knowledge before taking the test by taking the online boating knowledge quiz available on our website rms.nsw.gov.au/maritime. Questions in the online boating knowledge quiz are taken from the pool of questions used in the real general boat licence knowledge test.

For the PWC knowledge test you should study this handbook as well as the *Personal Watercraft Handbook*.

How the boat licence knowledge test works

The general boat licence knowledge test consists of 50 multiple choice questions. The first 20 questions must all be answered correctly. Of the remaining 30 questions, you will need to get at least 24 questions correct.

The PWC licence knowledge test contains 15 questions, and you will need to get at least 12 questions correct. PWC licence applicants must pass the general boat licence knowledge test before the PWC knowledge test can be attempted.

A fee is payable for each licence test attempt. If you fail the boating knowledge test, another fee is charged to sit the test again.

Licence knowledge tests can be completed at a registry, service centre or GAC.

A free interpreter service is available for applicants who need to take the test in another language. Please call **13 14 50** and ask the interpreter to phone **13 77 88**.

Applicants with special needs or learning difficulties should call **13 77 88** to discuss any

issues or special arrangements required before booking in for the test.

If you attend a GAC you must present or send your stamped application form, together with your completed logbook, to a registry or service centre.

Recognised qualifications

Successful completion of certain Yachting Australia (YA) courses is recognised as satisfying the full requirements, including the practical component, for the issue of a general boat licence, pending completion of the relevant application form and payment of the appropriate fees.

Other qualifications may be recognised. For more information call **13 77 88** or visit our website rms.nsw.gov.au/maritime.

Interstate licences

The holder of an interstate boat licence may transfer their licence to a NSW boat driving licence on presentation of:

- The original or certified copy of the interstate licence, or
- A letter from the issuing jurisdiction, and
- Proof of identity

For more information call **13 77 88** or visit our website rms.nsw.gov.au/maritime.



When applying for a licence

- An applicant must provide acceptable proof of identity (POI) documentation before sitting a boat driving knowledge test
- Applicants under 16 years of age must be accompanied by a parent or legal guardian when sitting the knowledge test. Proof of identity documentation for the parent or guardian is also required
- PWC driving licence applicants must provide two colour passport acceptable photographs with a light background. PWC driving licences are plastic photo cards
- Applicants 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.

PROOF OF IDENTITY (POI)

To ensure the accuracy of records, applicants must provide acceptable proof of identity (POI) when conducting a business transaction.

POI documents must be original or certified copies. POI requirements can be met by providing a NSW photo driver's licence and, for applicants under 16 years of age, an Australian full birth certificate and Medicare card.

For a full list of acceptable POI documents visit rms.nsw.gov.au/maritime or call **13 77 88**.

COMBINED DRIVER/BOAT/PWC LICENCE

Roads and Maritime customers are now able to combine their NSW driver licence and general boat or PWC driving licence onto one card.

Eligible customers can opt in only at the time of their NSW driver licence renewal and their driver licence photo card will be printed with a note on the reverse of the card that the licence holder also holds a NSW general boat driving licence or PWC driving licence.

This option may only be taken up by the customer at the time of driver licence renewal at selected registries or service centres.

For more information, visit our website at rms.nsw.gov.au/combinedlicence.



REMEMBER

You must carry your licence with you when doing anything for which the licence is required, and produce it for inspection when requested by a Roads and Maritime Boating Safety Officer, NSW 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 of any changes to personal details or address, or penalties may apply. Licences sent to the incorrect 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.



Always carry your boat driving licence when on the water, and produce it for inspection when requested by an authorised officer.

BOAT REGISTRATION

The information contained in this section is provided as a guide only. For more detailed information visit our website at rms.nsw.gov.au/maritime or phone **13 77 88**.

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 used on NSW navigable waters:

- Power-driven vessels with an engine of power rating 4.0 kilowatt (kw) or more (as a guide, 4.0 kw is approximately 5 horsepower (hp))
- Any power-driven or sailing vessel 5.5 metres or longer
- Every vessel subject to a mooring licence or marina berth
- PWC.

Note: For information about commercial vessels, see page 14.

TRANSFER OF REGISTRATION

When selling a registered vessel, the seller must complete the transfer and notice of disposal sections on the registration certificate and forward the notice of disposal to Roads and Maritime within 14 days. This can also be done online at licence.nsw.gov.au.

The transfer section must be given to the buyer, who must apply for transfer within 14 days of the date of purchase, or penalties may apply.

REGISTRATION LABEL

From 1 July 2016, registration labels will no longer be issued and there is no requirement for vessels to display them.

REGISTRATION NUMBERS

The owner of a registered vessel must ensure their registration number is displayed at all times on both sides of the hull, in figures at least 150 millimetres high (100 millimetres 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.



Registration numbers must be in a contrasting colour to the hull.



Sailing vessels may display their registration numbers on the transom.



AUSTRALIAN BUILDERS PLATE (ABP)

Most power-driven vessels built from 1 July 2006, including imported vessels, must have an ABP affixed before they are registered for the first time. Displaying an ABP does not exempt vessels from the Hull Identification Number (HIN) requirement explained in the following section.

There are two types of ABP, one for vessels under six metres and one for vessels over six metres. 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:

- Maximum weight and power rating of the engine
- Maximum number of people capacity
- Maximum load (weight) that the boat can carry (including people and equipment)
- Buoyancy statement (for boats up to six metres in length)
- Warning statements.

HULL IDENTIFICATION NUMBER (HIN)

The HIN system or Boatcode assists with vessel identification through the affixing of a unique identification number, prominently displayed in accordance with the international standard (Small Craft Hull Identification Coding System). The HIN system provides benefits that include:

- The expansion of the Personal Properties Security Register (PPSR), formerly known as REVS, to include vessels
- A numbering system that deters vessel theft and assists in the recovery of stolen vessels.

Boatcode is compulsory:

- For new vessels before being registered for the first time
- 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

Before purchasing a second-hand vessel, prospective buyers should contact the PPSR to find out if the vessel has a security interest attached to it. Visit ppsr.gov.au or call **1300 007 777** between 8.30am – 8pm weekdays and 9am – 2pm Saturdays.



Vessel registration numbers/letters (in this case WEAR IT N) must be displayed on both sides of the hull.

USING A VESSEL COMMERCIALLY

Domestic commercial vessels are now regulated by the Australian Maritime Safety Authority (AMSA) under a National System that commenced on 1 July 2013. For information about the National System, visit amsa.gov.au/domestic.

Roads and Maritime Services acts as a National System delegate and continues to deliver vessel survey, certification and safety management services on behalf of AMSA.

CERTIFICATES OF SURVEY

A vessel that operated commercially on 30 June 2013, or within the two years prior to that date, is classified as an existing vessel. All other vessels are new vessels.

A new vessel needs to be surveyed or is 'in survey' if it is 7.5 metres or longer, carries passengers, operates beyond sheltered waters, or is otherwise high risk. These vessels must be designed and built (National Standard for Commercial Vessels/NSCV Part C, Design & Construction), operated (NSCV Parts D – Crew Competencies and E – Safe Operations) and surveyed to meet national standards.

All other new vessels are not required to be in survey. These vessels must be designed and built (NSCV Part G, General Safety Requirements for Vessels) and operated (NSCV Parts D and E) to meet national standards.

CERTIFICATES OF OPERATION

New vessels entering the National System will require a certificate of operation, but this requirement will be implemented incrementally for existing vessels over the three year transition period to 2016.

A National System certificate of operation provides the approval for a commercial operator to operate one or more vessels, carry out different tasks and in different areas. It places an emphasis on operators identifying and managing their own operational risks.

CERTIFICATES OF COMPETENCY

While some existing commercial vessels can be operated using a general boat driving licence or PWC driving licence, many commercial vessels and all new 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 general boat or PWC driving licence in NSW.



Many commercial vessels require the master and crew to hold a commercial qualification or certificate of competency.



HIRE AND DRIVE OPERATIONS

This information is provided for anyone wishing to operate a hire and drive business and anyone wishing to hire a vessel.

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

- Powered vessels less than 7.5 metres in length, including 'tinnies' and PWC
- Passive (unpowered) vessels less than 10 metres in length such as a rowboat, canoe, kayak, pedalcraft, inflatable, sailboard, catamaran or sailing vessel
- Offshore sailing and powered vessels less than 24 metres
- Traditional houseboats and motorboats with a potential speed less than 10 knots and fitted with overnight accommodation.

A national certificate of operation 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.

If you suspect a hire operator does not have a certificate of operation, or you have a complaint regarding a hire and drive operator, call Roads and Maritime on **13 12 36**.

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

Hirers must hold a PWC driving licence to operate a hire and drive PWC. When hiring any other type of hire and drive vessel, you must hold a boat driving licence if the vessel is operated at 10 knots or more.

NATIONAL SYSTEM INFORMATION

For application forms and up to date information on the National System and requirements for domestic commercial vessels, visit amsa.gov.au/domestic or alternatively, call Roads and Maritime on **13 12 36**, or visit our website rms.nsw.gov.au/maritime.

Applications for National System certificates can be lodged with Roads and Maritime, using the contact details above.



Domestic commercial vessels are now regulated under a National System introduced in 2013.



Safety equipment



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LIFEJACKETS

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

An approved lifejacket must be carried for each person on board most vessels. It must be the correct size for the wearer, in good condition and, if an inflatable lifejacket, properly serviced.

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.

Every year lives are lost in recreational boating incidents. Tragically, many could have survived had they been wearing a lifejacket, especially in smaller vessels.

For more information about lifejackets visit rms.nsw.gov.au/lifejackets.

**WEAR A LIFEJACKET
DON'T RISK YOUR LIFE**

WHAT LIFEJACKETS MUST I CARRY ON MY RECREATIONAL VESSEL?

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 from registries and service centres.

Open (ocean) waters (including crossing ocean bars)

For general boating, a Level 100 lifejacket is the minimum required for open waters and must be worn when crossing coastal bars. Depending on the type of vessel, a Level 50 or 50S lifejacket may meet the requirements (see the table on page 22 for details).

Enclosed and alpine waters

Unless there is a requirement that a lifejacket must be worn, a lifejacket 50S or greater must be carried.



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



Children under 12 years of age must wear a lifejacket at all times on vessels less than 4.8 metres long. Adults must wear one too in a range of situations.



Safety equipment



LEVEL 100+ INFLATABLE LIFEJACKET

Similar to the former Type 1 category

Level 100+ lifejackets provide higher levels of buoyancy. There are two options: inflatable or non-inflatable.

Inflatable lifejackets rely on CO₂ for buoyancy, which means they are lighter and less cumbersome to wear than the equivalent foam lifejackets. Once inflated, these lifejackets display high-visibility colours.

Generally, adult inflatable lifejackets are rated at 150+ and are designed to help keep the wearer's head face-up and above the water even if unconscious.

There are two kinds of Level 100+ inflatable lifejackets, those that are inflated by manual activation or those that inflate automatically when the lifejacket comes in contact with water.

Level 100+ lifejackets are required in certain situations, for example when boating on open (ocean) waters.

The inflatable types are becoming more popular because they are comfortable to wear, but boaters must be aware of the added maintenance and service requirements that come with this style of lifejacket, and the need for detailed crew and passenger briefing on their operation. See page 21 for more information on selecting the right Level 100+ lifejacket.



LEVEL 100+ NON-INFLATABLE LIFEJACKET

Similar to the former Type 1 category

Level 100+ lifejackets are generally available as non-inflatable garments with in-built foam buoyancy, including neck support.

These lifejackets must be high-visibility colour and are bulkier to wear than the inflatable equivalent. However, they do not require the additional operation and servicing of an inflatable lifejacket. See page 21 for more information on selecting the right Level 100+ lifejacket.



IMPORTANT NOTE

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 starts from the date of purchase.

It is recommended that non swimmers and children under 12 years of age do not wear an inflatable lifejacket.

It is also strongly recommended that inflatable lifejackets not be worn on personal watercraft (PWC), as excess spray may accidentally inflate the lifejacket and startle the wearer.



LEVEL 50 LIFEJACKET

Similar to the former Type 2 category

These are designed to support the wearer in the water, but without the neck support required to keep the wearer's head face-up and above the water if unconscious.

They 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.



LEVEL 50S LIFEJACKET

Similar to the former Type 3 category

These are buoyancy vests with the same overall buoyancy as a Level 50 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 water-skiing, where style is important and assistance is on hand.

SELECTING A 100+ LIFEJACKET

The lifejacket category 'Level 100+' covers a range of buoyancy and performance levels. When making your selection, consider the locations you will go boating, the conditions you are likely to encounter and the type and weight of clothing you will be wearing.

Australian Standard 4758 provides the following guidance on selection and use:

- **Level 100** lifejackets are intended for people who may have to wait for rescue, but are likely to do so in sheltered and calm water. They are not intended for use in rough conditions, or when there is wave splash
- **Level 150** lifejackets are intended for general offshore and rough weather use where a high standard of performance is required. They are designed to turn an unconscious person in swimming attire into a safe position, and maintain a fully clothed person in a safe position with no subsequent action by the wearer
- **Level 275** lifejackets are intended primarily for offshore use and by people who are using items of significant weight or wearing clothing which may trap air and adversely affect the lifejacket's self-righting capacity. They are designed to ensure that the wearer floats with their mouth and nose clear of the surface.



WHAT LIFEJACKET AM I REQUIRED TO WEAR ON MY RECREATIONAL VESSEL?

| Boating activity/vessel type | Enclosed waters Lifejacket requirements | Open waters Lifejacket requirements |
|---|--|--|
| Children under 12 years of age | Level 50S or greater: <ul style="list-style-type: none"> • At all times on a vessel less than 4.8m • When in an open area of a vessel less than 8m that is underway. | Level 100 or greater: <ul style="list-style-type: none"> • At all times on a vessel less than 4.8m • When in an open area of a vessel less than 8m that is underway. |
| On all boats less than 4.8m (unless specified) | Level 50S or greater at all times when: <ul style="list-style-type: none"> • Boating between sunset and sunrise • Boating on alpine waters • Boating alone (without an accompanying person 12 years of age or more on the same vessel). | Level 100 or greater at all times. |
| PWC including tow-in surfer | Level 50S or greater at all times. | Level 50S or greater at all times. |
| Crossing coastal bars | N/A | At all times as per open waters requirement for boating activity/vessel type. |
| Anyone being towed, eg water-skiing, wakeboarding (whether or not the person is using a rope) | Level 50S or greater at all times. | Level 50S or greater at all times. |
| Canoes and kayaks | Level 50S or greater at all times when: | Level 50S or greater at all times. |
| Sailboarding and kiteboarding (when more than 400m from shore) | Level 50S or greater at all times when: <ul style="list-style-type: none"> • Boating between sunset and sunrise • Boating on alpine waters • Boating alone (without an accompanying person 12 years of age or more on the same vessel). | |
| Off the beach sailing vessel | Level 50S or greater at all times when: <ul style="list-style-type: none"> • Boating between sunset and sunrise • Boating on alpine waters • Boating alone (without an accompanying person 12 years of age or more on the same vessel). | |
| When directed by the master of the vessel [#] | As per enclosed waters requirement for boating activity/vessel type. | As per open waters requirement for boating activity/vessel type. |

You must wear a lifejacket when directed by the master of the vessel, for example when the master considers there is a heightened risk of an incident occurring or if an incident was to occur, it might be difficult to help yourself. Examples of heightened risk include (but are not limited to):

- Boating in bad weather such as in a gale warning, storm warning, severe thunderstorm warning or other severe weather warnings issued by the Bureau of Meteorology
- When a yacht does not have safety barriers, lifelines, rails, safety harnesses or jack lines in use
- Boating by the elderly, non-swimmers and people with serious medical conditions
- When the vessel has broken down
- When there is a significant likelihood that the vessel may be capsized or swamped by waves, or the occupants of the vessel may fall overboard or be forced to enter the water
- Other similar circumstances.



Inflatable lifejackets offer streamlined and comfortable options for adults but are not recommended for children under 12 years of age.

SERVICING INFLATABLE LIFEJACKETS

The emergence of affordable, comfortable and stylish lifejackets is a major step forward in boating safety. Inflatable lifejackets are rapidly gaining popularity because of their convenience and increasing affordability.

As lifejackets spend so much time in a harsh marine environment where they are often exposed to heat, sun and salt, they are subject to damage. One aspect of inflatables that boaters are often unaware of is that NSW regulations require inflatable lifejackets to be serviced at least annually, unless the manufacturer specifies and permits a longer period.

In addition to the formal process of servicing, inflatable lifejackets should be regularly checked throughout the year to make sure they are functioning properly.

Manufacturer's servicing

Some manufacturers require you to have your lifejacket serviced by them or by an authorised agent. This will ensure it remains in good working order and functions properly.

When the lifejacket 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

Some 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 you should get it serviced professionally, which is a higher level of inspection and replacement of parts than 'self service'.

If you are self servicing, follow the manufacturer's instructions carefully. 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.

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 service or replacement dates. You can also visit rms.nsw.gov.au/maritimealerts to register for a free email service reminding you when your safety gear needs to be serviced or replaced.

HOW TO SELF CHECK YOUR INFLATABLE LIFEJACKET STEP BY STEP GUIDE

Below is an example of how to 'self check' a lifejacket, which can be done at any time to ensure the jacket is functioning properly. If you want to 'self service' your lifejacket, follow the manufacturer's instructions for your specific lifejacket model.

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 the oral tube and leave overnight in a room with constant temperature. If the 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 the cylinder on kitchen or letter scales and ensure weight corresponds to the minimum gross weight engraved on cylinder +/- 2g. If the cylinder is rusted, corroded, has been pierced or is not the correct weight it should be replaced immediately. On auto inflation lifejackets, 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 on what you are most comfortable with and what activity the lifejacket is being used for. 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.

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.



SAFETY EQUIPMENT REQUIREMENTS










| OPEN WATERS | | | |
|---|--|---------------------------|--------------------------|
| Symbol | Item | Quantity | Check |
|  | Lifejacket – Level 100 or greater [#] . | 1 per person [*] | <input type="checkbox"/> |
|  | Anchor and chain/line to suit vessel size/weight and sea floor. | 1 | <input type="checkbox"/> |
|  | Bailer/Bucket/Fire bucket with lanyard. | 1 | <input type="checkbox"/> |
|  | Bilge pump – Manual or power operated for vessels with covered bilge(s) or closed under-floor compartments (other than airtight void spaces). Must be capable of draining each compartment. | 1 ^{**} | <input type="checkbox"/> |
|  | Compass – Fluid filled magnetic. | 1 | <input type="checkbox"/> |
|  | Distress flare – Orange smoke hand-held (in date). | 2 | <input type="checkbox"/> |
|  | Distress flare – Red hand-held (in date). | 2 | <input type="checkbox"/> |
|  | Fire extinguisher – For vessels with electric start, electric motors, battery, gas or fuel stoves. | 1 ^{**} | <input type="checkbox"/> |
|  | Map/chart for area of operation (paper or electronic). | 1 | <input type="checkbox"/> |
|  | Paddles or oars and rowlocks – In vessels under 6 metres unless a second means of propulsion is fitted. | 1 | <input type="checkbox"/> |
|  | Safety label appropriate to vessel type. | 1 | <input type="checkbox"/> |
|  | Sound signal – Air horn/whistle/bell. | 1 | <input type="checkbox"/> |
|  | V sheet – Minimum dimensions 1.8m x 1.2m. | 1 | <input type="checkbox"/> |
|  | Water suitable for drinking. | 2L per person | <input type="checkbox"/> |
|  | Waterproof torch – Floating and operational. | 1 | <input type="checkbox"/> |
| ADDITIONAL EQUIPMENT for OPEN WATERS required if 2 nautical miles or more offshore | | | |
|  | EPIRB – 406 MHz. Must be in date (according to the manufacturers expiry date) and properly registered with AMSA. | 1 | <input type="checkbox"/> |
|  | Marine radio. | 1 | <input type="checkbox"/> |

* Lifejackets must be suitable for the intended wearer and in good working condition. Inflatable lifejackets must be 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.

A lifejacket Level 50S or greater is required when using PWC, canoes and kayaks, off-the-beach sailing vessels, sailboards and kiteboards.





ENCLOSED WATERS

| Symbol | Item | Quantity | | Check |
|---|--|---------------|--|--------------------------|
| | | | | |
|  | Lifejacket – Level 50S or greater. | 1 per person* | | <input type="checkbox"/> |
|  | Anchor and chain/line to suit vessel size/weight and sea floor. | 1 | | <input type="checkbox"/> |
|  | Bailer/ Bucket/ Fire bucket with lanyard. | 1 | | <input type="checkbox"/> |
|  | Bilge pump – Manual or power operated for vessels with covered bilge(s) or closed under-floor compartments (other than airtight void spaces). Must be capable of draining each compartment. | 1** | | <input type="checkbox"/> |
|  | Fire extinguisher – For vessels with electric start, electric motors, battery, gas or fuel stoves. | 1** | | <input type="checkbox"/> |
|  | Paddles or oars and rowlocks – In vessels under 6 metres unless a second means of propulsion is fitted. | 1 | | <input type="checkbox"/> |
|  | Safety label appropriate to vessel type. | 1 | | <input type="checkbox"/> |
|  | Sound signal – Air horn/whistle/bell. | 1 | | <input type="checkbox"/> |
|  | Waterproof torch – Floating and operational. | 1 | | <input type="checkbox"/> |

* Lifejackets must be suitable for the intended wearer and in good working condition. Inflatable lifejackets must be 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.

DON'T EXPIRE. Record the expiry date/s of your equipment where relevant.

| Symbol | Item | Expiry | |
|---|--|--------|------|
| | | Month | Year |
|  | Inflatable lifejacket. | | |
|  | Distress flare (orange smoke hand-held). | | |
|  | Distress flare (red hand-held). | | |
|  | Emergency Position Indicating Radio Beacon (EPIRB). | | |



IMPORTANT NOTES

- The tables on page 26 and 27 do not include lifejacket wearing requirements. Refer to the table on page 22 and the information on pages 20-21 for additional lifejacket information.
- Refer to pages 31-35 for additional safety equipment information.
- Refer to pages 28-29 for exemptions to the safety equipment requirements.



Modified safety equipment 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 | |
| Racing shells, surf rescue boats, surfboats and surf skis | |
| Rowboats, dinghies, small unpowered inflatable boats | Exempt from carrying safety equipment on enclosed waters if the vessel is all of the following: <ul style="list-style-type: none"> • Less than 3m in length • Not a tender • Not carrying an engine or fuel • Not more than 200m from nearest shore • Operating between sunrise and sunset • Built so as to float if swamped or capsized. |
| Tenders (if operating in enclosed waters, less than 3m in length and operating within 200m of the shore) | 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. |
| 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. |



IMPORTANT NOTES

- This table does not include lifejacket wearing requirements – refer to table on page 22.
- Navigation lights must be displayed between sunset and sunrise and during times of restricted visibility.

Modified safety equipment requirements – continued

Dragon boats/
Outrigger canoes

For more information on safety equipment requirements please refer to Schedule 8, Part 2 of *Marine Safety Regulation 2016*.

PWC

Exempt from carrying safety equipment. Also exempt from carrying a safety label, but must have a PWC behaviour label. For tow-in surfing the PWC must be equipped with: A rescue sled, a spare kill switch lanyard 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.



Kayaks are exempt from carrying safety equipment but lifejacket wearing requirements apply, and marine radio or mobile phone in waterproof pouch are strongly recommended.

MORE CHOICE TO PROVE BEACON REGISTRATION

Four new options for you to prove beacon registration.
Choose what works best for you!



SMS

- Save your SMS registration confirmation on your mobile phone.



EMAIL

- Save your email registration confirmation on your mobile phone.



PRINT

- Print your registration confirmation, or if you have no email, request a printed copy be sent via mail.



ONLINE

- Check Beacon Registration – look up the registration status online.

If you have an existing beacon registration sticker it will remain valid until it expires.

Remember – it is important to keep your registration details up to date, as they will be used in case of an emergency.

Renew your details every two years.

For more information visit www.amsa.gov.au/beacons
or call the beacon registration helpline;

☎ **1800 406 406** (business hours) ☎ **+61 2 6279 5766** (international callers)

For accidental beacon activation call AMSA Search and Rescue on 1800 641 792.

ANCHORS

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

BAILER/BUCKET/FIRE BUCKET

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.

BILGE PUMP(S)

Vessels with covered bilges are required to be fitted with a bilge pump or pumps capable of draining each compartment of the vessel. They may be manual or powered and must be protected by a strainer to prevent choking of the pump suction.

COMPASS AND CHART

Any boat being operated on open (offshore) waters 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.

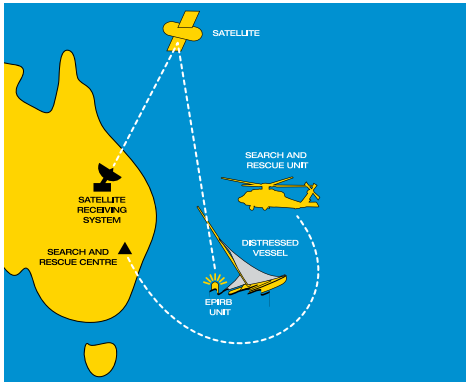
An appropriate chart or map that identifies significant features for navigation such as shallows, reefs, hazards and channels is also required on all vessels offshore. Charts and maps help to determine your position, which can be of particular importance in an emergency.

From 1 July 2016 under the *NSW Marine Safety Regulation 2016*, charts or maps may be in printed or digital format.

Boating maps for NSW coastal waters and many popular boating areas are available to order via the Roads and Maritime website.



An extensive range of boating maps are available from Roads and Maritime Services.



When activated, EPIRB signals are detectable by satellites and aircraft.

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).

A 406 MHz 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.



IMPORTANT NOTE

A Personal Locator 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.



A 406 MHz EPIRB is essential safety equipment for offshore boating.

FIRE EXTINGUISHER

All vessels with an electric start motor, gas installation, fuel stove or battery must carry a fire extinguisher. Fire extinguishers carried on board must be appropriate for the type of fuel carried on the vessel. Additional fire extinguishers may need to be carried if there are several fuel types onboard or the size of the vessel requires it.

Regular maintenance checks are recommended to ensure the charge indicator is registering in the green zone. If it is in the red zone you need to replace the extinguisher.

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 in open (ocean) waters, although some exemptions may apply. See page 26 for details.

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.

It is an offence to set off flares, except in an emergency.



Flare disposal

The safe disposal of out-of-date flares is essential to avoid any injury from unintended or deliberate ignition in a non-emergency situation.

For information about expired flare collection locations, call **13 12 36** or visit rms.nsw.gov.au/maritime.

FRESH DRINKING WATER

Two litres of fresh drinking water per person must be carried on all vessels operating on any open (ocean) waters.

MARINE RADIOS

Different types of marine radios are available so check with the Australian Communication & Media Authority (ACMA) to ensure your radio is suitable for the intended use.

Marine radios are compulsory for all vessels operating more than two nautical miles out to sea, and are recommended for anyone boating on open (ocean) waters. They provide a means of advising shore stations of your itinerary, checking boating weather and navigational warnings and making distress calls which can be picked up by other vessels in the area or by shore stations.

For more information on marine radio calling, see page 39 and pages 90-91.

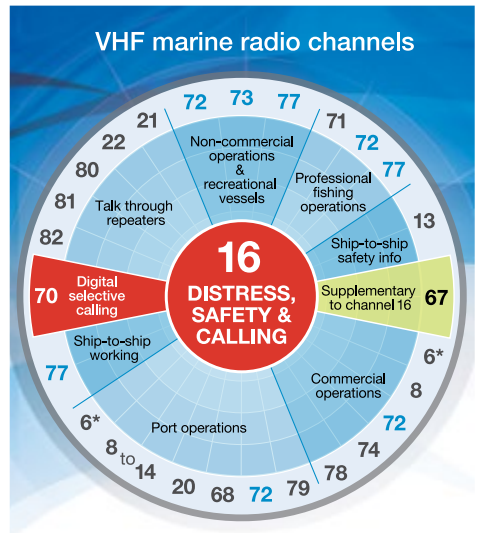
Marine radios are relatively inexpensive and available for general use.

VHF and HF radios are popular with VHF providing a wider coverage. View the diagram to the right and visit acma.gov.au/vhfmarine for further information about VHF use.

HF services have now transferred from the Port Authority of NSW to Kordia. This includes the monitoring of HF distress and emergency frequencies 4125 kHz, 6215 kHz and 8291 kHz and provision of navigation warnings on 8176 kHz at 10.57am and 11.57pm hours and at other times that such warnings are received from AMSA.

The key difference for NSW boaters currently using the HF component of the National Coastal Radio Network is that the call sign for distress and emergency calls in NSW waters is “Charleville Radio” instead of “Coast Radio Sydney”. Due to the superior equipment being used by Kordia and the better positioned HF equipment in Charleville, Queensland (far away from radio interference that normally occurs along the coast and in the cities), it is anticipated users of the service will experience improved HF coverage in NSW waters.

A mobile phone does not replace the requirement to carry a marine radio but is an extra means of communication. Call **000 (triple zero)** in any life threatening situation.



PADDLE OR OARS AND ROWLOCKS

Oars with rowlocks and/or paddles must be carried on most vessels under six 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.

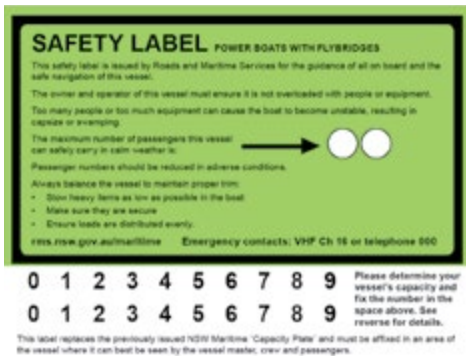
SAFETY LABEL

A Safety Label must be displayed clearly on all recreational 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 at each steering position on 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 Standard, the manufacturer or, if not specified, by the table on the reverse of the Safety Label.

The maximum number of people in 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 negligence.



In determining whether your vessel complies with the capacity limits shown on its safety label, note that:

- Children up to one year of age are not counted. However, you still require safety equipment for them
- Roads and Maritime recommends counting each child between the ages of one and 12 years as one half of an adult
- Capacity of each adult is assessed at 90kg including an allowance for their personal gear.

Note: For PWC, the number of people on the vessel must not exceed the maximum number specified by the manufacturer.

Safety labels are available from registries and service centres.

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 metres x 1.2 metres minimum) 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 and be operational. 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.

Kill switch lanyard

Many small recreational powerboats and all personal watercraft are fitted with an automatic engine cut-off device called a kill switch, which is activated by a lanyard. The kill switch lanyard attaches to your arm, leg, clothing or lifejacket and stops the engine if you fall overboard or lose control of the steering.

It is strongly recommended to always wear the lanyard and ensure the kill switch key is engaged whenever the engine is turned on and in gear.

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 adjustable spanner, pliers, metal file, wire brush, hacksaw and blade, phillips head and standard screwdrivers, spare fuel line, electrical wiring, insulation tape and a can of water repellent.

See page 104 for recommended tools and spare parts.



Kill switch lanyards being worn on personal watercraft, to automatically stop the engine if the rider falls overboard.

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. Remove new lifejackets from their plastic wrapping. Ensure they are stored in an accessible, dry and well ventilated area and let everyone on board know where they are.



Keeping your safety equipment in a 'grab bag' will protect it from the elements and make them easily accessible.





**Before you
go boating**



38 Before you go afloat

39 Weather

39 Keep in touch

40 Know your boat

Stability and boat handling

42 Kids and boats

BEFORE YOU GO AFLOAT

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
- Make sure you have local boating maps for the waterways you will be using. Boating maps are available for purchase for a nominal fee. They are a vital tool for negotiating NSW waterways and include handy hints for safe boating. The maps are printed on special waterproof paper and can be viewed online at rms.nsw.gov.au/maritime/using-waterways/maps before purchasing. To buy a map, contact your local registry or order online
- 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 experienced locals or Roads and Maritime
- Check the weather before you go out. Register for the Maritime Alert system that is 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. Too many boating incidents involve alcohol
- If crossing a bar, log on to view live web camera footage for a number of coastal bars in NSW at rms.nsw.gov.au/maritime.

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 marinerescuensw.com.au.



Marine Rescue NSW volunteers assisting a recreational vessel.

WEATHER

Before going out on your boat check the weather forecast at bom.gov.au/marine/. For graphical forecasts go to bom.gov.au/australia/meteye/ and zoom into your location.

There are five things to take note of when planning your boating trip:

- Are warnings current for your boating area?
- Are there weather conditions affecting safe navigation and comfort?
- What are the wind trends?
- What are the wave conditions?
- When is the next high and low tide?

When you are out monitor the weather using the mobile website m.bom.gov.au and check for any warnings, especially if wind changes, or storms are predicted. The timing of a frontal passage is sometimes difficult to forecast and the predicted time of arrival may be revised.

The Bureau of Meteorology provides a round-the-clock forecast and wind warning service for all Australian coastal waters. Warnings are issued when necessary for strong winds (averaging 25 to 33 knots), gale force winds (34 to 47 knots) and storm force (48 to 63 knots). These are updated every six hours. Note that wind gusts may be up to 40 per cent stronger than the average and maximum waves may be up to twice the height of the forecast average wave heights.

When waves are expected to break dangerously close inshore, advisories are included in coastal waters forecasts. For details visit bom.gov.au/marine/about/hazardous-surf-messages.shtml.

The Bureau of Meteorology (BOM) broadcasts forecasts and warnings on HF radio bands, via voice and fax. Extensive information about the Bureau's marine services is at bom.gov.au/marine/about/about-marine-services.shtml.

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 the radio operator where you are going, estimated time of return, vessel details and how many people on board.

You can also use the *MarineRescue* app to connect directly to Marine Rescue NSW and log on and off using your smartphone. The app is suitable for both Apple and Android mobile devices.

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.



IMPORTANT NOTE

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



KNOW YOUR BOAT

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.

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 and observe all navigation marks and signs.

For more information see the Navigation Marks and Signs section starting on page 57.

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 as 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. It is usually easiest to approach the mooring towards the wind or towards the current.

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 or 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, 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.

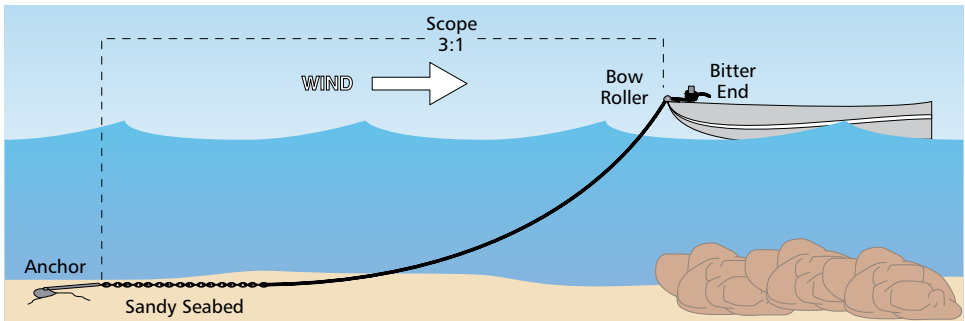
Do not anchor in sensitive habitats such as seagrass. Areas of seagrass are usually visible as dark patches on the sea bed. Damage from an individual anchor can potentially set off progressive seagrass loss over a wide area.

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

Don't anchor on bombooras, 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.



Sufficient anchor line is normally three times the depth of water, or more in bad weather or strong current.



KIDS AND BOATS

PREPARING CHILDREN FOR BOATING

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

IMPORTANT NOTE

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

- At all times when in a vessel less than 4.8 metres in length
- When in an open area of a vessel less than 8 metres in length that is underway
- Other situations as per the table on page 22.

Make sure that the lifejackets are well fitting and suitable for the boating situation.

Older 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 kids about lifejackets and sunscreen right from the start of their boating life.

Teach children to swim and practice emergency positions like Heat Escape Lessening Position (HELP) and 'Huddle'. See page 94 for additional details on the 'HELP' and 'Huddle' positions.

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 of the boat, and 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 is illegal and penalties apply.

Teach them the rules about keeping a good lookout, keeping a safe distance from others and reducing wash.

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



REMEMBER

Slip, Slop, Slap, Seek, Slide

- Slip on sun-protective clothing
- Slop on sunscreen
- Slap on a hat
- Seek shade
- Slide on wrap around sunglasses
- Wear a lifejacket.



Before you go boating

Children under 12 years of age must wear a lifejacket at all times on boats under 4.8 metres long, including while the vessel is at anchor or moored.



Safety on the water



46 Know the rules

- Safe speed
- Proper lookout
- Bow riding
- Giving way
- Safe distance and speed
- Mooring areas
- Diving activities
- Dredges
- Vehicular ferries
- Commercial fishing vessels

57 Navigation marks and signs

64 Night safety

- Navigation lights checklist

70 Special areas

- Open waters
- Bar crossings
- Inland waterways
- Alpine waters
- Sydney Harbour

78 Big ships and small boats

79 Go easy on the drink

KNOW THE RULES

All masters must be aware of the International Regulations for Preventing Collisions at Sea which are adopted in NSW and modified through the *Marine Safety Regulation 2016* and available on the Roads and Maritime website at rms.nsw.gov.au/maritime. 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:

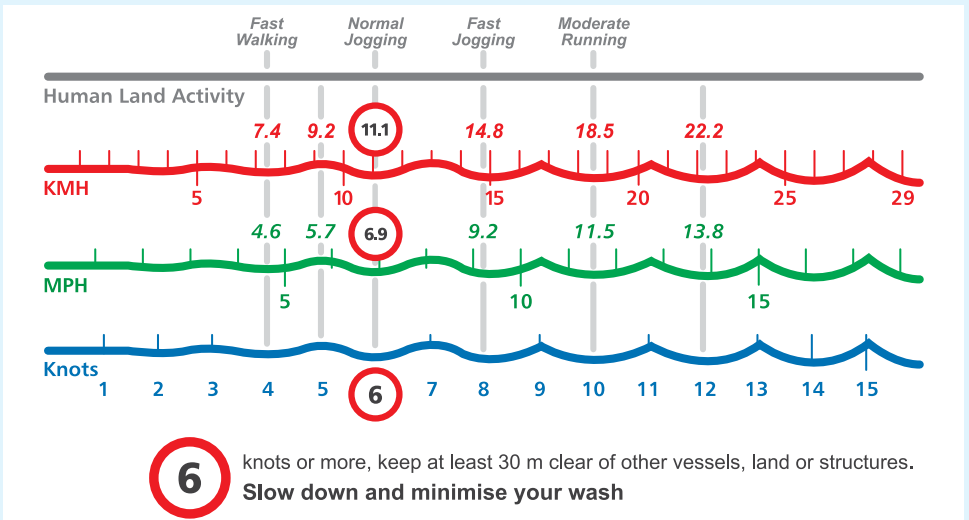
- **Visibility** – Drive slowly in rain, fog, mist, smoke or glare
- **Night** – Special caution is required between sunset and sunrise because many potential hazards may not be lit or may not be easily seen. Background shore lighting may confuse you

- **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.

WASH

Wash refers to the waves and turbulence created by a boat as it moves through the water. The size of a boat's wash and the effects it might have depend on how the boat is driven, its hull shape and how much load it is carrying.



PROPER LOOKOUT

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

See page 82 for information on towing responsibilities.



BOW RIDING IS ILLEGAL

Bow riding means:

- Extending any part of your body outside the perimeter of a power-driven vessel that is making way, or
- Being on the bow in a position that increases the risk of falling overboard.



IMPORTANT NOTE

The offence relating to bow riding applies to both the operator of the vessel and the offending person. Fines apply.



'Bow riding' on a moving powerboat includes being on the bow in a position increasing the risk of falling overboard, or sitting or leaning out over any edge of the vessel.

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 from 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.

IMPORTANT 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 powered 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).

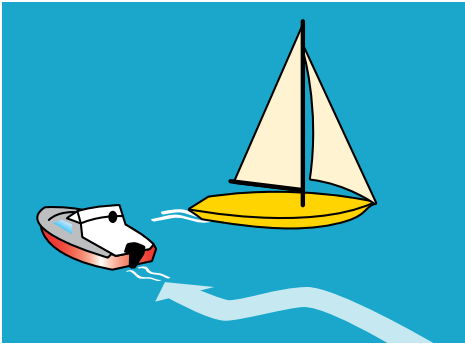
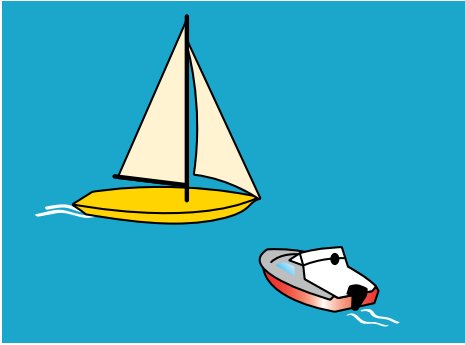
5 short blasts

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



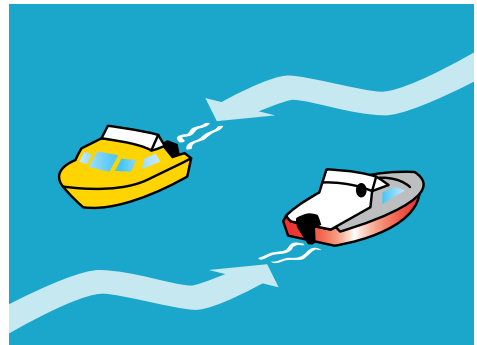
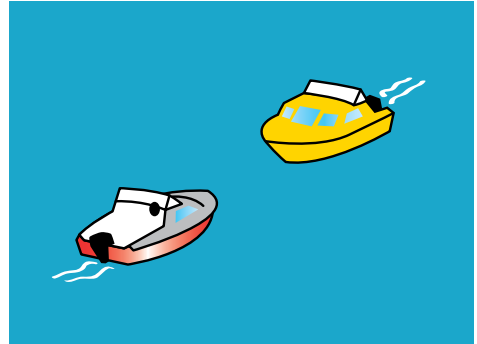
POWER GIVES WAY TO SAIL

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.



IMPORTANT NOTE

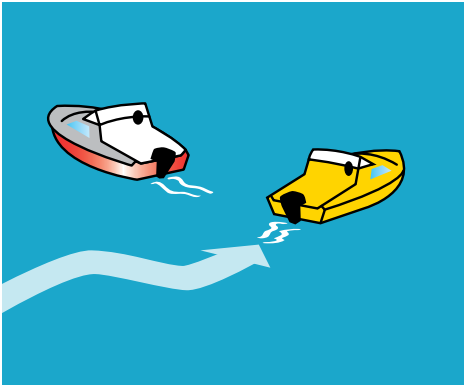
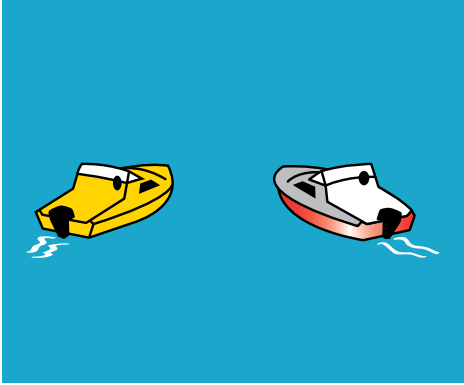
The master of the vessel which has right of way must maintain a lookout, maintain course and speed and be prepared to take action to avoid a collision if necessary.



Safety on the water

POWER DRIVEN VESSELS CROSSING

In crossing situations, give way to the right.



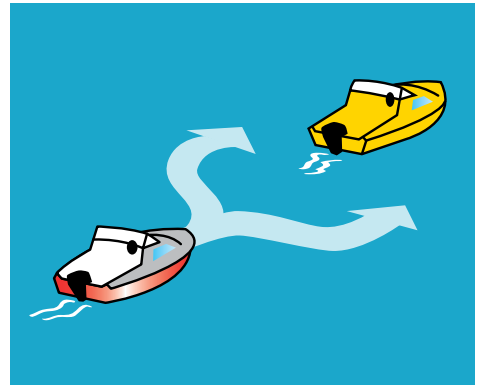
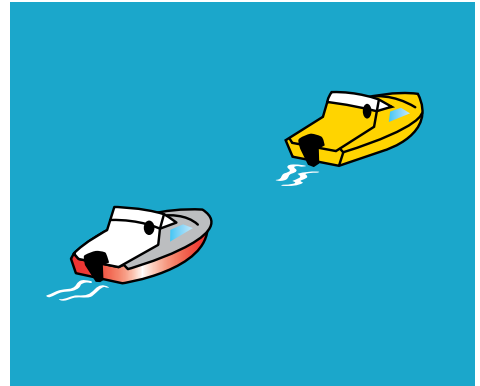
VESSELS OVERTAKING

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.

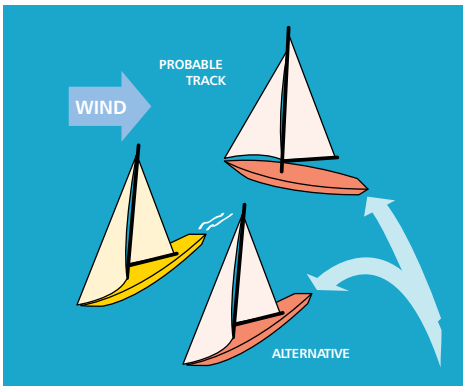
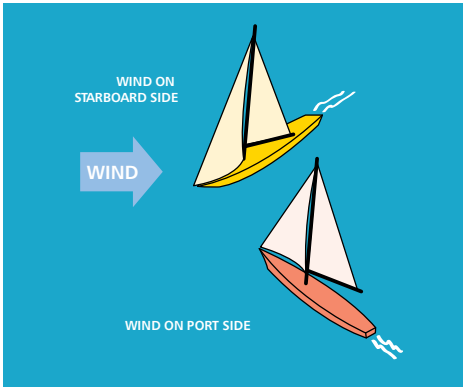
In narrow channels you must be particularly careful when overtaking.

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

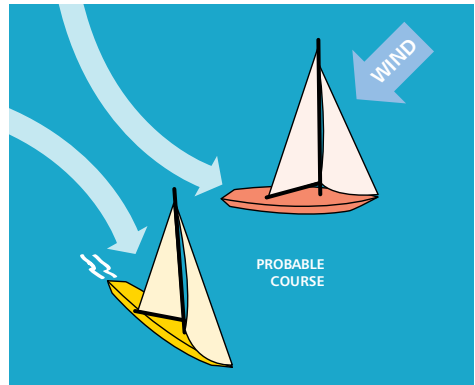
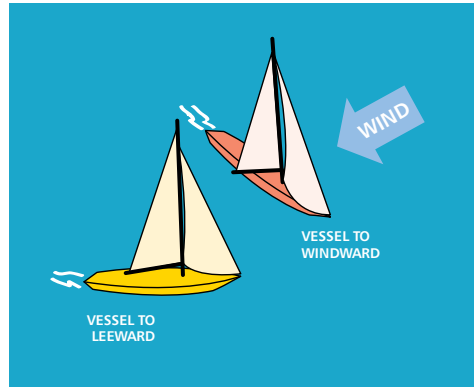


SAILING VESSELS AND SAILBOARDS

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.



When both craft have wind on the same side, the vessel which is to windward shall keep out of the way of the vessel which is to leeward.



IMPORTANT NOTE

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



Safety on the water

SAFE DISTANCE AND SPEED

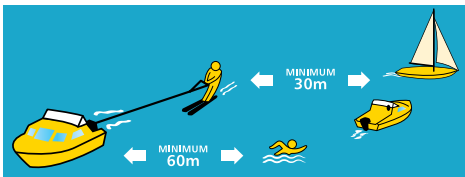
A **safe distance and speed** between a vessel and a person or thing (including another vessel) is a distance and speed that will ensure that the vessel will not cause danger or injury to the person or damage to the thing, having regard to all relevant safety factors including weather conditions at the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

Changes have been made to the safe distance requirements (also known as 'distance off') from July 2016 by the introduction of the *Marine Safety Regulation 2016*. The revised rules are explained below.

When driving any vessel (including when towing a person or people) you must keep the vessel, any towing equipment and anyone being towed, a minimum distance of:

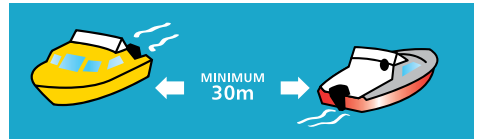
- **60 metres** from people in the water or if that is not possible, a safe distance and speed
- **60 metres** from a dive flag on the surface of the water or if that is not possible, a safe distance and speed.

Exceptions are when you are supporting swimmers or divers in the water; or your vessel is human-powered, eg a canoe, kayak, surf ski or rowboat; or it is a sailing vessel under 5.5 metres long without an auxiliary engine; or you are launching or removing it from the water taking care to avoid injuring people or damaging property.



When driving a power-driven vessel at a speed of six knots or more (including when towing a person or people) you must keep the vessel, any towing equipment and anyone being towed, a minimum distance of:

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



Parasailing vessels, any towing equipment and anyone being towed, must maintain a distance of at least **200 metres** from any other vessel, bridge, cable, wire, pipeline or structure.

DESIGNATED SWIMMING AREAS

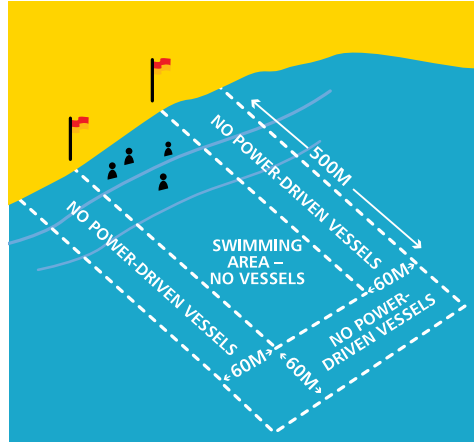
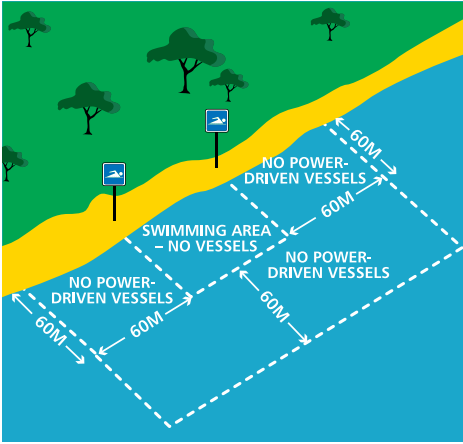
Vessels must not be operated in a swimming area, unless permitted to do so by signage.

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.

Power-driven vessels must not be operated within 60 metres of a swimming area and the flags or signs marking such zones, unless they are a vessel operated by Surf Life Saving NSW or Council lifeguards or unless permitted to do so by a sign.

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



All vessels must stay outside swimming areas and power-driven vessels must not come within 60 metres, unless permitted by signage.

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.

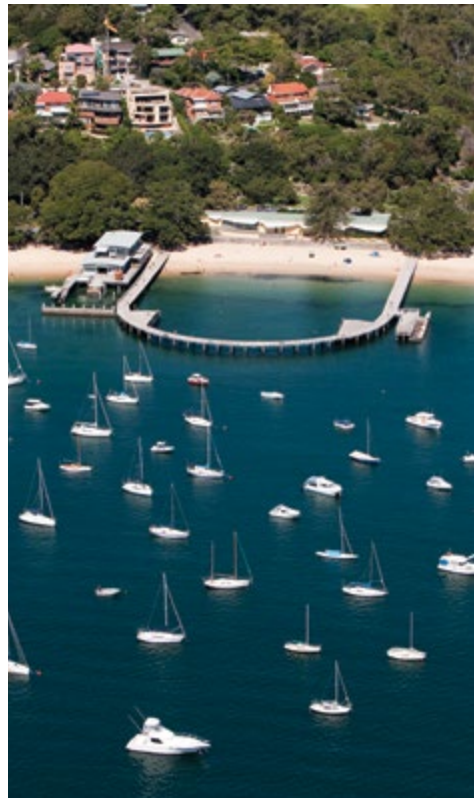
Check local maps or charts, or contact your local Roads and Maritime centre for details of mooring areas.



REMEMBER

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 6 knots or more in a power-driven vessel, you must stay at least 30 metres from any moored vessel.



Special rules apply when navigating through and near mooring areas.



DIVING ACTIVITIES

Always keep a good lookout for people in the water, including divers, snorkellers, spearfishers and swimmers. Keep an eye out for the 'Alpha' flag, which means divers, snorkellers or spearfishers are in the water nearby.

Divers may be present in a variety of areas: Headlands, rocky reefs, bomboras and sheltered coves. Check your local boating map for likely areas before going out on the water.

Navigate with caution whenever within 200 metres of the shore where divers may be present. Be particularly careful when visibility is poor, such as in fog, glare, low light and surface chop.

The blue and white Alpha flag must be displayed whenever divers, spearfishers or snorkellers are operating from the vessel. It should measure at least 40 centimetres x 40 centimetres in size, be rigid, and be flown in a vertical position at least one metre above the vessel's superstructure and visible through 360 degrees. In addition, it is a good idea to attach a high visibility fluorescent yellow/green flag to draw attention to the Alpha flag, whether it is displayed from a vessel, buoy or personal float.

Alternatively the Alpha flag can be flown off a nearby float/buoy, in which case it must be at least two metres above the water level. It is also strongly recommended that a personal float and an Alpha flag be towed by snorkellers or spearfishers who venture more than 60 metres away from their vessel or who are operating from shore. For even greater visibility, it is a good idea to use a float that displays the high visibility colours.

If you see any Alpha flags, brightly coloured flags or brightly coloured floats, slow down and keep well clear. Remember, you must stay at least 60 metres away from anyone in the water, or a safe distance and speed if that is not practicable.



Divers can be up to 100 metres from their float/flag. You must stay at least 60 metres away from anyone in the water.



Fluorescent floats and/or flags are recommended to draw attention to the Alpha flag.



If you suddenly find yourself close to divers' flags and/or floats, cut the engine immediately, look around and match people to floats before slowly motoring clear. Remember that spearfishers may be up to 100 metres from their float and flag.

Avoid passing between a diving vessel and the shore, pass well clear to the seaward side. Be aware that spearfishing and snorkelling vessels

are not always at anchor, and often move about picking up and dropping off divers.

If picking up or dropping off snorkellers or divers, always be prop aware. For more information on propeller strikes, see page 92. Preferably switch off the engine first and always choose a safe position well clear of rocks or breaking waves so you don't have to rush.

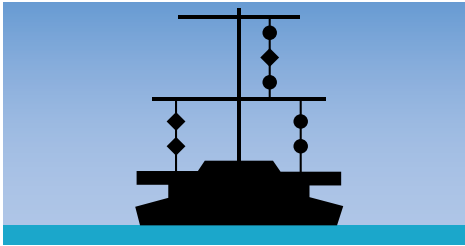


The blue and white 'Alpha' flag means divers, snorkellers or spearfishers are in the water nearby.



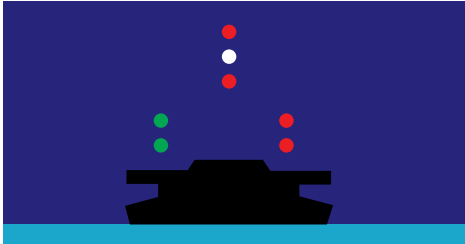
DREDGES

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



Safe side to pass
(Diamonds)

Obstruction this side
(Balls)



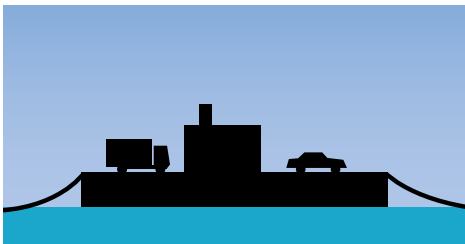
Safe side to pass
(Green – Go)

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 four 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.

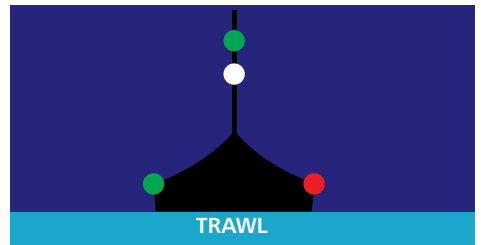


COMMERCIAL FISHING VESSELS

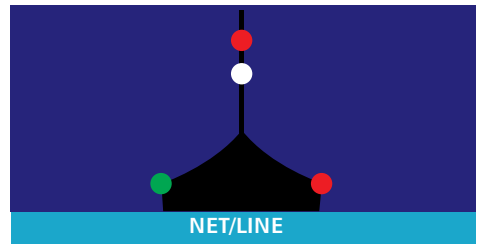
Licensed fishing vessels (LFB) display special shapes and lights when their manoeuvrability is restricted by their fishing apparatus.

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 NSW Department of Primary Industries (NSW DPI) Fisheries office for more details about the rights of commercial fishing vessels.



TRAWL



NET/LINE

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 rms.nsw.gov.au/maritime.

LATERAL MARKS

Port and starboard marks are referred to as lateral marks.

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.

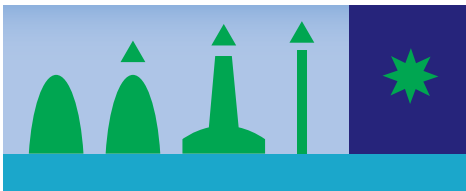
Port markers may be any of the shapes shown below.



Starboard hand markers

Starboard markers are green and have a cone shaped topmark or buoy. If lit, a starboard hand mark shows a flashing green light.

Starboard markers may be any of the shapes shown below.



IMPORTANT NOTE

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

Single lateral marks

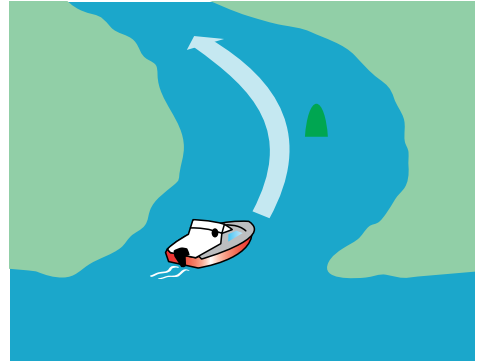
Often lateral marks are not placed in pairs, so you will need to decide on the safe side to pass.

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

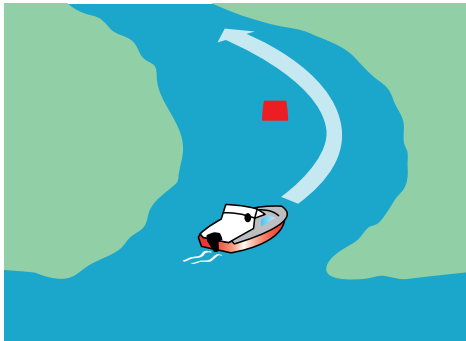


IMPORTANT NOTE

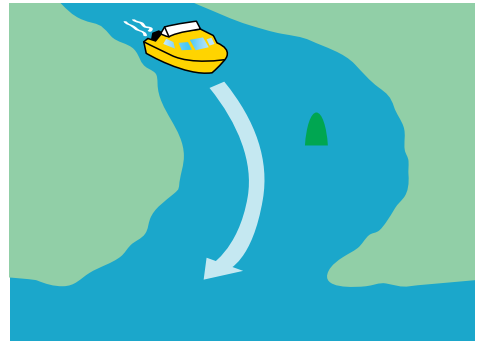
Heading upstream means in a direction away from the sea. Heading downstream means in a direction towards the sea.



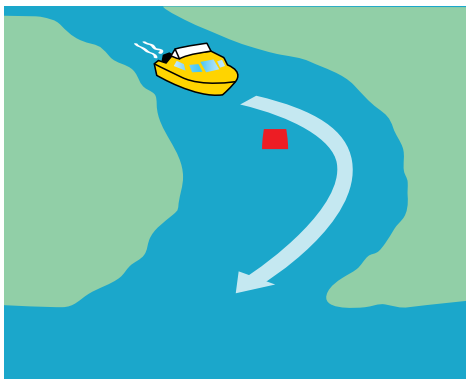
Keep **green** (starboard hand marks) on your **right hand side** (to starboard) when going upstream.



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

In NSW, the term 'channel' means an area of navigable waters that, whether or not indicated by navigation marks, provides a passage for vessels. This means that the term channel extends to bays and sounds as well as the more traditional marked channels, fairways, passages and rivers. Generally speaking, best practice is to keep to starboard (right hand side) in all waterways. However, in narrow channels a vessel **must** keep to starboard.

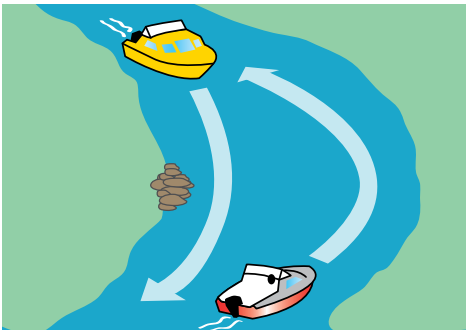
When driving a boat on rivers and estuaries, extreme caution should be exercised because not all shallow areas and navigation hazards may be marked and shallow areas may shift.

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 all regulations for avoiding collision apply. Remember:

- 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.

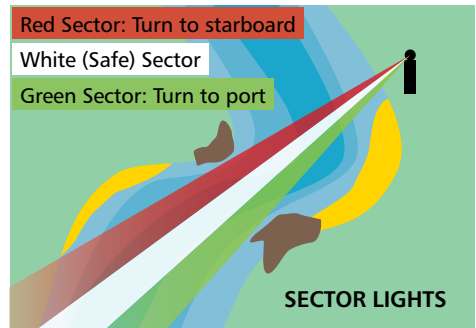
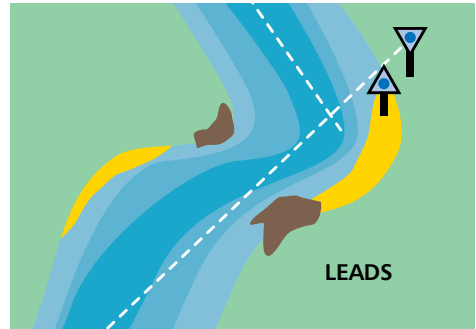


LEADS AND SECTOR LIGHTS

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.



Sector lights vary from port to port and a chart should be referred to before using them. Where sector lights mark the entrance to a port, be aware that the white sector is the shipping channel. Do not impede the passage of seagoing ships. See page 78 for more information on large vessels.



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.



REMEMBER

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

Three flashes = East.

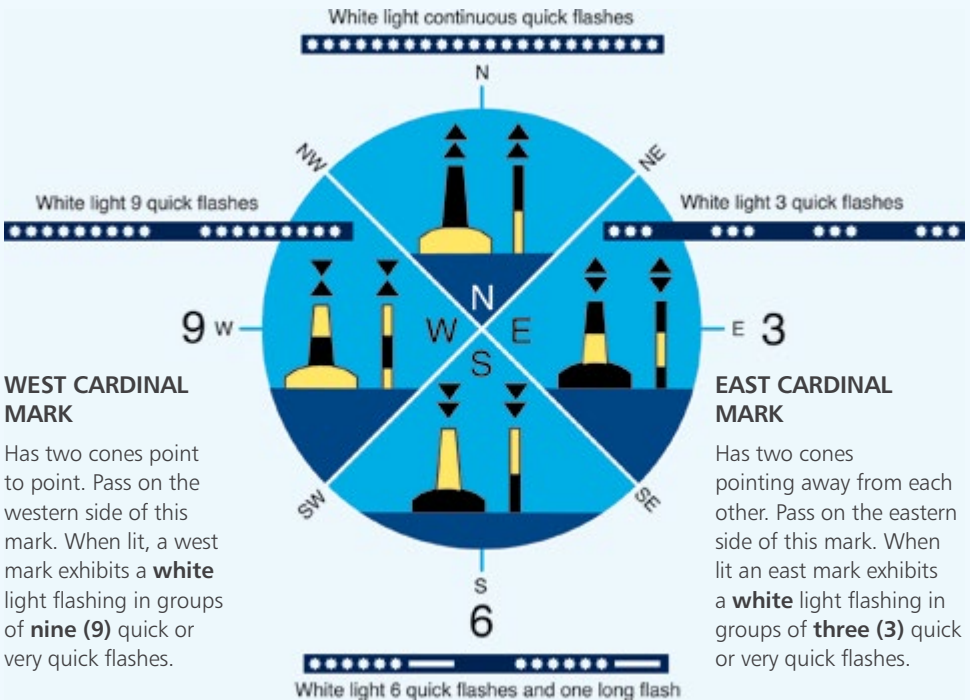
Six flashes and one long flash = South.

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

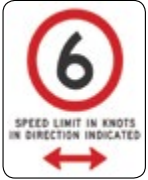
SPEED SIGNS

In some areas, speed restriction signs are used for safety reasons in NSW. These usually show four or eight knots, but can also show six, 10 and 15 knots. Penalties apply for travelling in excess of the speed restriction.



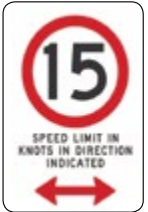
4 knots

About 7 km/h or a fast walking speed



6 knots

About 11 km/h or a jogging speed



15 knots

About 28 km/h or a fast running speed. Used in the Sydney Harbour Transit Zone. See page 76 for additional details.

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.

'Wash' is the wave effect created by a vessel moving through the water. 'No Wash' and 'Reduce 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.



Be aware that vessel wash can travel for hundreds of metres, and you can be held legally responsible for damage caused by wash from your vessel.

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.

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

IMPORTANT NOTE

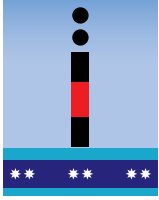
On the spot fines are issued for creating excessive wash.

Travelling at the speed shown on a speed restriction sign does not guarantee you are not creating excessive 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.

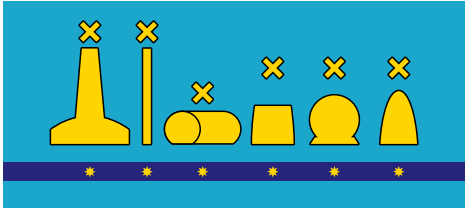
Special marks

Indicates special features or areas such as:

- Tide poles
- Spoil grounds
- Underwater pipes.

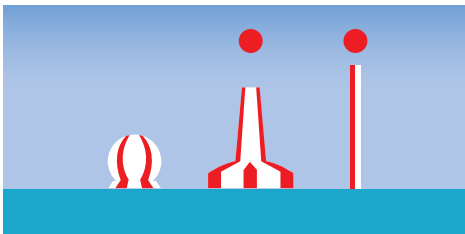
They can be utilised as lateral marks by using can or conical shaped buoys. If so they must be passed as lateral marks: can (port hand) or conical (starboard hand). See page 57 for more information.

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



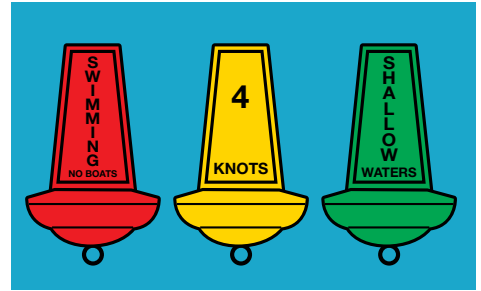
Safe water marks

These are not common in NSW. 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 kept on your left hand (port) side.



Aquamark minibuoy

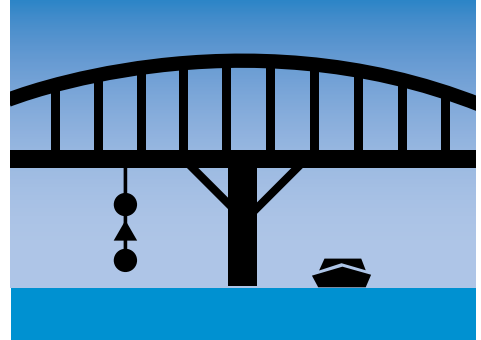
Used in some areas as alternatives to conventional buoyage. They often have advisory messages on them and penalties may apply for breaching the requirement displayed.



Channel blocked/closed

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

- Bridge span blocked
- Channel is blocked
- Port closed.



Submarine cables

Submarine cables carry electrical power or telecommunication signals under the water. Anchoring is prohibited within 200 metres of a submarine cable. If your anchor becomes snagged in this area, it should not be retrieved. Cut the anchor line as close as you can to the anchor.

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.

A new crossings signage system is progressively being introduced on NSW waterways. The new

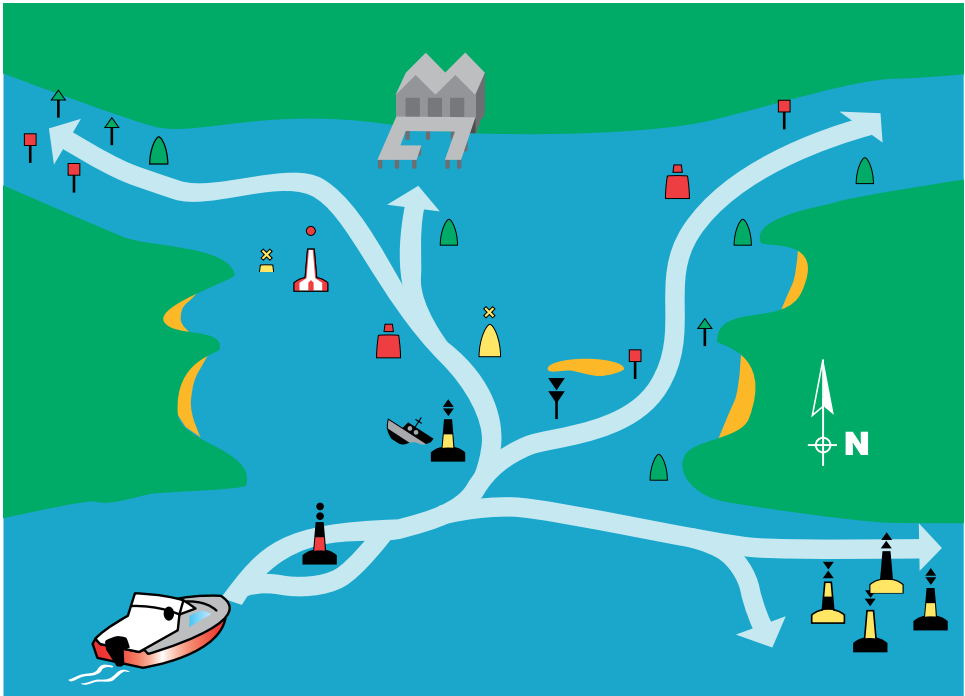
signage advises the maximum vessel height which can be navigated under an overhead crossing. It is important to note that clearances may be reduced during floods.

Roads and Maritime offers a free sticker which you can use to help 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.



Understanding the system of navigation buoys, poles and lights is an essential element of safe boating.



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.

IMPORTANT NOTE

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.



Check all your navigation lights are working before heading out on the water, switch them on and slow down to a safe speed when night falls.

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 correct 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.

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.



Vessels at anchor displaying all round white lights. Photo courtesy of City of Sydney.



NAVIGATION LIGHTS CHECKLIST

Check your lights before heading out. When boating at night or in times of restricted visibility:

- Check switches are on
- Check navigation lights are on and working
- Physically check each light is on
- Turn off cabin lights as they 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 clearly visible through an arc of 360 degrees, 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.



REMEMBER

Look out 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

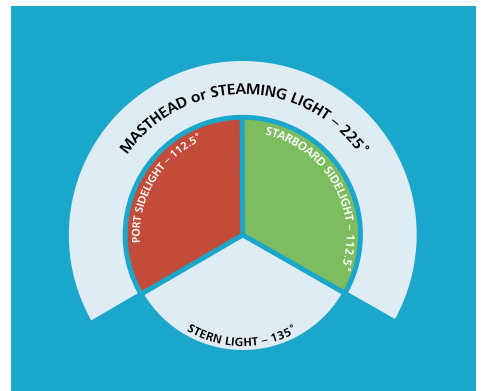
All round white light: A white light showing an unbroken light over an arc of the horizon of 360 degrees.

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 beam 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.



RANGE OF VISIBILITY

Vessels under 12 metres

- Masthead light – 2 nautical miles (nm)
- Sidelight – 1nm
- Stern light – 2nm
- All round lights – 2nm.

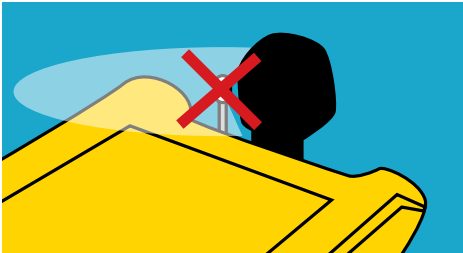
Vessels 12 metres to 20 metres

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

PLACEMENT OF LIGHTS

Incorrectly installed navigation lights

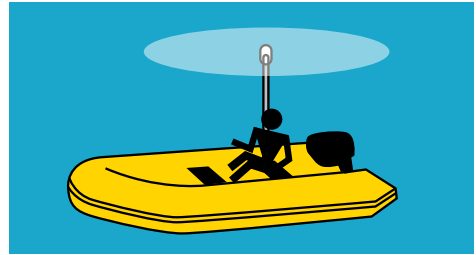
Navigation lights should be installed correctly so they show the appropriate arc of light and are not obscured by the vessel's superstructure as shown in the diagram below, or interfered with by deck lights. This reduces the vessel's visibility and is dangerous.



The diagram above shows incorrectly installed sidelights. Don't install them so they point only forward or straight up. They need to point out across the water as described and illustrated on the opposite page.

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

Power vessels under seven metres and less than seven knots

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

All other power vessels under 12 metres

Shall exhibit one of the following:

- Separate or combined sidelights; a masthead light and a stern light
- 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.

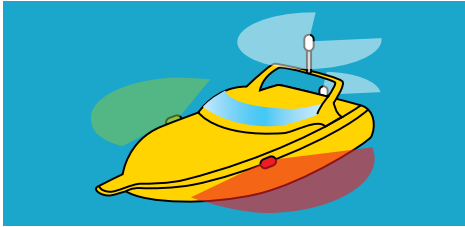


Power vessels 12 metres to 20 metres

Shall exhibit one of the following:

- A masthead light, separate sidelights and stern light
- 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 seven metres

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

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



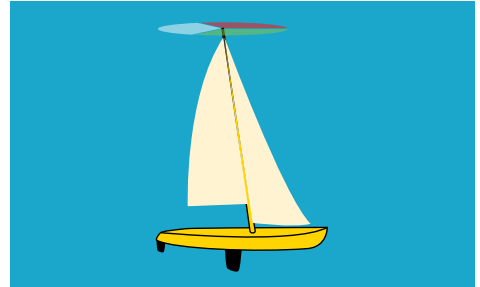
IMPORTANT NOTE

The use of tricoloured lights alone in areas affected by backlighting is not recommended eg Sydney Harbour. In these cases it is recommended to use deck level navigation lights to make your vessel as visible as possible.

Sailing vessels seven metres to 20 metres

Shall exhibit one of the following:

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



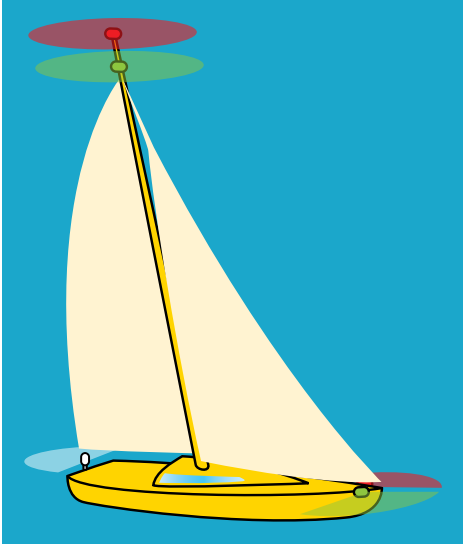
Sailing vessels over 20 metres

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.



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 four 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.

IMPORTANT NOTE

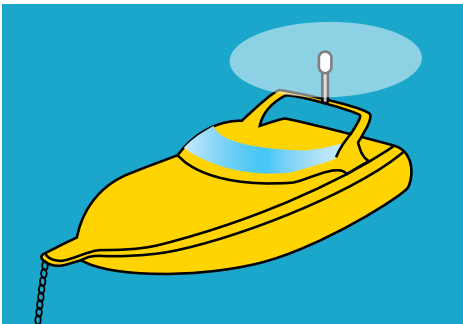
There are many other combinations of lights used on vessels. The lights shown relate to the activity the vessel is engaged in, ie fishing, dredging, not under command.

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

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 such as deck lights or cabin lights to ensure you are seen and keep a good watch.



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
- The distribution of weight on board.

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 experienced 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 up to 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 and is typically designed to take the initial impact of chop and waves. Vessel design however is extremely varied and it is essential you know the limits of your boat's capability.

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 (see page 72), 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 capsizing
- 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 tell-tale clouds and white cap waves.

IMPORTANT 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.

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.

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 or 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.



IMPORTANT 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 must 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.





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

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.

Knowledge and experience

If in doubt, don't go out.

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.

Preparation and 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 and sea conditions

- Observe the bar conditions, either in person or via the online network of web cameras, and be prepared to cancel or delay the crossing
- If unfamiliar with the bar, obtain advice from experienced locals, eg 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
- Make sure all people onboard have their Level 100+ lifejacket on
- 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 as 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 as 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 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 also has a network of web cameras to assist in trip preparation. Check the Roads and Maritime website for up-to-date information and live vision of 19 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.



Submerged trees and other snags can pose danger on inland waterways.

Always get a wind/weather report before boating and once out on the water, 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 refers to:

- Lake Burrinjuck
- Lake Eucumbene
- Lake Jindabyne
- Khancoban Pondage
- Swampy Plains River
- Mannus Lake
- Googong Reservoir
- Blowering Reservoir
- Pejar Dam
- Yass River
- Lake Oberon
- All navigable waters within the boundaries of Kosciuszko National Park.

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 in most situations on alpine waters. For full details refer to pages 22-23.

Alpine weather

Alpine lakes are often subject to very cold and windy weather. Many of these lakes commonly experience snow in winter. The higher altitude means weather often changes quickly, so proper trip preparation and continuous monitoring of the weather when you are out are essential. Watch for any warnings and be prepared to change your plans if necessary.

When boating in alpine waters check the weather with the Bureau of Meteorology's graphical forecasts bom.gov.au/australia/meteye/ and zoom into your location. You can also use m.bom.gov.au on your mobile device and type in the nearest location.

Cold water

Winter brings a greater risk of hypothermia to boaters exposed to the elements. Capsizing in cold water can also be life-threatening. 'Cold shock' can incapacitate almost instantly. So plan and prepare to avoid cold shock and 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 unless extremely close to the shore. Remain with your craft in the 'HELP' or 'Huddle' position
- Remember, alcohol increases the body's heat loss.

See page 94 for more information.



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.

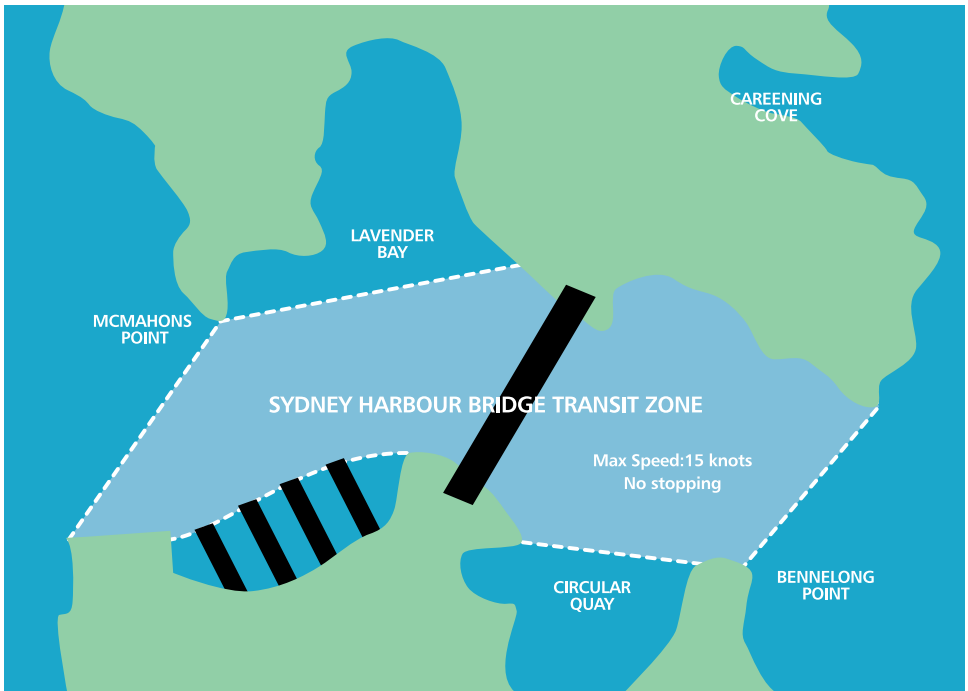
The number of vessels on the Harbour is increasing each year, providing a greater challenge in managing the potential for additional conflict and incidents to ensure safety on the waterway.

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 eg people sailing in organised events and commercial vessels operating to timetables.

Sydney Harbour Bridge Transit Zone

Roads and Maritime 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.

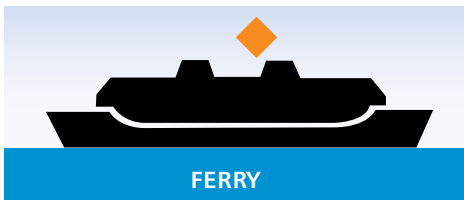
Within this zone, anchoring or drifting are prohibited other than in an emergency. This means that vessels may only travel through this area to reach an area alongside or outside of the transit zone.



Priority over sail

Some ferries on Sydney Harbour display an orange diamond shape. The shape is called the priority over sail signal. This shape removes the usual 'power gives way to sail' rule - meaning a sailing vessel is required to keep out of the way of any ferry displaying an orange diamond. The only exception is if the ferry is overtaking the sailing vessel.

For general safety and courtesy, skippers of sailing vessels should stay at least 200 metres from the bow, and at least 30 metres from the sides or stern of a ferry displaying the priority over sail signal.

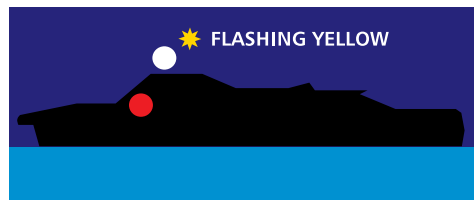


IMPORTANT NOTE

The use of a PWC is prohibited in Sydney Harbour, including all tributaries such as Parramatta River.

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.



Safety on the water

BIA
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

MyBoatingLife.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.
MyBoatingLife.com.au

Facebook, Twitter, Instagram, YouTube, BIA logo

Sydney Harbour Control

Channel 16/13 (24 hours). Details of large vessel movements, navigation warnings and meteorological forecasts are broadcast on VHF Channel 13 from approximately 1.05am, every second hour. Unless otherwise directed, sailing vessels and motor vessels are not to impede the passage of commercial shipping/naval vessels inside the shipping channels. See pages 78-79 for more information.

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 provides more information regarding big ships and small boats on its website, including map sections within the local boating map showing the shipping channels. Visit rms.nsw.gov.au/maritime.

Active radar reflectors (ARR)

Active radio 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.

ARR need to be mounted high enough on a vessel to be effective (eg 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.



Large vessels are restricted in their ability to alter course and cannot stop quickly. Always keep well clear of them.

Recreational boat users beware

- Always keep a proper lookout for big ships and steer clear of them
- Make your intentions clear 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
- Do not anchor in a navigation channel
- Ensure you can be seen clearly at all times. 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.



Do not risk crossing ahead of large vessels unless well clear.

GO EASY ON THE DRINK

When afloat, your coordination, judgement, vision, balance and reaction time can decline up to three times faster after consuming alcohol. The boating environment with the waves, motion, vibration, engine noise, weather, wind and spray multiply the effects of alcohol. Driving under the influence of alcohol or drugs is an offence.

Everyone aboard needs to take care. Studies have shown that boat passengers are just as likely as operators to be involved in incidents such as capsizing the vessel or falling overboard as a result of drinking alcohol.

Operators of vessels that are underway may be subject to random breath testing and subject to heavy penalties if found to be over the limit. The 'operator' of a vessel includes anyone steering or exercising control over its course or direction and includes the observer in a vessel which is towing people, as well as anyone being towed.

See page 107 for further information about drug and alcohol offences and random breath/drug testing.





Other boating activities



- 82 Water-skiing, wakeboarding and towing**
- 84 Canoes and kayaks**

- 85 Sailboarding and kiteboarding**
- 86 Personal watercraft (PWC)**

WATER-SKIING, WAKEBOARDING AND TOWING

Towing activities include water-skiing, wakeboarding, kneeboarding, tubing and similar sports such as wake surfing.

THE TOWING VESSEL

- Must have current registration (if applicable)
- 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 DRIVER

- Must hold a general boat driving licence if the vessel will be operated at 10 knots or more or a PWC driving licence when operating a PWC at any speed. Additional restrictions apply to licence holders under 16 years of age (see page 8)
- Is responsible for the safety of the vessel and towed people and for maintaining the minimum distances off applicable to the boat and the person or people being towed
- Must not be under the influence of alcohol or drugs
- Must not operate the vessel at more than 60 knots if towing anyone under the age of 18 years, unless in accordance with an aquatic licence
- **Must not tow more than three people at once.**



Anyone being towed must wear a lifejacket.

THE OBSERVER

- Must hold a boat or PWC driving licence or be 16 years of age or older
- 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 drugs
- Has the prime responsibility of observing the towed people and reporting all matters affecting their safety to the master
- Tells the driver about other vessels approaching from behind
- Should be familiar with the standard hand signals.



IMPORTANT NOTE

When towing the observer must face backwards to watch the person being towed while the driver faces forward to maintain a lookout.

THE TOWED PERSON

- Must wear a lifejacket (see page 22)
- Must maintain the minimum distances off (listed below) and, when returning to shore, must do so safely
- Must not be under the influence of alcohol or drugs.

SAFE DISTANCE AND SPEED

When towing a person or people at **any** speed, you must keep the vessel, any towing equipment and anyone being towed a minimum distance of:

- **60 metres** from people in the water or if that is not possible, a safe distance and speed
- **60 metres** from a dive flag on the surface of the water or if that is not possible, a safe distance and speed.

When towing at a speed of six knots or more, you must keep the vessel, any towing equipment and anyone being towed a minimum distance of:

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

If towing aerial equipment (eg paraflying) the vessel, any towing equipment and anyone being towed, must maintain a distance of at least **200 metres** from any other vessel, bridge, cable, wire, pipeline or structure.

IMPORTANT NOTE

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



Always keep a safe distance between the towed person and the shore.

NO TOWING AREAS

In some areas water-skiing and wakeboarding etc may be prohibited and signs may be displayed. The signage may specifically prohibit operating a power-driven vessel that is ballasted at low speed so as to generate a large wave or wake for wakeboarding or wake surfing activities. 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.

TOW ROPE REQUIREMENTS

The operator of the vessel must ensure the tow rope is long enough for anyone being towed to be at least **seven metres** behind the vessel at all times. Some exceptions apply for vessels during training activities.

For wake boarders and wake surfers, the vessel operator must ensure they are at least **seven metres** from the centreline of the stern of the vessel, whether or not they are using a tow rope or other device. However, this requirement does not apply if the following conditions are met:

- The operator considers and mitigates the risks associated with carbon monoxide emissions
- The vessel is not fitted with a propeller at the aft most position of the hull.



The driver and observer both have important duties while towing.



CANOES AND KAYAKS

Canoes and kayaks are classified as vessels and must comply with NSW marine legislation. This includes paddlers being responsible for the safety of their vessel and all those on board. An understanding of the safe boating rules that apply to canoes and kayaks will help paddlers enjoy their sport in safety.

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

SAFETY IN CANOES AND KAYAKS

All skippers, and that includes the person in command of a paddle craft, are responsible for the safety of their vessel and all those on board. 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
- 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 one kilometre 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 special areas section on page 70 of this handbook.

If you intend to paddle 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.

LIFEJACKETS

Lifejackets must be worn when paddling at most times on NSW waters. For full details of the lifejacket wearing requirements, refer to pages 22-23.

The operator of the canoe or kayak is responsible to ensure that everyone on board complies with lifejacket requirements.

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.



Lifejacket rules apply to paddle craft.

SAILBOARDING AND KITEBOARDING

Sailboarding (often referred to as windsurfing) and kiteboarding (often referred to as kitesurfing) 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.

SAFE DISTANCE AND SPEED

Sailboarders and kiteboarders must:

- Keep themselves and their equipment a minimum distance of **60 metres** from people in the water and dive flags on the surface of the water or if that is not possible, a safe distance and speed
- Stay out of designated swimming zones.

LIFEJACKETS

Lifejackets must be worn at most times when kiteboarding or sailboarding more than 400 metres from shore.

For further information, refer to pages 22-23.

NO-GO/CAUTION AREAS

Sydney Harbour is a no-go zone for kiteboarding and many areas within the harbour are restricted when sailboarding.

In 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 the Roads and Maritime 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 a waterproof pouch 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/kiteboarder overtaking any other craft (power or sail) must keep well clear of the vessel being overtaken.



Lifejacket and safe distance rules apply to both sailboarding and kiteboarding.



PERSONAL WATERCRAFT

A personal watercraft (PWC) is a vessel with a fully enclosed hull that may be driven standing up, lying down, sitting astride or kneeling, and includes jet powered surfboards. Regardless of the type of PWC, it is important to remember they are just another form of powerboat and are generally subject to similar regulations and laws. However, some special rules do apply to the use of these craft:

- A PWC driving licence is required to drive a PWC at any speed
- All PWC must be registered on NSW waterways
- Everyone on a PWC must wear a lifejacket at all times.



IMPORTANT NOTE

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

PWC Exclusion Zone

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

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

Penalties apply.

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 200 metres of the shoreline of the above.

Irregular driving

Examples of operating in an irregular manner include, but are not limited to:

- 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 200 metres of the shoreline.

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

Penalties apply.

All other navigable waters

In all navigable waters, other than in the PWC Restriction Zone and including all of the NSW coast, 'operating in an irregular manner' is not permitted within 200 metres of the shoreline where one or more dwellings are visible from the water and located within 200 metres of that shore.



After sunset

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

Tow-in surfing

Tow-in surfing is a technique where a person operating a PWC tows a surfer onto a breaking wave. In NSW the following conditions apply to tow-in surfing:

- Tow-in surfing is only permitted on open waters at surf breaks where no other surfboard riders are present
- Both the driver of the PWC and the surfboard rider must have a current PWC licence, current First Aid certificate, wear an appropriate lifejacket (Level 50S or greater) and have attended any course or passed any examination required by Roads and Maritime.

The driver of the PWC:

- May not tow more than one person at a time
- Must yield right of way to all other boating or recreation activities
- Must maintain a distance of at least 200 metres from all vessels and people in the water
- Must carry dive fins and a safety knife.

IMPORTANT NOTE

The restriction on 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.

When tow-in surfing, the PWC is to be equipped with a:

- Rescue sled
- A spare kill switch lanyard wrapped around the handlebars
- Two-way communication device
- Toolkit
- Quick release floating tow rope with a minimum length of seven metres
- Bow tow-line with a minimum length of seven metres.

Only PWC may be used for tow-in surfing. No observer is required on the PWC provided there is compliance with the above conditions at all times.



INFORMATION

For detailed information about PWC refer to the PWC Handbook published by Roads and Maritime.



Special rules apply when operating a PWC for tow-in surfing.





Emergencies



90 Communication and rescue

91 Fire and fuels

92 Person overboard

92 Propeller strikes

94 Hypothermia and cold shock

94 Carbon monoxide

95 Incident reporting

COMMUNICATION AND RESCUE

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 **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.

For more information on marine radios, see page 33.

EMERGENCY WORDS

All calls should be 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.



Safer boating at your fingertips
Download the FREE MarineRescue App

The *MarineRescue App* makes it easier than ever for boaters to stay safe on NSW waters. It's the only App that connects you directly to Marine Rescue NSW.

Find out more on www.mrnsw.com.au or go direct to the App Store or Google Play.

MARINE RESCUE NSW - Volunteers saving lives on the water

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 five metre 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 five metre 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, Coast Radio Sydney for a renewal of a strong wind warning please switch to channel VHF 67. Out."

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 AND 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:

- 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, always take them ashore when fuelling
- Clean up fuel spills quickly.



Onboard fires are usually too fast and intense to fight, once started.



LIQUEFIED PETROLEUM 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.

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 and 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.



Treat the area around boat propellers as a 'hazard zone'.

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 or where powerboats are used near swimmers or children such as during sailing school or surf club activities.

PROPELLER PRECAUTIONS

Roads and Maritime 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, divers or other people in the water
- 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, or securely to your clothing or lifejacket, and stops the engine when pulled out.

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 Alpha flag, which means divers, snorkellers or spearfishers are in the water nearby.

If you are diving or snorkelling from a vessel you must display this flag and it is strongly recommended that you use the Alpha flag at all times while snorkelling, diving and ocean swimming. Attach a fluorescent yellow/green flag below Alpha for increased visibility.

Please see page 54 for additional information.



HYPOTHERMIA AND 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 per cent. 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 fall into the water, avoid panicking. 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 person or people may be in an area that has high exposure to carbon monoxide, placing you and others in danger.

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

INCIDENT REPORTING

If a marine accident (boating related incident) 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 boat or PWC driving licence required to be held
- Give details to any person having reasonable grounds for requesting them eg other persons involved in the accident

- Details must include the master's name and address as well as any distinguishing number which is required to be displayed on the vessel eg registration number or permit number.

If requested by a Roads and Maritime Officer or any NSW Police Officer, provide the following details as a minimum:

- Full identification
- Time, place and nature of accident
- Name and/or 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 driving licence or certificate of competency.

A written report must be forward to Roads and Maritime within 24 hours setting out the particulars of the incident if one of the following applies:

- The incident has resulted in the death, or injury to, a person
- The incident has resulted in damage in excess of \$5000 to a vessel or any other property
- Damage or risk of damage to the environment has occurred.

These forms are not required to be completed if the details have already been given to a Roads and Maritime Officer.

Vessel Incident Report Forms

Vessel Incident Report forms are available for download from the Roads and Maritime website under the boating safety section. Alternatively, the forms can be obtained at any Roads and Maritime operations centre, NSW Police or Marine Rescue NSW office.



IMPORTANT NOTE

Penalties apply for not reporting an accident to Roads and Maritime.

Emergency Contacts: Phone 000 or VHF16





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AQUATIC LICENCES

An aquatic licence is required by any person or organisation conducting, promoting or organising a race, competition, 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.

It is recommended that applications for aquatic licences and supporting documentation, including payment of the required fee, be submitted to Roads and Maritime a minimum of six weeks prior to the start of the event/activity, otherwise the application may be refused.

If the aquatic licence requires the exclusive use of an area of water, a 'special event' may have to be declared. Roads and Maritime is required to publish a marine notice for special events and additional fees may be charged for placing this notice in a local newspaper.

MOORING LICENCES

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

- **Private (Yellow Buoy)** – Licence permits you to moor your vessel on navigable waters subject to a range of conditions and is renewed annually
- **Commercial (Red Buoy)** – Licence issued to a company or other legal entity trading to provide marine type services to the boating public. This licence is also subject to a range of conditions
- **Emergency (Blue Buoy)** – Used by Roads and Maritime or NSW Police to store vessels in emergency situations
- **Courtesy (Pink Buoy)** – 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 to individuals and to a specific vessel.

The individual must:

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

An annual mooring fee is payable and is based on the mooring location and length of vessel.

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

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.

For details, visit the Roads and Maritime website rms.nsw.gov.au/maritime or call the Infoline **13 12 36**.



Yellow buoys are used to identify private moorings.

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 2012* 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.

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.

IMPORTANT NOTE

Polluting the waterways can result in a fine. Check the Roads and Maritime website for more information on pumpout facilities and locations.

An approved onboard sewage treatment system can also be used, but remember certain areas are declared as 'no-discharge zones'. Treated sewage must 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.

- 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.



Everyone in the boating community can help reduce marine pollution by properly disposing of vessel waste.

SHELLFISH HARVEST AREAS

The NSW shellfish industry is the largest aquaculture industry in the state. 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. 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.



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 has introduced wash restrictions in areas where vessel wash has potential to erode shorelines. Every skipper must comply with 'Minimise Wash' signs.

Continually assess your boat's wash. If it is causing other vessels to rock, or is causing a breaking/slapping wave on the shore, you may need to slow down.

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

Wakeboarders and other tow sport participants should look for wider, more open waterways and try to keep well clear of soft or eroding banks.

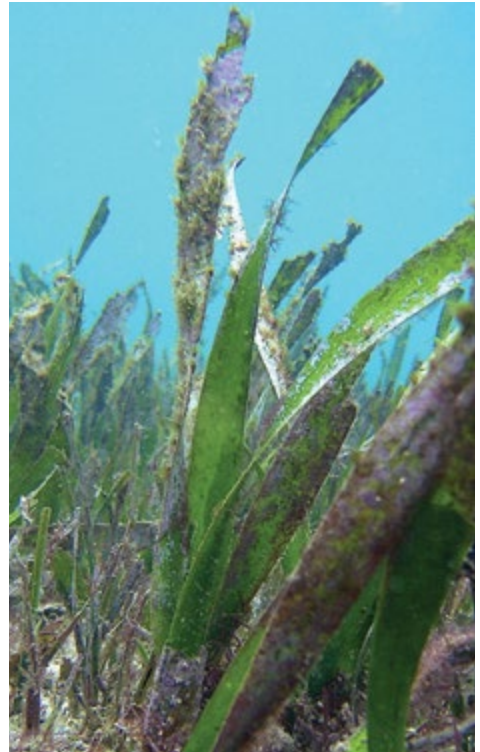
See page 46 for more information on wash.

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. These are often indicated by darker patches on the sea bed
- If you need to replace your mooring and it is currently over a seagrass bed, contact your local Roads and Maritime office to discuss other options.



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

AQUATIC WEEDS

Aquatic weeds include freshwater plants such as *Salvinia*, *Cabomba* and alligator weed, as well as the marine alga *Caulerpa*.

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, dense submerged thickets or stands along the bank.

Aquatic weeds can deplete oxygen levels, reduce sunlight penetration and displace native plants. The associated effects 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.

Propellers and anchors can cut plants into fragments that are then easily spread by currents. Fragments can be introduced to new water bodies 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.



Infestation of the marine alga Caulerpa on a jetty pylon in Pittwater, Sydney.

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 DPI on **1800 680 244** or email weeds@dpi.nsw.gov.au. Further information on freshwater weeds can be found at dpi.nsw.gov.au/biosecurity.

AQUATIC BIOSECURITY

Introduced pests and disease pose environmental, social and economic threats by impacting the natural balance of aquatic flora or fauna.

The marine alga, *Caulerpa taxifolia*, has been found in several estuaries along the South and Central Coasts of NSW and has the potential to outcompete native seagrass and overgrow other habitats.

You may be carrying marine pests on your boat and may be unknowingly spreading them to your favourite locations. Cleaning your boat and gear will help stop the spread of marine pests. It will also reduce your fuel costs and increase the life of your boat.

If you suspect a new incursion of an aquatic pest or disease, please contact the NSW DPI Aquatic Biodiversity Unit Pest Hotline on **(02) 4916 3877** or email a report with location details and photographs to aquatic.pests@dpi.nsw.gov.au.

Further information is available at dpi.nsw.gov.au/biosecurity.



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).

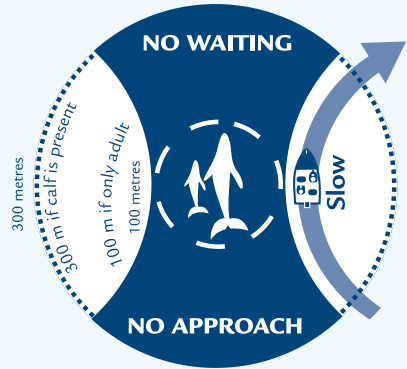
All vessels (powered and un-powered) must stay at least 100 metres from a whale (300 metres if whale is with calf) and maintain a slow 'no wash' speed while within 300 metres. The corresponding distances for dolphins are 50 metres (adults only) and 150 metres (if calves are present). Different rules apply to PWC, they must not approach within 300 metres of any whales or dolphins.

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 from 1 July to 28 February. This includes 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 environment.nsw.gov.au/animals.

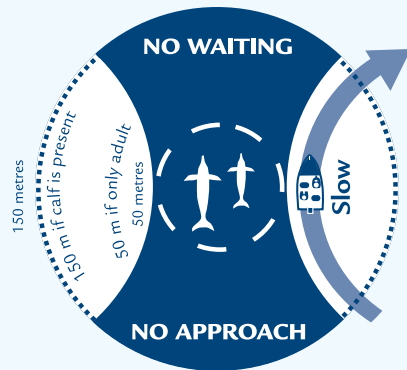


WHALE AND DOLPHIN WATCHING

Whale approach distances



Dolphin approach distances



Advice to skippers

- Go slow when within 300 metres of whales and 150 metres 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 'minimal wash' speed
 - Move away or disengage your vessel's gears
 - Make no sudden movement
 - Minimise noise.

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. | <input type="checkbox"/> |
| Ensure the vessel is well ventilated to prevent carbon monoxide build up from exhaust systems. | <input type="checkbox"/> |
| 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. | <input type="checkbox"/> |
| Check fuel, engine oil and coolant levels. Fuel should be fresh and not last year's. You should have enough fuel for the full trip plus reserve. Examine batteries, terminals etc. Do the same for the second engine if carried. | <input type="checkbox"/> |
| Check the fire extinguisher is in good condition. | <input type="checkbox"/> |
| Ensure there is sufficient fresh water and food for the length of the voyage with some extra in case of emergency. | <input type="checkbox"/> |
| Make sure your navigation lights are in working order. | <input type="checkbox"/> |
| Self-draining holes should be clear. | <input type="checkbox"/> |
| Ropes and lines should be in good condition and stored ready for use. | <input type="checkbox"/> |
| Steering cables and connections must be in good working order. | <input type="checkbox"/> |
| If your vessel is fitted with a kill switch, make sure you have the correct lanyard. | <input type="checkbox"/> |
| Inspect the battery. | <input type="checkbox"/> |
| Check that appropriate anchors are on board and are properly rigged, stowed and ready for use. | <input type="checkbox"/> |
| Have one appropriate and accessible lifejacket for each person on board. | <input type="checkbox"/> |
| Children should have suitably-sized lifejackets and look at means of rigging lifelines in open areas so that children have enough handholds. | <input type="checkbox"/> |
| 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. | <input type="checkbox"/> |
| Have up-to-date charts showing the area of your intended trip, especially any harbours, ports and other potential refuges from rough weather. | <input type="checkbox"/> |
| Ensure you have a complete first aid kit. | <input type="checkbox"/> |
| Essential tools and spare parts should be in good condition. | <input type="checkbox"/> |
| Keep a sharp knife in a handy place; you may need it to cut ropes etc. | <input type="checkbox"/> |
| Have a rescue quoit or lifebuoy ready for use. | <input type="checkbox"/> |
| Have a whistle, mirror, marker dye, flares for emergency signalling. | <input type="checkbox"/> |
| Do not overload your vessel. | <input type="checkbox"/> |
| Don't forget the bung! | <input type="checkbox"/> |



**Recommended spare parts
(minimum suggested items)**

| Spare part | Outboard powered vessels | Inboard powered vessels | Yacht |
|---|--------------------------|-------------------------|-------|
| Pulley belts | | x | x |
| 'D' shackles | x | x | x |
| Fuses for motor and radio | x | x | x |
| Propeller | x | | |
| Spark plugs | x | x | |
| Starter cord | x | | |
| Fuel filter | x | x | x |
| Shear pins for propeller/ spare nuts and bolts | x | x | x |
| Roll of waterproof electrical tape | x | x | x |
| Spare fuel line | x | x | |
| Electrical wire | x | x | |

**Recommended tool kit
(minimum suggested items)**

| Tool | Outboard powered vessels | Inboard powered vessels | Yacht |
|--------------------------|--------------------------|-------------------------|-------|
| Bolt/wire cutters | | | x |
| Adjustable spanners | x | x | x |
| Small metal file | x | x | x |
| Screwdrivers | x | x | x |
| Hacksaw and blade | x | x | x |
| Pliers | x | x | x |
| Wire brush | x | x | x |
| Water displacement spray | x | x | x |
| Spark plug spanner | x | x | |

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.

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.

To avoid petrol with ethanol, buy either higher octane rated fuel which doesn't contain ethanol or regular unleaded petrol from a marina.

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.

Diesel blends of up to five per cent biodiesel do not require labelling, so always ask your marina operator before you fill your tank.



ROAD RULES FOR TOWING VESSELS

Towing a trailerable vessel requires additional knowledge of the road rules, the right equipment and driving skills. All trailers affect the performance of the towing vehicle and special rules apply to the towing vehicle, the trailer and the vessel being towed.

Rules for towing

- Towing more than one trailer at a time is not allowed
- Nobody is allowed to ride in trailers
- When towing and driving on a road without street lights, drive at least 60 metres behind heavy vehicles or other vehicles towing trailers, unless overtaking
- Learner drivers and learner and provisional motorcycle riders are not allowed to tow
- P1 car licence holders can tow small trailers with up to 250 kilograms of unloaded weight.

Before each trip, check:

- Vehicle and trailer are roadworthy
- All tyres are properly inflated
- Trailer's wheel-bearings, suspension and brakes work properly
- All lights work and safety chains are properly connected
- Oil, water, brake fluid, battery and other service checks on the vehicle.

At regular intervals during the trip, check:

- Couplings, all doors, hatches, covers and any load or equipment are still properly secured
- Tyres are still properly inflated and not rubbing on suspension or body work.

If travelling to another State, check with the relevant roads authority whether there are different rules.

For information on the rules for towing and safety guidelines, visit rms.nsw.gov.au.

Oversize vehicle/vessel combinations and road access

Oversize light vehicles and light combinations used for load carrying (including boats, sailing boats and yachts) which exceed the prescribed dimension limits may be eligible to travel under the NSW Light Vehicle Agricultural and Load Exemption Ministerial Order 2015.

They must operate in accordance with the conditions of the Order, including requirements for warning devices and pilot vehicles, and may only use the routes and travel in the zones published by Roads and Maritime.

An oversize light vehicle and light combination is defined as:

- A motor vehicle that has a Gross Vehicle Mass (GVM) not exceeding 4.5 tonnes
- A trailer that has an Aggregate Trailer Mass (ATM) not exceeding 4.5 tonnes
- A combination of two light vehicles.

Note: A light combination may weigh more than 4.5 tonnes provided none of the individual vehicles in the light combination has a GVM that exceed 4.5 tonnes.

For information on oversize light vehicle road access including the NSW Light Vehicle Agricultural and Load Exemption Ministerial Order 2015 and 'Notice of suitable routes and areas', visit rms.nsw.gov.au or call Service NSW on **13 77 88**.



Special road rules and requirements apply when trailering a vessel.

BOATING OFFENCES

Penalty notices

If an offence such as speeding is committed, authorised officers (Roads and Maritime or NSW 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 suspension of a boat driving licence, seizure/impoundment/forfeiture of vessel and/or court proceedings after the issue of a court attendance notice.

Such offences may include menacing behaviour, speeding and dangerous or negligent navigation.

Note: Cameras may be used to detect or record offences on NSW waters.

For more information visit rms.nsw.gov.au/maritime.

Alcohol and drug offences

Driving under the influence of alcohol or drugs is an offence. Random breath testing (RBT) and random drug testing (RDT) can be conducted on the operator of a vessel while it is underway, including drifting. RBT or RDT do not apply when a vessel is moored, berthed or at anchor.

Being detected in excess of the permissible concentration of alcohol by way of a breath test may result in immediate suspension of a boat driving licence and/or Police issuing 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 under 18 years of age
- **Less than 0.05** for recreational vessel operators over 18 years of age.

IMPORTANT NOTE

Penalties apply for boating offences.

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.

Offences relating to climbing/attaching to vessels

For safety reasons, people are prohibited from climbing, attaching themselves to or helping another person to attach themselves to any vessel without lawful authority.

Offences relating to naval vessels

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

An exclusion zone of **60 metres** applies around a naval vessel that is moored, anchored or berthed at all times.

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, an alcohol or drug offence, 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
- Been found to be not a true vessel and is being used as a wharf or pontoon
- Been deemed environmentally hazardous.

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



BOATING TERMS

Specialised language or jargon 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.



Bars at the mouth of rivers or harbour entrances are often dangerous.

Boating at night

Operating a vessel between official sunset and sunrise.

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 there is a greater chance of an incident occurring or if an incident was to occur, it might be difficult for those on board to help themselves. Examples include (but are not limited to) tides, river flows, poor visibility, rough seas, adverse weather or an emergency causing an elevated 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.



Protected bays and harbours, rivers and other inland navigable waters all come within the definition of enclosed waters.

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', is 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/h.

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.

Making way

When a vessel is underway (see definition) and propelled by the vessel's engine.

Master

The person in charge of a vessel, whether or not they are actually driving it. Often referred to as the skipper.

MHWS

Mean High Water Springs (MHWS) is an average value of spring high tides used on some signs. These make no allowance for unusual tide conditions.

Nautical miles (nm)

A unit used in measuring distances at sea, equal to 1.852 kilometres or 1.151 miles.

Open waters

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



Open waters can demand skilful boat handling. For more information see page 70.

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.



Small tinnies are included in the term 'open vessel'.



Operator

The person driving a vessel. The operator is often, but not always, the vessel's master.

Port

Includes:

- Any harbour or haven, whether natural or artificial, or any estuary, channel, river, creek or roadstead
- 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.

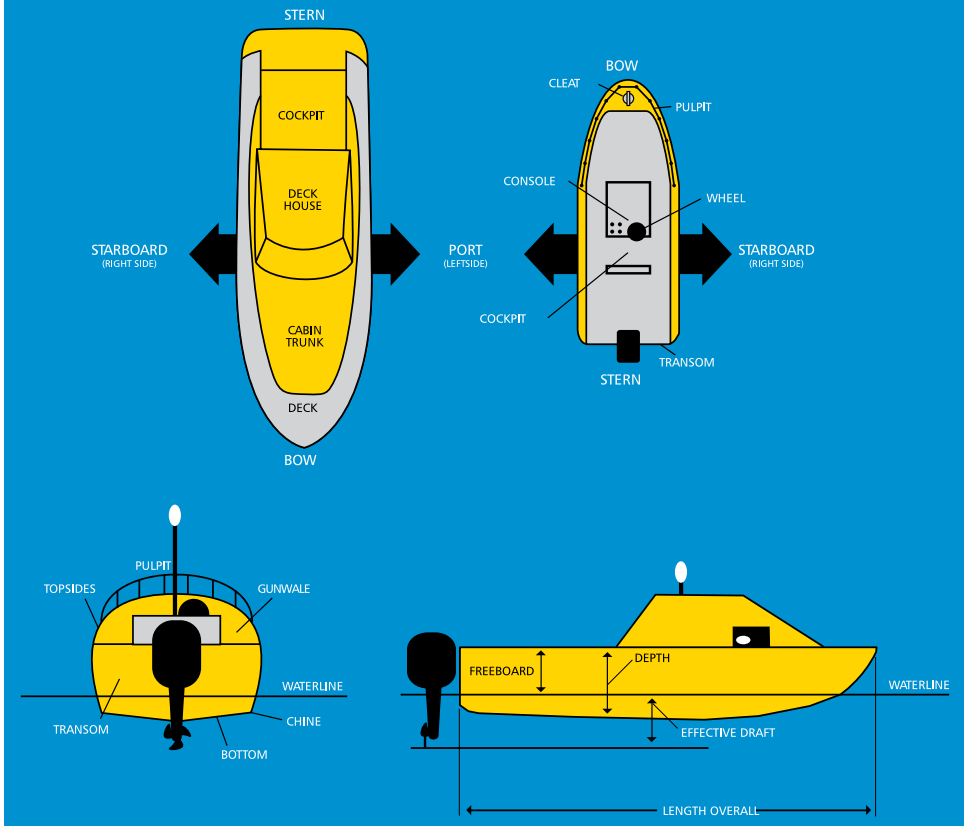
PWC

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.

Toward the front of the boat is known as 'forward' and towards the back end, 'aft'.



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

- Less than 7.5 metres in length
- Does not operate further than 1nm from its parent vessel
- Used to transport persons or goods between shore and its parent vessel or between its parent vessel and another vessel.

Underway

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

Vessel

Any craft capable of being used to undertake a voyage on the water. This includes submersible craft, kiteboards and sailboards. It does not include surfboards, towed flotation devices or swimming accessories.

Windward

The direction from which the wind blows (upwind).



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Hello Sailor!

BOATING KNOWLEDGE QUIZ

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 rms.nsw.gov.au/maritime

- 1. When driving a vessel at 6 knots or more, or towing a person, what is the MINIMUM distance both the vessel and any towed person MUST keep from power driven vessels, land or structures?**
 - A. 30 metres or if not possible a safe distance
 - B. 60 metres or if not possible a safe distance
 - C. 100 metres or if not possible a safe distance
 - D. It doesn't matter as long as you navigate with care.
- 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 green navigation marker 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. When driving a powered vessel at any speed or towing a person, what is the MINIMUM distance both the vessel and the towed person MUST keep from a person in the water?**
 - A. 60 metres or if not possible a safe distance
 - B. 30 metres or if not possible a safe distance
 - C. 100 metres or if not possible a safe distance
 - D. Any distance which you consider safe.
- 5. When is it compulsory to carry a waterproof torch on navigable waters on a powered vessel (other than a personal watercraft)?**
 - 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. In what circumstances MUST a child under 12 wear a lifejacket:**
 - A. At all times on a vessel under 4.8 metres
 - B. When being towed on any apparatus
 - C. When in an open area of a vessel less than 8 metres under way
 - D. All of the above.
- 7. What is the minimum distance you should 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. What factors influence the way a boat handles at sea?**
- A. The vessel's hull design and the amount of power used to propel it
 - B. Wave direction and the way a boat is steered
 - C. The load (including people) carried on board
 - D. All the above.
- 10. At night, a vessel at anchor MUST display:**
- A. Sidelights
 - B. Masthead light forward
 - C. All round white light
 - D. No lights are required.
- 11. What should you do to ensure your boat's wash does NOT unreasonably impact on other vessels or the foreshore?**
- A. Always travel at 8 knots
 - B. Constantly observe and consider the effects of your wash
 - C. Always travel at the speed shown on speed restriction signs
 - D. Travel as close to other vessels or the shore as possible.
- 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. When is the MOST DANGEROUS time to cross a coastal bar?**
- A. Slack water (top or bottom of the tide)
 - B. On an incoming tide (flood tide)
 - C. On an outgoing tide (ebb tide)
 - D. All of the above.
- 14. The maximum number of people permitted to be towed behind a vessel is:**
- A. Five people
 - B. Whatever the manufacturer states is permissible
 - C. Three people
 - D. Whatever the vessel's skipper (driver) thinks is safe.
- 15. The responsibility of the master (driver) of a vessel 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 people shown on a safety label recommended?**
- A. Only when boating in poor 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 should you do when approaching a much larger vessel in a channel?**
- Signal to the larger vessel that you are holding your course
 - Keep well clear and, if necessary, pass astern at a safe distance
 - Increase speed and cross close in front of the larger vessel
 - Hold your course and let the larger vessel take any necessary avoiding action.
- 18. What is the maximum permissible blood alcohol level for a person 18 years of age or over when driving a recreational vessel in NSW?**
- Under 0.08
 - Under 0.02
 - Under 0.05
 - Nil.
- 19. When should you switch on and display navigation lights on a vessel underway?**
- Only when it is dark
 - From sunset to sunrise and in restricted visibility
 - At night only when travelling on open waters (the sea)
 - At night in port areas only.
- 20. What is the minimum age requirement of an observer when water skiing/ wakeboarding/aquaplaning, if the observer is NOT the holder of a boat driving licence?**
- 14 years
 - 15 years
 - 16 years
 - 18 years.
- 21. Who should be encouraged to wear a lifejacket at all times?**
- Children (even when not mandatory to wear lifejackets)
 - Elderly people and poor swimmers
 - People with medical conditions eg heart or breathing problems
 - All of the above.
- 22. You are driving a vessel at speed and your vision is suddenly affected by glare from the sun. Your immediate reaction should be:**
- Slow down or stop
 - Continue driving at speed in anticipation that you will regain your vision
 - Increase speed and manoeuvre vessel to find a direction to minimise spray and the effect of the sun
 - Immediately turn sharply away from the sun.
- 23. For environmental reasons, where should you avoid driving your boat?**
- Deep, wide river channels
 - Shallow areas which contain endangered seagrasses
 - Boundaries between murky and clear water
 - Bar crossings.
- 24. When is it appropriate to dispose of rubbish overboard?**
- Never – all rubbish should be appropriately disposed of ashore
 - Only if it consists of biodegradable food scraps
 - Only when the rubbish is heavy enough to sink to the sea bed
 - At any time when operating in open waters.

- 25. Who can service an inflatable lifejacket?**
- Anyone
 - The manufacturer or their authorised service agent
 - Anyone, but only if the manufacturer provides self-servicing instructions
 - Both B and C.
- 26. When returning over a coastal bar or travelling with a large 'following sea' offshore, the SAFEST option is to:**
- Maintain a position behind the wave, but not too close
 - Maintain a position just in front of the wave
 - Proceed at speed through the waves
 - Maintain a position on top of a wave.
- 27. If you find yourself in cold water, what can you do to extend survival time?**
- Move constantly and do not remove clothing
 - Remove all wet clothing and float on your back
 - Assume the Heat Escape Lessening Posture (HELP) and do not remove clothing
 - Remove clothing and maintain movement of your arms and legs.
- 28. Which of the following activities must NOT be undertaken by a person under 16 years of age who holds a General Boat Driving Licence?**
- Operate a vessel at greater than 20 knots
 - Operate a vessel after sunset and before sunrise at a speed of 10 knots or more
 - Operate a power boat at 10 knots or more while towing a person
 - All of the above.
- 29. Where should you drive a vessel when in a channel?**
- On the port (left-hand) side
 - In the middle of the channel
 - On the starboard (right-hand) side
 - 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?**
- As soon as you realise you need assistance
 - Every hour
 - When you see an aircraft, another vessel, or people on shore
 - Between sunset and sunrise.
- 31. What does a 'dive flag' look like?**
- White and blue flag with swallow tail
 - Red and white flag
 - Yellow with black dot flag
 - Blue with centred white square.
- 32. When is it COMPULSORY to carry an EPIRB (Emergency Position Indicating Radio Beacon)?**
- When crossing a coastal bar
 - When operating a vessel less than 5 metres in length on enclosed waters
 - At all times
 - When operating a vessel, 2 or more nautical miles off the coast.
- ANSWERS**
1. A 2. A 3. B 4. A 5. C 6. D 7. A
 8. C 9. D 10. C 11. B 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. A 25. D
 26. A 27. C 28. D 29. C 30. C 31. A 32. D



This quiz is a guide only and does not reflect the actual licence test.

CONTACT DETAILS

Roads and Maritime Services

Licensing and Registration:
Phone: **13 77 88**

Areas not covered by NSW
telephone exchange:
Phone: **02 9563 8557**

Email:
info@service.nsw.gov.au

Visit
service.nsw.gov.au

Other Maritime Products:
Phone: **13 12 36**

Visit
rms.nsw.gov.au/maritime

Phone Payments (24 hours)

NSW Licences,
Registrations and Moorings
Phone: **13 12 36**

Areas not covered by NSW
telephone exchange:
Phone: **02 9563 8556**

Contact Us

Head Office
33 James Craig Road
Rozelle Bay NSW 2039
Locked Bag 5100
Camperdown NSW 1450

Phone: **13 17 82**
Fax: 02 8588 4105

Opening Times: Mon – Fri,
8.30am – 4.30pm.

Oil spills

For oil spills on inland waters

Fire and Rescue NSW
Phone: **000**

For marine oil spills

QLD border to Fingal Head (Port Stephens)

Contact Roads and Maritime
Phone: **02 9962 9074**

Fingal Head to Catherine Hill Bay including the Port of Newcastle

Contact the Port Authority of New South Wales
Phone: **02 4985 8292**

Catherine Hill Bay to Garie Beach including Sydney Harbour and Botany Bay

Contact the Port Authority of New South Wales
Phone: **02 9296 4999**

Garie Beach to Gerroa including the Port of Port Kembla

Contact the Port Authority of New South Wales
Phone: **02 4274 4571**

Gerroa to the Victorian Border

Contact Roads and Maritime Services
Phone: **02 9962 9074**

Australian Maritime Safety Authority (AMSA)

Phone: **02 6279 5000**
Head Office

Opening times: Mon – Fri
8am – 5.15pm.

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 DPI Fisheries

Phone: **1300 550 474**

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: **13 15 00**

Sydney Water

Service difficulties and emergencies (24 hours)
Phone: **13 20 90**

NSW Water Police

Marine crime and information can be reported (anonymously if requested).

Phone: **1800 658 784**

Crime Stoppers

Phone: **1800 333 000**

Marine Rescue NSW

Headquarters
Phone: **02 8071 4848**

Mon to Fri 9am – 5.00pm

For contact details of local units, visit

marinerescuensw.com.au

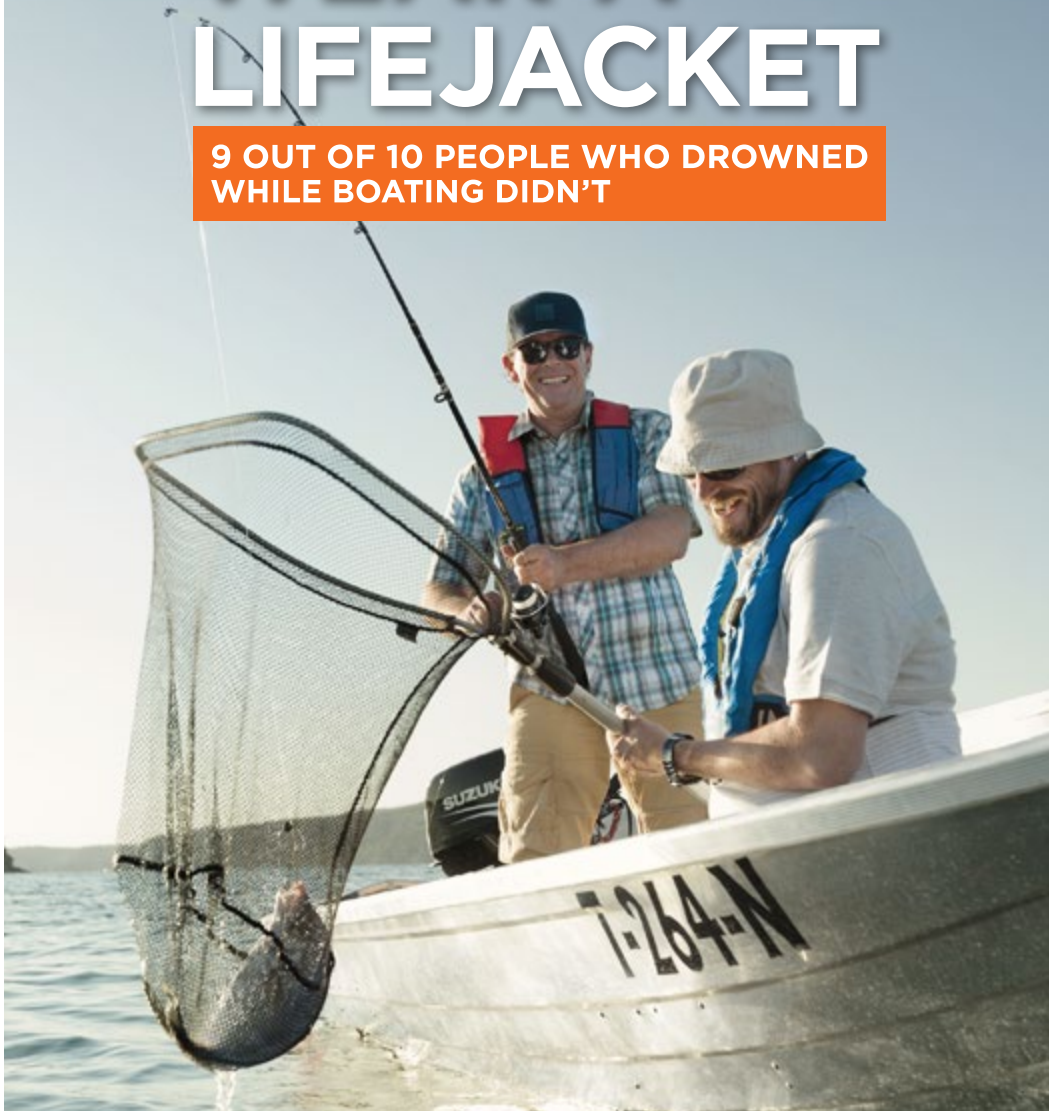
Environment

NSW Environment Protection Authority
Phone: **13 15 55**

To report pollution and other environmental incidents, or to get information about the environment.

WEAR A LIFEJACKET

9 OUT OF 10 PEOPLE WHO DROWNED
WHILE BOATING DIDN'T



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Contact Us

 **13 12 36**  rms.nsw.gov.au/maritime

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.

MARWWSHAN011
October 2016
RMS 16.284



Transport
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