Maritime

Boating Handbook

NSW GOVERNMENT





Family enjoying Belmont Wharf, Belmont. Destination NSW.

Introduction

The Boating Handbook explains the main rules and safety practices you need to know to operate a vessel safely and responsibly on NSW waterways. It is essential reading for anyone learning to boat, renewing their knowledge, or preparing to obtain a boat or PWC licence.

This handbook is written in clear, plain language to make boating information easy to understand. Because of this, it is not a detailed version of maritime law. To access the full and current legal requirements for boating in NSW, visit **legislation.nsw.gov.au** and refer to the *Marine Safety Act 1998*, Marine Safety Regulation 2016, and the International Regulations for Preventing Collisions at Sea (ColRegs).

This handbook will help you understand your responsibilities on the water and learn safe, low-risk boating behaviour. It also aims to support you in preparing for the Boat and PWC licensing tests.

In this handbook, the words 'must' and 'must not' are used when describing rules that are legally required. The words 'should' and 'should not' are used when explaining safe practices that reduce risk and help you operate your vessel responsibly.

This handbook is reviewed and updated regularly. For the latest version and to read it in community languages, visit **nsw.gov.au**

You can also find additional safety guides and resources for paddlers, commercial operators and other waterway users at **nsw.gov.au**

If you need assistance accessing licensing tests in another language, an interpreter service is available. Call 13 12 36 for support.

Statistics and safety information in this handbook are sourced from Transport for NSW unless stated otherwise.

Remember, we all share NSW waterways. Safe boating is everyone's responsibility and looking out for each other helps ensure every trip is a safe one.

This handbook provides general guidance only. Where any difference exists between this handbook and NSW maritime legislation, the legislation prevails.

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Cover: Boats moored in Middle Harbour near Store Beach, Manly. Destination NSW

Staying safe on NSW waterways

The NSW Boating Handbook is for everyone using NSW waterways. Whether you're a newcomer or an experienced skipper, being safe on the water is a responsibility we all share.

The handbook is designed to help you understand the key rules to keep you and everyone else safe. It's essential reading for anyone without experience of being on the water. It aims to prepare you for the challenges and reduce your risk.

For those more experienced, it's a useful guide for refreshing your knowledge and checking the rules for any recent changes. It helps you understand your responsibilities – from giving way and towing to safe distance and speed.

You'll find helpful information on how to prepare for a safe day on the water. This includes checklists for essential safety equipment, rules for wearing a lifejacket, and what to do in an emergency.

The handbook also outlines how to safely dispose of waste and minimise your impact on marine animals and plants. Following these rules helps protect our waterways.

The handbook is the main resource to get your boat licence and personal watercraft (PWC) licence. It covers all the questions in the General Boat Licence Knowledge Test and PWC Licence Knowledge Test. It also provides practical information about vessel registration.

The NSW Government is committed to reducing fatalities and serious injuries on NSW waterways. Certain behaviours and factors are commonly linked to incidents on the water. Avoiding these behaviours and making better decisions will reduce your risk.

- Always wear a lifejacket – it can only save your life if you are wearing it.
- Check the weather before you go and when you're out, and take extra care in cold water.
- Always travel at a safe speed and keep a look out for others.
- Know your limitations, and those of your vessel. Head out with others whenever possible.
- Avoid alcohol and illegal drugs when boating.

Your behaviour and decisions on the water are an essential part of making our waterways safer and more enjoyable for everyone.



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

Marine safety rules and regulations

The Boating Handbook explains the key rules and safety practices for using NSW waterways. It is designed to help you understand how to operate a vessel safely and responsibly, but it does not include every law that applies to boating.

If you are the skipper, you need to understand and follow the International Regulations for Preventing Collisions at Sea (COLREGs). These rules are used around the world and set out how vessels should operate to avoid collisions. They include give-way rules and other important navigation requirements, and they apply on NSW waterways through state law.

For complete and up-to-date boating laws, you should always refer to the official legislation at **legislation.nsw.gov.au**, including the *Marine Safety Act 1998*, Marine Safety Regulation 2016 and the COLREGs. If there is any difference between the information in this handbook and NSW maritime law, the law applies.

For definitions of the common terms used in this book, see General maritime terms.

About Transport for NSW

Transport for NSW leads the development of a safe, efficient, integrated transport system that keeps people and goods moving, connects communities and shapes the future of our cities, centres and regions.

The Maritime branch of Transport for NSW is the state's maritime safety regulator for commercial and recreational vessels and their operators.

Responsibilities include:

- Providing recreational and commercial boating safety regulation, enforcement and education.
- Implementing boating safety policies and plans.
- Installing and maintaining marine aids to navigation across NSW waterways.
- Preserving and protecting the maritime environment for all waterway users.
- Responding to marine pollution incidents, including maintaining a clean and safe Sydney Harbour
- Managing grants for the recreational boating infrastructure program.

The Centre for Maritime Safety branch of Transport for NSW is responsible for improving waterway safety, access and sustainability for all NSW waterway users.

Responsibilities include:

- Setting goals for reducing boating trauma, including the 'Towards Zero' vision for zero fatalities and serious injuries on NSW waterways by 2056.
- Developing maritime strategies and policies to enhance boating safety, access and sustainability based on the latest available evidence.
- Developing evidence-based education resources and campaigns to promote safe waterway use.

General maritime terms

The Boating Handbook uses specialised maritime terminology. A working knowledge of these terms is useful when you're on the water and can help you understand and follow the rules.

Types of vessels

The handbook uses specific terminology to refer to vessels.

Domestic Commercial Vessel (DCV): Vessel engaged in commercial, research or government activities within Australia's Exclusive Economic Zone. The Australian Maritime Safety Authority (AMSA) is responsible for DCV certification, operational approvals, and seafarer licensing.

Vessel: Any vessel used as transport on the water. Includes powered vessels, sailing vessels, paddlecraft and rowing vessels. Does not include surfboards, stand-up paddle boards, towed equipment – for example, water skis, inflatable tubes or rafts – or swimming equipment.

Powered vessel: Vessel with an engine – for example, powerboats, sailing boats using an engine and personal watercraft (PWC).

Sailing vessel: Any vessel using a sail for power. For example sailing boats without an engine or with an engine (but not using it), off-the-beach sailing boats, sailboards and kiteboards.

Personal watercraft (PWC): Vessel with a fully enclosed hull that you drive standing up, lying down, sitting astride or kneeling. It uses waterjet propulsion and has an engine in a watertight compartment. For example, jet ski or jet-powered surfboard.

Paddlecraft: Vessel that you paddle – for example, kayaks, canoes and surf skis.

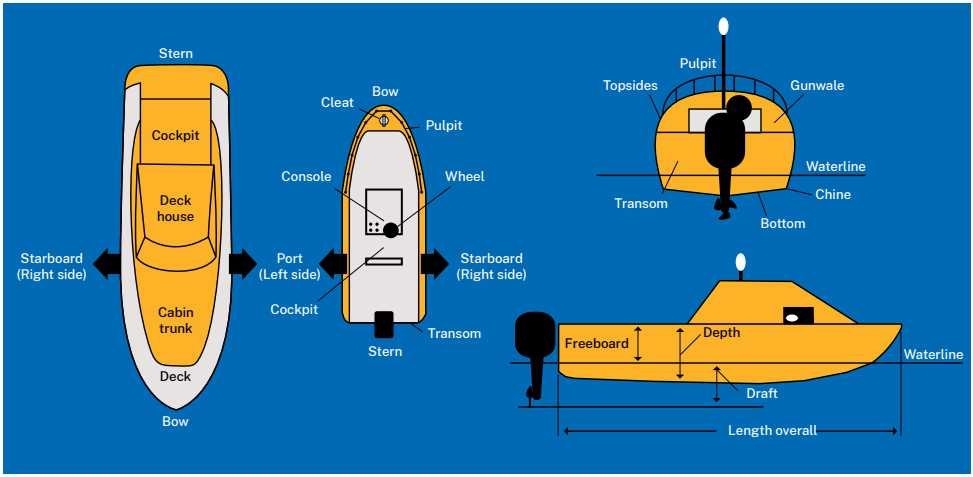
Rowing vessel: Vessel that you row – for example, rowing shells and skiffs, dragon boats, rowing boats, rowing dinghies and small inflatable boats.

Tender: Vessel used to transport people and goods between its parent vessel and the shore, or another vessel. It is less than 7.5m long and doesn't operate further than 1 nautical mile from the parent vessel.

Skipper: The person in charge of a recreational vessel, whether driving or not. Often referred to as the master.

Driver: The person driving a vessel. Often referred to as the operator.

Parts of a vessel



Towards the front of the boat is known as the bow, the back end is known as the stern.

Beam: The widest part of a vessel.

Bilge: Inside the bottom of a vessel's hull where water collects.

Bow: The front of a vessel.

Cabin trunk: On a small boat, a raised cabin above the deck.

Centreline: The middle line of a vessel, from bow to stern. The dividing line between port and starboard.

Chine: A sharp change in angle on the surface of a hull. Often located where the topsides meet the waterline.

Cleat: A fitting on a vessel to which lines (ropes) can be attached.

Cockpit: A lowered space in the deck of a boat where people can stand or sit.

Console: Where controls are located, such as steering, radio, ignition and other switches.

Deckhouse (also coach house or coach roof): An enclosed cabin on the deck of a vessel.

Draft: Distance from the waterline to the lowest part of the vessel.

Freeboard: The vertical distance from the waterline to the top of a vessel's hull.

Gunwale: The top edge of a vessel's sides.

Hull: The main body of a vessel.

Marlin board: A small deck on the back of a boat to make getting into the water easier – similar to a swim board.

Port side: The left side of a vessel when you are looking towards the bow and the side on which a red sidelight is displayed.

Pulpit: The railing at the bow of a boat.

Starboard side: The right side of the vessel when you are looking towards the bow and the side on which a green sidelight is displayed.

Stern: The back or rear of a vessel.

Topsides: The sides of a vessel between the waterline and the gunwale.

Transom: The surface that forms the stern of a vessel.

Wheel: Used for steering a vessel. Also called the helm.

General maritime terms

Give way: Reduce speed, stop, reverse or alter course to keep out of another vessel's path.

Knots (speed): 1 knot is a speed of 1 nautical mile per hour, or 1.852 kilometres per hour.

Nautical miles (nm): A unit of measure for distances at sea. One nautical mile per hour is equal to 1.852 kilometres or 1.151 miles.

Navigable waters: A waterway that a vessel can navigate safely.

Planing: A vessel is planing when it speeds up enough to rise and skim on top of the water. Also called 'on the plane. Heavier boats are not capable of planing.

Stand on vessel: the vessel that must maintain its course and speed in a situation where two vessels risk colliding.

Underway: A vessel is underway when not at anchor or fastened to the shore or ground. If a vessel is drifting, it's underway.



Vessels are underway unless anchored or fastened to the shore.



Licences and registration

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Getting your boat licence

To drive a vessel for any commercial activities you need a certificate of competency or exemption from the Australian Maritime Safety Authority (AMSA).

You must have a NSW general boat driving licence (boat licence) to drive a powerboat or sailing boat using its engine for recreation on NSW waterways at a speed of 10 knots or more. This is approximately 18.5km/h.

Ten knots is the speed at which most powerboats start to speed up, rise and plane (skim) on top of the water.

You **do not** need a boat licence:

- to drive a powerboat under 10 knots
- to drive a sailing boat using its engine under 10 knots
- to sail a sailing boat without an engine
- to use paddlecraft – for example, a canoe, kayak or surf ski
- to use rowing vessels – for example, a rowing boat
- to use a sailboard or kiteboard
- if you hold a current certificate of competency as a master or coxswain.

To drive a personal watercraft (PWC) – for example, a jet ski – you must have a PWC licence. You must have a boat licence to get a PWC licence, or you can get both licences at the same time.



Anyone driving a powerboat on NSW waterways at a speed of 10 knots or more must have a boat licence.

Check if you're eligible

To get a boat licence, you must:

- be aged 12 or over
- meet the practical experience requirements
- pass the General Boat Licence Knowledge Test
- declare any medical condition or physical disability that could affect your driving
- meet eyesight standards.

If you're aged under 16, there are restrictions you must follow – see Licence restrictions on page 20.

If you have a boat licence from somewhere outside NSW, you may be able to transfer to a NSW licence – see Interstate and overseas licences on page 19.

Get practical experience

To apply for your boat licence, you must get practical boating experience. This includes experience using safety equipment and manoeuvring and handling a boat.

You must apply for your licence within 12 months of getting your practical experience.

See 'Practical boating experience' at **nsw.gov.au**

There are 2 ways you can get your practical experience:

1. Training with an experienced skipper

OR

2. Training with an Authorised Training Provider

1. Training with an experienced skipper

You must take a minimum of 3 trips with an experienced skipper in a powerboat or sailing boat using its engine.

An experienced skipper must be aged 18 or over and:

- have a current NSW or interstate boat licence, and have held their licence for a minimum of 3 consecutive years at any stage, or
- hold a certificate of competency.

The boat must have the required safety equipment. If you take the trips at night (between sunset and sunrise), the boat must have the required lights.

You must record details of your practical experience in the Boat Driving Licence Practical Logbook. Both you and the skipper must verify these details with your initials.

You can download the 'Boat Driving Licence Practical Logbook' or get a copy from a service centre – see 'Find a Service NSW location' at **service.nsw.gov.au**

2. Training with an Authorised Training Provider (ATP)

You can get your practical experience by doing a course with an ATP. ATPs are independent organisations approved by NSW Maritime to deliver courses. They set their own fees and conditions.

When you do your training with an ATP, they will complete and sign the relevant sections of your application. This is evidence you've done the practical experience.

For a list of ATPs, see 'Practical boating experience' at **nsw.gov.au**

Take the General Boat Licence Knowledge Test

You must pass the General Boat Licence Knowledge Test to apply for your boat licence.

The test has 50 multiple-choice questions about rules and safety on the water. To pass, you must answer:

- the first 20 questions correctly, and
- a minimum of 24 of the remaining 30 questions correctly.

If you're aged under 16, a parent or legal guardian must be with you when you take the test.

Preparing for the test

Everything you need to know to pass the test is in this handbook. Study it to give yourself the best chance to pass the test.

You can also take the online 'General Boat Knowledge Practice Quiz' at **nsw.gov.au**

There are 2 ways you can take the General Boat Licence Knowledge Test: at a service centre or with an Authorised Training Provider (ATP).

Taking the test at a service centre

You can book your test at **service.nsw.gov.au**. You can take the test at any service centre.

You can also book to do the PWC Licence Knowledge Test at the same time. You must pass the boat licence test first. If you pass both tests, you can apply for a PWC licence. Your PWC licence allows you to drive a PWC and a powerboat.

There's a fee for taking the tests – see 'Licence fees' at **nsw.gov.au**

Taking the test with an Authorised Training Provider (ATP)

You can take the General Boat Licence Knowledge Test as part of an ATP course. When you pass, they will complete and sign the relevant sections of your application as evidence.

If you want to get your PWC licence at the same time, you can do an ATP course that includes the PWC Licence Knowledge Test.

Interpreter service

A free interpreter service is available if you need to take your boat licence or PWC licence test in another language. Call **13 14 50** to arrange an interpreter.

If you have special needs or learning difficulties, call **13 77 88** before booking your test.

If you fail the test or cheat

If you fail the test, depending on availability, you can take it again on the same day or book to do it another time. You have to pay for the test each time you take it.

You must pass the test honestly. If you cheat, penalties are severe and can include fines and imprisonment. You also cannot resit the test for 6 weeks and must pay the fee again.

Apply for your boat licence

When you've done your practical experience and passed the test, you can apply for your boat licence. To apply, you must:

- complete the Application for General Boat Driving Licence (available from a service centre or an ATP)
- prove who you are – see 'Proving your identity' at **nsw.gov.au**
- pay a fee – see 'Licence fees' at **nsw.gov.au**

If you took your test at a service centre, you can apply in person at the same time. If you did a course at an ATP, you can submit your application in person or by post to a service centre.

Your application must include evidence of:

- your practical experience – either in a logbook or from an ATP
- passing the General Boat Licence Knowledge Test – either from a service centre or an ATP.

If you have a recognised qualification, you must include evidence of this with your application.

See 'Apply for a general boat driving licence' at **service.nsw.gov.au**

Your boat licence card will be posted to you. You can also choose to get a digital licence, which can be accessed via the Service NSW app – see 'Digital boat licence and vessel registration' at **nsw.gov.au**



You must have a personal watercraft licence to drive a PWC.

How long a boat licence is valid

Your boat licence is valid for 1, 3, 5 or 10 years. You can renew it for another 1, 3, 5 or 10 years.

Combining your driver, boat and PWC licences

If you have a NSW unrestricted driver licence, you can combine it with your boat licence or PWC licence. You can only do this when you renew your driver licence. See 'Combined driver licence and boat licence' at **nsw.gov.au**

Getting your PWC licence

You must have a personal watercraft (PWC) licence to drive a PWC.

A PWC is any vessel with a fully enclosed hull that you drive standing up, lying down, sitting astride or kneeling. For example, a jet ski or jet-powered surfboard. To check the licence requirements for other watercraft – such as engine-powered hydrofoil boards – see 'Emerging technologies' at **nsw.gov.au**

PWC drivers must follow all the rules and regulations for powered vessels. There are also some specific PWC rules designed to keep everyone on the water safe.

You do not need a PWC licence if you hold a current certificate of competency as a master or coxswain.

Check if you're eligible

To get a PWC licence, you must:

- have a boat licence
- be aged 12 or over
- pass the PWC Licence Knowledge Test
- declare any medical condition or physical disability that could affect your driving
- meet eyesight standards.

If you're aged under 16, there are restrictions you must follow – see Licence restrictions on page 20.

Some other qualifications may meet the test requirements. To check if your qualification is recognised, call Transport for NSW (Maritime) on **13 77 88**.

If you have a PWC licence from somewhere outside NSW, you may be able to transfer to a NSW licence – see Interstate and overseas licences on page 27.

If you do not have a boat licence, you can take the General Boat Licence Knowledge Test, get your practical boat experience, and then apply for your PWC licence. This licence allows you to drive a powerboat and a PWC.

Take the PWC Licence Knowledge Test

You must pass the PWC Licence Knowledge Test to apply for your PWC licence.

The test is about PWC rules and safety on the water. To pass, you must answer a minimum of 12 of the 15 questions correctly.

If you're aged under 16 you must have a parent or legal guardian with you when you take the test.

Preparing for the test

Everything you need to know to pass the test is in this handbook and the Personal Watercraft Handbook. Study them to give yourself the best chance to pass the test.

You can also take the online 'General Boat Knowledge Practice Quiz' and 'PWC Knowledge Practice Quiz' at **nsw.gov.au**

There are 2 ways you can take the PWC Licence Knowledge Test: at a service centre or with an Authorised Training Provider (ATP).

Taking the test at a service centre

You can book your test at **service.nsw.gov.au**. You can take the test at any service centre.

There's a fee for taking the test – see 'Licence fees' at **nsw.gov.au**

Taking the test with an Authorised Training Provider (ATP)

You can take your test as part of an ATP course. ATPs are independent organisations approved by Transport for NSW (Maritime) to deliver courses. They set their own fees and conditions.

When you pass, they will complete and sign the relevant sections of your application as evidence.

For a list of ATPs, see 'Practical boating experience' at **nsw.gov.au**

If you fail the test or cheat

If you fail the test, depending on availability, you can take it again on the same day, or book to do it another time. You have to pay for the test each time you take it.

You must pass the test honestly. If you cheat, penalties are severe and can include fines and imprisonment. You also cannot resit the test for 6 weeks and must pay the fee again.

Apply for your PWC licence

When you've passed the test, you can apply for your PWC licence. To apply, you must:

- complete the Application for Personal Watercraft Driving Licence and (if necessary) the Application for General Boat Driving Licence (available from a service centre or ATP)
- prove who you are – see 'Proving your identity' at **nsw.gov.au**

- provide 2 colour passport photos
- pay a fee – see 'Licence fees' at **nsw.gov.au**

If you have a recognised qualification, you must include evidence with your application.

If you took your test at a service centre, you can apply in person at the same time. If you took your test at an ATP, you can submit your application to a service centre in person or by post.

See 'Apply for a personal watercraft (PWC) driving licence' at **service.nsw.gov.au**

Your PWC licence card with photo will be posted to you. If you have a NSW unrestricted driver licence, you can combine your licences – see 'Combined driver licence and boat licence' at **nsw.gov.au**

How long a PWC licence is valid

Your PWC licence is valid for 1, 3, 5 or 10 years. You can renew it for another 1, 3, 5 or 10 years.

Licence restrictions for drivers aged under 16

There are restrictions for people aged under 16 with a NSW boat licence or personal watercraft (PWC) licence. These restrictions help keep everyone safe.

If you're aged under 16, you must not drive a powered vessel:

- faster than 10 knots unless there's a person aged 16 or over on board who has a boat or PWC licence
- faster than 10 knots while towing a person
- faster than 20 knots at any time
- faster than 10 knots at night (between sunset and sunrise) – for boats only
- at night (between sunset and sunrise) – for PWC only
- in any race, display, regatta, exhibition or similar operation.

People aged under 16 with an interstate or overseas licence must also follow these restrictions when using NSW waterways.

There may be exemptions to these restrictions for participants of licensed organised events.

Renewing your licence

When your boat or personal watercraft (PWC) licence expires, you can renew it for another 1, 3, 5 or 10 years.

You must renew your licence within 5 years after it expires, otherwise you'll have to complete the entire licence process again.

If you have combined your NSW driver licence with your boat or PWC licence, you must renew the licences at the same time.

Changing your details

You must contact Transport for NSW (Maritime) within 14 days if your personal details change – for example, if you change your name or address.

See 'Renew, replace or update' at **nsw.gov.au**

Interstate and overseas licences

If you live outside NSW, you can use your interstate or overseas boat licence or personal watercraft (PWC) licence on NSW waterways for limited periods. You must:

- follow the rules and regulations in this handbook, including rules for lifejackets and navigation
- meet the requirements in your home port for safety equipment
- follow the licence restrictions if you're aged under 16.

You must get a NSW licence if you're:

- moving to NSW, or
- using the waterways for longer than 3 consecutive months, or
- already a resident of NSW.

Most interstate and some New Zealand licences can be transferred directly to a NSW licence for a fee.

Overseas licences and certificates cannot be transferred. This means you must get a NSW licence within 3 months of coming to NSW to continue to drive a powered vessel in NSW.

See 'Moving your boat or PWC licence to NSW' at **nsw.gov.au**



Always carry your licence when using NSW waterways, and show it when asked by an authorised officer.

Driving without a licence

You must have a boat licence to drive a powerboat or a sailing boat using its engine at a speed of 10 knots or more. You must have a personal watercraft (PWC) licence to drive a PWC. This includes when driving a boat or PWC you've borrowed or hired.

Your licence can be cancelled for driving a PWC without a licence.

Carrying your licence

You must always carry your boat or PWC licence when driving at 10 knots or more, or when driving a PWC.

Transport for NSW (Maritime) authorised officers and police can ask to see your licence anytime. When asked, you must have a current:

- NSW boat licence (card or digital licence)
- NSW PWC licence (card with photo), or
- interstate or overseas boat or PWC licence.

You must stop and show your licence when asked.

Other people driving your vessel

If you own a powered vessel, you must be able to identify any person who drives it, even if you're not on board at the time. This person must have a boat licence to drive at 10 knots or more, or a PWC licence to drive your PWC.

Registering a vessel

To use your recreational vessel on NSW waterways, you must register:

- powerboats and sailing boats with an engine power rating of 4.0kW or more (approximately 5hp)
- powerboats and sailing boats (with or without an engine) 5.5m or longer
- any other vessels that need a mooring licence or marina berth
- personal watercraft (PWC).

To check the registration requirements for other watercraft – such as engine-powered hydrofoil boards – see 'Emerging technologies' at **nsw.gov.au**

To use your vessel for commercial, government or research activities on NSW waterways, see Using a vessel commercially on page 28.

You must be aged 16 or over to register a vessel in NSW.

What you need to register a vessel

To register a vessel, you must:

- complete the Application for Vessel Registration
- have proof of purchase – for example, a receipt, bill of sale or consignment note
- have a Hull Identification Number (HIN) certificate
- have an Australian Builders Plate (ABP) – for powerboats, and for PWC designed to carry more than 2 people
- be able to prove who you are – see 'Proving your identity' at **nsw.gov.au**
- pay a fee – see 'Boat registration fees' at **nsw.gov.au**

You can submit your application to a service centre in person or by post.

If a vessel has been issued with a unique vessel identifier (UVI) by the Australian Maritime Safety Authority (AMSA), or used commercially, you must also provide a Letter of Agreement for Recreational Vessel Registration from Transport for NSW (Maritime) to register it for the first time. For more information, call **13 12 36**.

See 'Get NSW vessel registration' at **nsw.gov.au**

It's recommended that you get third-party insurance. This covers you for any damage your vessel causes to someone else's property.

Once you have your registration, you can access it digitally using your smartphone or tablet – see 'Digital boat licence and vessel registration' at **nsw.gov.au**

Hull Identification Number (HIN)

The HIN system (also called Boatcode) gives all powered vessels a unique number. The HIN is recorded on a certificate and a plate by the manufacturer. The HIN is also listed on the Personal Properties Security Register (PPSR) so you can check who owns the vessel.

The HIN plate must be permanently attached and clearly displayed on the hull.

See 'Hull Identification Number and Boatcode' at **nsw.gov.au**

Australian Builders Plate (ABP)

Most powerboats, including imported boats, built after 1 July 2006 must have an ABP. There are 2 types of ABP – one for boats up to 6m long and one for boats over 6m.

The manufacturer or importer attaches the ABP to the boat. It must be permanently attached and clearly displayed where it can be seen by the driver – for example, in the cockpit or near the steering position.

The ABP provides safety information about the boat's capability and capacity. It makes it easier to choose a boat to suit your needs. It also helps you plan for a safe trip.

Information on an ABP includes:

- maximum weight and power rating of the engine
- maximum number of people (capacity)
- maximum weight (load), including people on board and equipment
- buoyancy statement (for boats up to 6m long)
- warning statements.

If a boat is modified, its ABP may no longer be valid.

PWC designed to carry more than 2 people also have an ABP, or a similar plate, showing maximum load and capacity. PWC that meet ISO 13590 are exempt.

See 'Australian Builders Plate (ABP)' at **nsw.gov.au**

When you've registered a vessel

All registered vessels have a registration number with numerals and letters.



The vessel registration number must be a minimum of 150mm high on the hull. WEARITN is a personalised registration number.

Registration number

The registration number must be displayed on both sides of the hull. Sailing boats can display it on the transom.

The displayed number must be in a contrasting colour to the hull, solid and clear, and in numerals and upper case letters. For powerboats, it must be a minimum of 150mm high. For sailing boats and PWC it must be a minimum of 100mm high.

It must be well above the normal waterline so it can be seen at all times.



The registration number must be in a contrasting colour to the hull.



Sailing boats can display their registration number on the transom.

Safety label

Powered vessels (not including sailing boats with an engine or PWC) must have a safety label that shows the maximum number of people and the load it can carry, as well as other important safety information. It must be displayed where everyone on board can see it.

PWC behaviour label

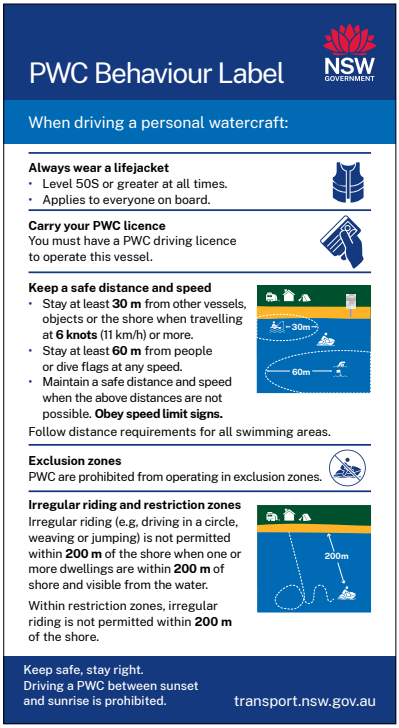
All personal watercraft (PWC) must have a PWC behaviour label that shows the key rules the driver must follow.

Renewing your registration

Registration is valid for 12 months. You must renew it on or before the due date. See 'Renew your vessel registration' at **nsw.gov.au**

If the registration expires, you must not drive your vessel until you've renewed the registration.

Your registration can be cancelled or suspended if your vessel is unsafe, unseaworthy or environmentally hazardous.



The PWC behaviour label must always be clearly visible to the driver.

Transferring registration

When you buy or sell a registered vessel, you must transfer registration within 14 days to avoid a late fee.

The buyer must pay a fee to transfer registration. The seller is responsible for the vessel until the transfer is complete. This includes any fines or other issues with the vessel.

If the registration has expired, the buyer must pay a registration renewal fee to complete the transfer.

See 'Transfer your vessel registration' at **nsw.gov.au**

If your vessel is registered interstate or overseas and you're moving to NSW, or using NSW waterways for longer than 3 consecutive months, you must register your vessel in NSW.



Cruising the Corindi River on the North Coast. If you're moving to NSW you must register your vessel in NSW. Destination NSW photo

Using a vessel commercially

To use your vessel for commercial, government or research activities, it must meet certain safety standards and requirements. Commercial activities include:

- sightseeing and charter boats
- water taxis
- ferries
- workboats
- boat shares or syndicates
- renting boats for overnight accommodation
- commercial fishing
- hire-and-drive vessels.

The Australian Maritime Safety Authority (AMSA) regulates commercial vessels under the National System for Domestic Commercial Vessel Safety. This provides a consistent approach to the regulation of safety for owners, operators, masters, crew and builders of DCVs.

For more information about activities, exemptions and the requirements for operating a domestic commercial vessel, visit **amsa.gov.au**.

Certificate of survey

Generally, a commercial vessel must have a certificate of survey. This survey checks the vessel is designed, built, operated and maintained to meet specific National Standards for Commercial Vessels (NSCV) requirements.



Commercial vessels are regulated by AMSA under a national system.

A new vessel must have a certificate of survey if it is used for commercial, government or research activities, and:

- is 12m or longer
- carries passengers
- is used beyond enclosed waters, or
- is otherwise high risk.

All other commercial vessels are exempt, but they must be designed, built and operated to meet specific NSCV requirements or AMSA Exemption 03 conditions. These vessels include personal watercraft (PWC), paddlecraft, and sailing boats up to 7.5m.

See 'Certificates of survey' at **amsa.gov.au**

Certificate of operation

Commercial vessels must have a certificate of operation. Some vessels are exempt if they meet AMSA Exemption 03 conditions. For example, non-passenger PWC, kayaks, and sailing boats for training schools.

A certificate of operation can include one or more commercial vessels. As the vessel owner, you're responsible for identifying and managing your own operational risks. See 'Certificates of operation' at **amsa.gov.au**



To work on a commercial vessel you must hold a commercial qualification or a certificate of competency.

Certificate of competency

You must hold a commercial qualification or a certificate of competency to work on a commercial vessel in Australia, for example, as a master, engine driver or coxswain.

To get a certificate of competency, you must:

- meet minimum sea service requirements
- complete an approved training and first-aid course
- meet medical and eyesight standards.

You can get your certificate of competency or commercial qualification at a registered training organisation. See 'Domestic qualifications' at **amsa.gov.au**

You do not need a boat or PWC licence if you hold a certificate of competency as a master or coxswain.

Hire-and-drive companies

Hire-and-drive companies offer vessels to the public for hire. These vessels can carry up to 12 passengers and include:

- powerboats up to 24m long, including tinnies
- sailing boats up to 24m long, including multihulls
- sailboards and kiteboards
- houseboats and powerboats with a potential speed of up to 10 knots and fitted with overnight accommodation.

This also includes PWC designed to carry 2 or more people.

To be available for hire, these vessels must have a certificate of operation. This makes sure they are operating at a suitable standard and the company follows appropriate and consistent procedures. See 'Safety management systems' at **amsa.gov.au**

If you hire a vessel, the hire-and-drive company must give you a safety briefing before you use the vessel on NSW waterways.

Hiring a vessel

You can hire a vessel to use on NSW waterways – for example, a powerboat, sailing boat, canoe, personal watercraft (PWC) or houseboat.

Vessels offered for hire must meet commercial safety standards. Please refer to **amsa.gov.au** for more information.

When you need a licence

You must have a boat licence to drive a powerboat or a sailing boat using its engine at a speed of 10 knots or more.

To hire and drive a PWC you must have a PWC licence and be aged 16 or over. There are some licensing exemptions – see 'Personal watercraft hire and drive tours' at **nsw.gov.au**

Hire companies also set their own requirements – for example, minimum competency, age and medical requirements for drivers and passengers.

Safety instructions and rules you must follow

When you hire a vessel, the hire company must give you safety instructions before you go out on the water. Depending on the size and type of vessel, this can include information about:

- safety equipment and how to use it
- lifejacket rules
- operating controls
- navigation equipment
- what to do in an emergency
- charts and safe navigation
- pre-departure checks and planning
- passenger and load capacity.

Hire companies set their own fees and conditions for hiring a vessel – for example, the maximum number of passengers, where you can go and how long you can stay on the water.

You must also follow all the rules in this handbook, including for lifejackets, giving way, alcohol limits and towing.



Lifejackets and safety equipment

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When to wear a lifejacket

Lifejackets are the most important item of safety equipment on any recreational vessel. Wearing a lifejacket can save your life and it's recommended that you wear one at all times.

Lifejackets are also known as personal flotation devices or PFDs.

There are rules for when you must wear a lifejacket and what type. These rules depend on:

- your age – there are special rules for children aged under 12 years
- the level of risk
- the type of vessel you're in
- where you are – for example, enclosed waters, alpine waters, open waters or crossing coastal bars
- what time of day you're on the water.

There are different types of lifejackets – for example, Level 50, Level 50S and Level 100. See Approved types of lifejackets on page 39.

Heightened risk

As well as the specific rules for different types of vessels, you must wear a lifejacket when the skipper tells you to. This may be at times of heightened risk, for example:

- when there's a gale, storm, severe thunderstorm or other severe weather warning from the Bureau of Meteorology
- when there are passengers who are elderly, are non-swimmers or have a serious medical condition
- if the vessel is in danger of capsizing or being swamped by waves
- if people on the vessel are in danger of falling overboard or being forced to enter the water
- when cold water temperatures are likely
- if the vessel has broken down
- on sailing boats without safety barriers, lifelines, rails, safety harnesses or jack lines.

Powerboats and sailing boats

These lifejacket rules cover all powerboats and sailing boats, including tenders and off-the-beach sailing boats.

Under 4.8m long

Everyone must wear a lifejacket:

Enclosed waters	Alpine waters	Open waters and crossing coastal bars
At night (between sunset and sunrise) Or When alone on your boat (including when you have children aged under 12 on your boat)	At all times	At all times
Level 50S or above	Level 50S or above	Level 100 or above. Level 50S for off-the-beach sailing boats

4.8m or longer

Everyone must wear a Level 100 lifejacket or above when crossing coastal bars.

Personal watercraft (PWC)

Everyone must wear a Level 50S or above lifejacket at all times on a PWC. This includes the driver, passengers, observer, and any person being towed.

Inflatable lifejackets are not recommended when you're driving a PWC.

When towing

A person being towed by a vessel must wear a Level 50S or above lifejacket at all times. This includes wakesurfers and tow-in surfers.

Inflatable lifejackets are not recommended when you're being towed.

Sailboards and kiteboards

People on sailboards and kiteboards must wear a lifejacket when more than 400m from the shore:

Enclosed waters	Alpine waters	Open waters and crossing coastal bars
At night (between sunset and sunrise) Or When alone on your sailboard or kiteboard (including when you have children aged under 12 on your sailboard or kiteboard)	At all times	At all times
Level 50S or above	Level 50S or above	Level 50S or above



You must wear a lifejacket when sailboarding more than 400m from the shore and alone on your vessel.

Paddlecraft

Canoes and kayaks

People in canoes (including outrigger canoes) and kayaks must wear a lifejacket:

Enclosed waters	Alpine waters	Open waters and crossing coastal bars
At night (between sunset and sunrise) Or When alone on your canoe or kayak (including when you have children aged under 12 on your canoe or kayak)	At all times	At all times
Level 50S or above	Level 50S or above	Level 50S or above



You must always wear a lifejacket in a canoe or kayak when alone in your vessel.

Surf skis

It's recommended that people using a surf ski wear a lifejacket at all times.

If your surf ski is under 4.8m long, you must follow the same rules as for powerboats and sailing boats under 4.8m long.

There is an exception for surf club members involved in lifesaving, training or competition – unless the event organiser says you must wear a lifejacket.



It's recommended that you wear a lifejacket when using a surf ski.

Stand-up paddle boards

It's recommended that people using stand-up paddle boards (SUPs) wear a lifejacket. If this is not possible, it's recommended that you use a leg rope so you do not get separated from your board.

Rowing vessels

People in rowing boats, rowing dinghies, rowing skiffs, dragon boats or small unpowered inflatable boats must wear a lifejacket:

Enclosed waters	Alpine waters	Open waters and crossing coastal bars
At night (between sunset and sunrise) Or When alone on your vessel (including when you have children aged under 12 on your vessel)	At all times	At all times
Level 50S or above	Level 50S or above	Level 100 or above

People in rowing (racing) shells do not have to wear a lifejacket on enclosed waters. However, it is recommended that you wear a Level 50S or above lifejacket when not taking part in organised events and activities.

Carrying lifejackets

Vessels must carry enough approved lifejackets for everyone on board at all times – even when they do not have to be worn.

Lifejackets must be stored for quick and easy access on board. If they're not easy to see, the storage area must have a sign saying 'Lifejackets' (red lettering on a white background). You can get a free sticker from your nearest service centre.

Approved types of lifejacket

There's a wide range of lifejackets to suit different activities and conditions.

Lifejackets are grouped into safety levels based on their buoyancy, performance and what they're intended to be used for.

These levels help you choose a lifejacket that suits your situation, the type of activity you choose and the conditions you might experience, and that meets the legal requirements for when you must wear a lifejacket.

These levels have replaced the old type 1, 2 or 3 lifejackets used before the introduction of the Marine Safety Regulation 2016 in 7 October 2016. You can still use the old types as long as they're in good condition and well maintained. However, it's recommended that you upgrade to the newer lifejackets with improved safety features. All lifejackets must meet certain standards – see 'Lifejacket standards' at **nsw.gov.au**

Recreational vessels must carry a lifejacket for each person on board. They must be the right level, the right size, in good condition and easy to find.

Approved types of lifejacket

Level 50

Similar to the former Type 2.

Level 50 lifejackets are:

- mainly used in enclosed waters
- intended for people who can swim and are close to the bank or shore or have help close by
- designed to support you in the water, but do not automatically turn you to a face-up position
- made in high-visibility colours to make it easier to see you in the water and increase your chance of rescue.



Example of a Level 50 lifejacket.

Level 50S

Similar to the former Type 3.

Level 50S lifejackets are the same as Level 50, but come in a wider range of colours and styles. They're popular for activities such as wakeboarding and water skiing.



Example of a Level 50S lifejacket.

Level 100 and above

Similar to the former Type 1.

Level 100 and above lifejackets have higher levels of buoyancy and help turn you to a face-up position. The different levels suit different situations.

Level 100

- intended for use when the shore is in sight
- not intended for rough conditions
- helps turn you to a face-up position.

Level 150

- intended for offshore and rough weather
- helps turn you to a face-up position when unconscious.

Level 275

- intended for offshore and rough weather when you're:
  - wearing clothes that could trap air and stop the lifejacket turning you to a face-up position, or
  - carrying heavy items that mean you need extra buoyancy
- helps turn and keep you in a face-up position with your mouth and nose above the water.

Inflatable

Inflatable lifejackets use carbon dioxide (CO_2) for buoyancy, which makes them lighter and less bulky.

Inflatable lifejackets are either inflated manually, by pulling a tab, or automatically when they come into contact with water. Excess spray can accidentally activate an auto-inflating lifejacket.

A person wearing a manual inflatable lifejacket needs the ability and knowledge to activate it in an emergency.

Inflatable lifejackets are therefore not recommended for:

- children aged under 12 years
- personal watercraft (PWC) drivers and passengers
- anyone being towed.

Manual inflatable lifejackets are not recommended for people who cannot swim.

As the skipper, you must make sure your passengers know how inflatable lifejackets work. You must also make sure lifejackets are in good working order and serviced regularly – see Looking after your lifejacket on page 44.



Example of an inflatable lifejacket – Level 100 and above.

Non-inflatable

Non-inflatable Level 100 and above lifejackets have foam buoyancy with neck support. They're bulkier to wear than inflatable ones, but they do not need servicing.



Example of a non-inflatable lifejacket – Level 100 and above.



Children aged under 12 years in vessels less than 4.8m long must wear lifejackets at all times.

Children and lifejackets

It's strongly recommended that children wear a lifejacket at all times.

Lifejackets must be an approved type that meets Australian standards:

- Level 50S or above on enclosed waters
- Level 100 or above on open waters.

The rules about when children must wear a lifejacket depend on their age.

Children aged under 12 years

In addition to the general lifejacket wearing requirements, which apply when crossing a coastal bar in any vessel, on a personal watercraft (PWC), when being towed by any vessel, wakeboarding or wakesurfing, or when directed to by the master of any vessel, children aged under 12 years must wear a lifejacket:

- at all times on vessels less than 4.8m in length, or
- whilst in open areas of vessels 4.8m to less than 8m in length, while the vessel is underway.

Open areas are:

- all deck areas including coach roofs, superstructures, open flying bridges, trampolines and nets, excluding areas within a rigid deckhouse, rigid cabin, rigid half cabin or securely enclosed under-deck space
- the whole vessel excluding areas with a rigid cabin or securely enclosed space, when the vessel does not have a deck
- the whole vessel when it is a kayak or canoe.

When choosing a lifejacket, make sure it fits well and the child cannot slip out of it. A lifejacket with a crotch strap is recommended.

Some sports and department stores sell 'swim vests' designed for children learning to swim under supervision. These vests are not an approved type of lifejacket as they do not offer the same level of protection.

Inflatable lifejackets are not recommended for children aged under 12 years. If a child is wearing an auto-inflating lifejacket when playing, the lifejacket may inflate if it gets wet. If they're wearing a manual inflating lifejacket, they may forget how to activate it in an emergency.

Babies

Babies must wear an approved lifejacket that is suitable for their weight. The lifejacket must fit securely and snugly to ensure the baby cannot slip out, and it must include a crotch strap.

Some babies may be too small for even the smallest approved lifejackets. If a baby cannot wear a properly fitted lifejacket, they must not be carried on:

- any vessel less than 4.8m in length at any time, or
- the open area of a vessel between 4.8m and less than 8m in length while the vessel is underway.

Most swim vests do not meet Australian Standard AS4758 and must not be used as lifejackets.

Children aged 12 years or over

Children aged 12 years or over must follow the same rules for wearing a lifejacket as adults, although it's strongly recommended that they wear one at all times.

Dog lifejackets

There are no rules that dogs (or other pets) must wear lifejackets.

You may want to consider investing in one to keep your pet safe. Find one that's a good fit, so your pet does not slip out of it. One with a grab handle can be useful to pull them out of the water.



You must show the service record on the inside of your lifejacket if asked by a Transport for NSW (Maritime) authorised officer or police.

Looking after your lifejacket

Lifejackets are exposed to heat, sun and salt, which means they damage easily.

Look after your lifejackets by:

- rinsing off salt with fresh water and checking for damage after use
- storing lifejackets in a dry, well-ventilated area out of sunlight
- not using your lifejackets as cushions or fenders (bumpers)
- keeping lifejackets away from oil and fuel
- removing new lifejackets from their plastic wrapping before storing.

Service regularly

A regular service makes sure the bladder, inflation mechanism and CO_2 cylinder are in good working order. In NSW, you must service inflatable lifejackets once a year, or in accordance with manufacturer's instructions.

If you cannot remember when your lifejacket was last serviced, it's recommended that you get it serviced straight away. Keep receipts and certificates as evidence of servicing. You must also keep a record of the date your lifejacket was serviced on the inside of your lifejacket.

Sometimes, you can self-service a lifejacket by following the manufacturer's instructions. The instructions are either supplied with the new lifejacket, printed on the lifejacket itself, or available on the manufacturer's website.

Inflatable lifejackets

Inflatable lifejackets need extra care. An inflatable lifejacket can only help you if it's in working order. If it's not, you or one of your passengers could drown. Check your lifejacket before wearing and service it regularly.

Check before wearing

First, check there are no visible signs of general wear and tear. Next, check that the CO_2 cylinder is not pierced and is screwed in firmly (hand tight).

If you have an auto-inflating lifejacket, check the auto-inflation cartridge is hand tight and that it's still in date. Cartridges must be replaced by the expiry date shown.

Finally, check the pull cord is free and ready to use.

After use, remove the cartridge and rinse the lifejacket with fresh water.

Dry the lifejacket and reconnect the cartridge before storing.

6 steps to self-service your inflatable lifejacket

Always follow the manufacturer's instructions when servicing and repacking your inflatable lifejacket. Each step should be performed in accordance with the specific guidance provided for your lifejacket model.

Step 1 Inspect for visible damage and wear

Check the fabric, seams, buckles, fastenings, and straps. Ensure there are no tears, holes, or signs of deterioration.



Check all fastenings are working.

Step 2 Inflate the bladder and check for pressure loss

Open the lifejacket to access the inflation system and oral inflation tube. Inflate the bladder fully using the oral inflation tube, then leave the lifejacket inflated overnight.

If the bladder loses pressure, do not use the lifejacket, take it to an accredited service agent.



Inflate the bladder with air to check it does not lose pressure.

Step 3 Deflate the bladder

Deflate the bladder by inverting the cap on the oral inflation tube and pressing down gently on the valve inside the tube. Do not insert any objects into the top of the tube, as this may damage the valve. Once deflated, gently roll or press the lifejacket from one end to the other to expel any remaining air, ensuring the bladder is completely flat and ready for repacking.



After you've checked the bladder, deflate it using the cap on the tube.

Step 4 Check the CO_2 cylinder and auto-inflation cartridge (if fitted).

Remove and check the CO_2 cylinder for any signs of rust, corrosion, or piercing. Weigh the cylinder using

scales, it should match the minimum gross weight shown on the cylinder, or be within 2 grams. Replace cylinder if damaged or not the correct weight.

While the cylinder is removed, check that the pull cord and firing pin are functional. For auto-inflating lifejackets, ensure all auto-inflation components are armed (ready for use) and have not expired. Replace any expired components.

Refit the cylinder to the inflation system and tighten it by hand until just firm.



Remove the cylinder to check its weight and condition.

Step 5 Repack the lifejacket

Ensure the pull cord is free, accessible and unlikely to catch on anything when worn.



When you repack the lifejacket, make sure the pull cord is accessible.

Step 6 Record the date

Record the date of self-service inside the lifejacket as evidence of servicing. Keeping an accurate record helps ensure your lifejacket remains compliant and safe for use.

Important:

- If any part fails inspection, do not attempt repairs yourself, take the lifejacket to an accredited service agent.
- Service your inflatable lifejacket at least annually, or as recommended by the manufacturer.
- For further guidance, refer to NSW Maritime's online resources and instructional videos.
- Link to online resources: **https://www.nsw.gov.au/driving-boating-and-transport/waterways-safety-and-rules/lifejackets-and-safety-equipment/lifejacket-care**



Servicing schedule for lifejacket

Essential safety equipment

Having the right safety equipment and knowing how it works will help you deal with unexpected situations or emergencies.

This is a full list of safety equipment you **must carry on powerboats and sailing boats.** For other vessels – such as personal watercraft (PWC), canoes, kayaks, sailboards and kiteboards – it's recommended that you also carry this equipment, if possible.

Vessels must carry enough approved lifejackets for everyone on board at all times – even when they do not have to be worn.

Use the Safety equipment checklist on pages 56–58 to check the minimum safety equipment your vessel must carry.

All safety equipment must be:

- in good condition and meet appropriate standards or specifications
- maintained or serviced according to the manufacturer's specifications
- replaced before the manufacturer's expiry date (if applicable)
- easy to find and access.

Anchor

An anchor is an important piece of safety equipment that you must carry. You can use it to hold your position against the tide, wind or currents. If you break down, you can use it to stop your boat from drifting onto rocks or breaking waves.

Carry an anchor that's the right size and type for your boat and the sea floor. Sand anchors (Danforth anchors) suit mud or sand and are easy to pull up if they get stuck. Reef anchors (grapnels) suit anchoring on reefs or in rocky areas. Plough anchors suit large, heavier boats in sand and mud, but may get caught on reefs or rocks.

Carry enough anchor line for the depth of water you may need to anchor in. Allow about 3 times as long as the depth of water, plus extra for bad weather or emergencies. The anchor line should include a length of chain to soften the boat's movement and help the anchor dig in. The larger the boat, the more chain you need.

Bailer, bucket or fire bucket

Unless your vessel has covered bilges or sealed underfloor compartments, you are required to carry a bailer or bucket with a lanyard attached. The bailer or bucket must be strong, sturdy, and fit for purpose. It is recommended that you carry a bucket at all times, as it can also be used to assist in the event of a fire or for other emergency situations.

Bilge pumps

A bilge pump is a pump used to remove water from inside the bottom of a boat.

Boats with covered bilges must be fitted with a manual or powered bilge pump or pumps. They must be:

- able to drain each compartment of the boat
- protected by a strainer to stop the pump suction choking.

Compass and chart

Compasses and charts (maps) are navigation aids. They help you plan where you're going and avoid hazards. They also help you determine your exact position, which can be important in an emergency.

On open waters, you must have a compass and a chart. Charts must show navigation features, such as shallows, reefs, hazards and channels. They can be printed or digital.

Transport for NSW (Maritime) produces boating maps for popular NSW waterways. Printed copies can be ordered at **nsw.gov.au**

If you have a digital chart on a laptop or mobile phone, it's recommended that you download a copy before you set off. This is in case you have reception issues on the water. You must be able to show the chart to Transport for NSW (Maritime) authorised officers or police if asked to.

If you have satellite navigation, you must still have a compass. This is to help you get back to shore if the satellite navigation fails or if rain, fog or sea haze hides the land from view.

Emergency Position Indicating Radio Beacon (EPIRB)

An EPIRB is an electronic distress beacon used to alert search and rescue services in an emergency.

Once activated, an EPIRB transmits a distress signal for a minimum of 48 hours. This signal can be detected by satellite and aircraft and relayed to a local rescue coordination centre.

An EPIRB must transmit on 406 MHz and conform with Standard AS/NZS 4280.1. It must also be registered with the Australian Maritime Safety Authority (AMSA) – see 'Registration information' at **beacons.amsa.gov.au**

If you're on open waters and more than 2nm from the shore, you must have an EPIRB. Even within 2nm, it's recommended.

It's recommended that you keep your EPIRB stored to avoid accidentally activating it. If it does go off by mistake, switch it off immediately and contact AMSA at **amsa.gov.au** or **1800 641 792**.

When it's stored, your EPIRB should be easy to access (not in the bottom of a locker or another place that's hard to reach).

Personal Locator Beacon (PLB)

A PLB is smaller than an EPIRB. It's designed to be carried on people rather than on the vessel. A PLB does not replace an EPIRB as a mandatory item of safety equipment. It can be carried as an extra safety precaution or when an EPIRB is not mandatory.



Fire extinguishers

When is a fire extinguisher required?

You must carry a fire extinguisher if your boat has any of the following:

- An engine that starts with a key or button (electric start)
- A battery
- Gas bottles or gas pipes (gas installation)
- A fuel-powered stove

You must carry additional fire extinguishers if you:

- Carry flammable liquids below deck
- Have LPG or other flammable gas on board
- Have sleeping accommodation

Recommended extinguisher size:

If you have less than 25 litres of fuel on board, you should have at least a 5B fire extinguisher.

If you have more than 25 litres of fuel, you should have at least a 20B fire extinguisher.

Where should fire extinguishers be kept?

Fire extinguishers must be securely fixed in place and easy to find and access. Good locations include:

- Near the steering position
- In the galley (kitchen) area
- Close to the engine compartment

Buying the right fire extinguisher:

Purchase fire extinguishers (and other safety equipment such as fire blankets) from a trusted or authorised dealer. Your fire extinguisher must meet the current Australian Standard AS 1841.

Looking after your extinguisher:

- Keep fire extinguishers away from saltwater to prevent rust.
- Regularly check the gauge. If the needle is in the green zone, it's ready to use. If it's in the red zone, replace it.
- Ensure the date stamped on the cylinder is less than 5 years old, or within the expiry date.
- Inspect for any rust, dents, corrosion, or other damage.
- Fire extinguishers must be serviced by the manufacturer or an authorised agent before their expiry date (see the manufacturer's instructions).
- Before you go boating, give your extinguisher a gentle shake and confirm all checks above are met.

Fire extinguisher suitability by fire class

✓ Suitable — The extinguisher is effective and safe to use on this class of fire

✗ Not suitable – Do **not** use; may be ineffective or increase danger

* *Limited effect – May reduce the fire but is not effective at fully extinguishing it*

Extinguisher Type	Class A Flammable Materials (paper, wood)	Class B Flammable Liquids (petrol, diesel)	Class C Flammable Gases (LPG, butane)	Class D Metals (aluminium, lithium)	Class E Electrical (energised equipment)	Class F Cooking Oils & Fats
Water	✓	✗	✗	✗	✗	✗
Dry Chemical Powder (ABE)	✓	✓	✓	✗	✗	✗
Dry Chemical Powder (BE)	✗	✓	✓	✗	✗	✗
Carbon Dioxide (CO_2)	*Limited effect*	*Limited effect*	✗	✗	✗	*Limited effect*
Foam	✓	✓	✗	✗	✗	✗
Wet Chemical	✓	✗	✗	✗	✗	✓

Flares

A flare is a type of distress signal that you ignite to let people know you're in trouble and to show rescuers where you are. Flares are best used when you believe there's a chance of them being seen.

There are 2 types of flares that you must carry on open waters:

- orange smoke flares for day use
- red hand flares for day or night use.

You must carry 2 of each kind. Everyone on board should be able to find and ignite the correct flare, even in total darkness. Keep flares in an accessible, sealed and waterproof container.

Most flares expire after 3 years. You must replace flares before they expire, and dispose of the expired ones safely. See 'Expired marine flare disposal' at **nsw.gov.au**

Fresh drinking water

On open waters you must carry at least 2 litres of fresh drinking water for each person on board.

Marine radios

If you're more than 2nm from the shore on open waters, you must have a marine radio. Even within 2nm, it's recommended.

Marine radios can be used to:

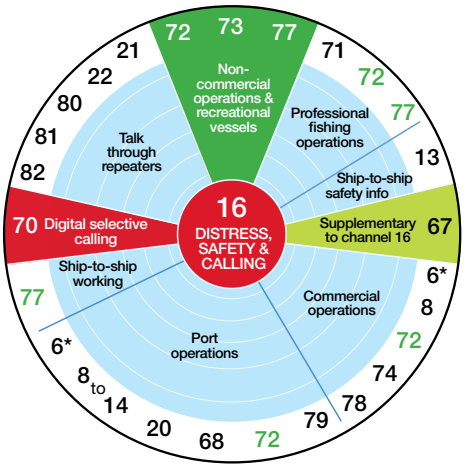
- make distress calls to other vessels in the area or to shore stations
- advise shore stations of your itinerary
- check weather and navigational warnings.

There are 3 types of marine radio:

- very high frequency (VHF)
- high frequency (HF)
- 27 MHz.

VHF and 27 MHz are both 'line of sight' communication, which means they work when you're in sight of the land or other vessels. VHF is recommended over 27 MHz. VHF is more reliable, has a longer range, and is more widely monitored by shore stations and large commercial vessels.

VHF marine radio channels



Australian Government | acma

www.acma.gov.au/vhfmarine

*Also used for on-scene air/sea SAR operations.

HF radio is for longer range communication. It works even if you're not in sight of the land and suits longer distances on open waters.

To use a VHF or HF radio, you must have a radio operator's certificate – see 'Office of Maritime Communications' at **amc.edu.au**

A mobile phone does not replace a marine radio. But it can be used in a life-threatening situation if you have reception – call Triple Zero (000). It's recommended that you keep your mobile in a waterproof cover.

Paddles or oars with rowlocks

Paddles or oars with rowlocks must be carried on boats up to 6m long, unless the boat has a second means of propulsion – for example, an engine on a sailing boat, or a second engine on a powerboat.

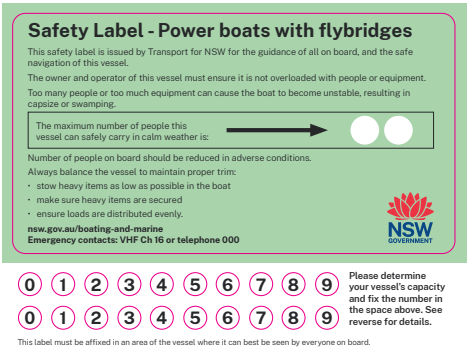
It's recommended that the second means of propulsion for boats over 6m is a second engine, particularly if travelling long distances.

Safety label

A safety label shows the maximum number of people (capacity) and load you can carry on your boat, as well as other important safety information. Powered vessels (not including sailing boats with engines or PWC) must display a safety label where everyone on board can see it.

The capacity and load are set by the Australian Builders Plate (ABP), the manufacturer, or by the table on the back of the safety label.

You get a safety label when you register your boat or from your nearest service centre – see **service.nsw.gov.au**



A safety label shows the maximum number of people you can carry, and other important safety information.

Sound signal

You must have something to make a sound signal, such as an air horn, whistle or bell. You can use sound signals to attract attention or to let other vessels know what you're doing.

V sheet

A V sheet is a fluorescent orange-red sheet (a minimum of 1.8m x 1.2m) with a large black V printed in the middle. You must carry one on open waters.

You can spread the V sheet over the deck or fly it as a flag to show that you're in trouble.

Keep your V sheet in an accessible, sealed and waterproof container.



The V sheet makes your vessel more visible to other vessels and aircraft.

Waterproof floating torch

You must carry a working, floating waterproof torch. A torch can be used for signalling or working on the engine, or as a navigation light on small vessels.

Keep your torch with spare bulbs and batteries in an accessible, sealed and waterproof container.



Keep your torch in a sealed, waterproof container along with other small items like flares, V sheet and EPIRB.

Safety equipment checklist

The minimum safety equipment you must carry depends on the type of vessel you're in and whether you're on open waters or enclosed waters.

Powerboats and sailing boats

On powerboats and sailing boats of any size (except tenders and off-the-beach sailing boats) you must carry:

Equipment you must carry	Enclosed waters (including alpine waters)	Open waters
Lifejackets. For each person on board – also see When to wear a lifejacket on page 33.	1	1
Anchor and chain/line. Except for sailing boats up to 6m long.	1	1
Bailer or bucket with lanyard. Except for sailing boats with permanently enclosed, self-draining hulls and powerboats with covered bilges or closed underfloor compartments other than airtight void spaces.	1	1
Bilge pump (electric or manual). For vessels with covered bilge or closed underfloor compartments (other than airtight void spaces). Must be able to drain each compartment. Larger vessels may need additional bilge pumps.	1	1
Chart (map). For area of operation (printed or digital).	–	1
Compass. Fluid filled magnetic.	–	1

Equipment you must carry	Enclosed waters (including alpine waters)	Open waters
Distress flares. Not expired.	–	2 orange smoke 2 red hand
Drinking water.	–	2 litres per person
EPIRB – 406 MHz. Must be registered with AMSA and not expired.	–	1 (if 2nm or more from the shore)
Fire extinguisher. For boats with electric start, electric engines, battery, gas installation or fuel stoves. Larger boats may need additional fire extinguishers.	1	1
Marine radio.	–	1 (if 2nm or more from the shore)
Paddles or oars and rowlocks. For boats up to 6m long, unless they have a second means of propulsion.	1	1
Safety label. Except for sailing boats.	1	1
Sound signal. Air horn, whistle or bell.	1	1
V sheet. A minimum of 1.8m x 1.2m.	–	1
Waterproof torch. Floating and working.	1	1

Equipment you must carry	Enclosed waters (including alpine waters)	Open waters
Recommended equipment		
First-aid kit.	1	1
Kill switch lanyard. For small powerboats.	1	1
Toolkit.	1	1
2 means of communication. For example, a marine radio and mobile phone in a waterproof cover.	–	1

Personal watercraft (PWC)

PWC must have a PWC behaviour label. The label must be displayed where it can be seen from the steering position. This label shows the rules you must follow when driving a PWC, such as keeping a safe distance from people and other vessels. You get one when you register your PWC at a service centre.

You must wear a lifejacket on a PWC at all times.

For your safety, especially in remote areas and on open waters, it's recommended that you carry:

- kill switch lanyard (strongly recommended)
- torch (waterproof and working)
- first-aid kit
- fire extinguisher
- 2 means of communication – for example, a marine radio and a mobile phone in a waterproof cover
- wetsuit for each person
- helmet for each person.

When tow-in surfing

If you're tow-in surfing without an observer on a PWC, you must carry:

- rescue sled
- spare kill switch lanyard – wrapped around the handlebar
- two-way communication device – such as a marine radio or mobile phone in a waterproof cover
- dive fins
- safety knife
- toolkit
- quick-release floating tow rope (minimum 7m long)
- bow tow-line (minimum 7m long).

Sailboards, kiteboards and off-the-beach sailing boats

You must carry lifejackets for each person on board – also see When to wear a lifejacket on page 33.

If you're going out alone to remote areas or on open waters, it's strongly recommended that you carry a minimum of 1 means of communication, such as a mobile phone in a waterproof cover.



Couple enjoying a day of stand up paddleboarding at Clareville Beach, Clareville. Destination NSW.

Paddlecraft

Canoes and kayaks

You must carry:

- lifejackets for each person on board – see When to wear a lifejacket on page 33
- a waterproof torch if you go out at night (between sunset and sunrise) to use to help prevent a collision.

For your safety, it's recommended that you:

- wear highly visible clothing
- attach a high-visibility flag to your vessel
- carry a handheld marine radio or mobile phone in a waterproof cover in case of an emergency.

Paddling activities on open waters – such as sea kayaking – demand a high level of self-sufficiency and skill. See the 'Safety Guidelines' provided by Paddle Australia at **paddle.org.au**

On open waters, canoes and kayaks with an engine must carry the same safety equipment as powerboats and sailing boats.

Surf skis

You must carry lifejackets for each person onboard, unless you are involved in council or surf club lifesaving, training or competition activities. See When to wear a lifejacket on page 33.

Stand-up paddle boards

It's strongly recommended that people on stand-up paddle boards wear a lifejacket.

Rowing vessels

Rowing boats, rowing dinghies, rowing skiffs and small inflatable boats

You must carry lifejackets for each person on board – see When to wear a lifejacket on page 33.

You must carry the same safety equipment as powerboats and sailing boats.

You do not have to carry safety equipment if your vessel is **all** of the following:

- up to 3m long
- not carrying an engine or fuel
- built to float if swamped or capsized
- within 200m of the nearest shore.

If the boat is being used as a tender, you must carry the safety equipment for a tender.

Rowing (racing) shells

You do not have to carry safety equipment or lifejackets on enclosed waters.

Dragon boats and outrigger canoes

Dragon boats and outrigger canoes have special rules for the safety equipment they must carry, how it's stored and safety drills. See Marine Safety Regulation 2016 Schedule 8, Part 2 (clause 8 for outrigger canoes and clause 9 for dragon boats) at **legislation.nsw.gov.au**

Vessels used for competition, training or surf rescue

Surf rescue boats (except PWC) do not have to carry safety equipment, and people on board do not have to wear lifejackets, when they are being used by a local council or recognised rescue organisation for:

- lifesaving
- surf rescue
- training or competition.

Sailing vessels used for organised sailing training do not have to carry safety equipment – as long as a powered vessel capable of rescue is close by. Everyone must wear a lifejacket.

Tenders

A tender is any type of boat up to 7.5m long used to transport people or goods between the shore and a parent vessel or another vessel. It is no longer classified as a tender if it travels further than 1nm from its parent vessel.

Tenders up to 3m long

A tender up to 3m long must carry:

- paddle or oars
- bucket, bailer or bilge pump
- waterproof torch at night (between sunset and sunrise).

A tender must carry the same equipment as powerboats and sailing boats if it goes:

- more than 200m from the shore on enclosed waters
- anywhere on open waters.

Tenders over 3m long

A tender over 3m long must carry the same safety equipment as powerboats and sailing boats.

Recommended safety equipment

In addition to the essential safety equipment that you must carry, it's recommended that you carry these items on board at all times.

First-aid kit

Carry a complete first-aid kit appropriate for the maximum number of people the vessel is designed to carry.

Kill switch lanyard

Many small powerboats and all personal watercraft (PWC) have an automatic engine cut-off device called a kill switch. This is activated by a lanyard.



A kill switch lanyard attached to your arm stops the engine if you fall overboard.

When you're driving, you attach one end of the kill switch lanyard to your arm, leg, clothing or lifejacket, and the other end to the engine. If you fall overboard or lose control of the steering, the lanyard disconnects and stops the engine.

It's strongly recommended that you wear a kill switch lanyard when the engine is on and in gear.

Toolkit

It's recommended that every vessel have a basic toolkit with:

- spark plug spanner and spark plugs (for petrol engines)
- small adjustable spanner
- pair of pliers
- metal file
- wire brush
- hacksaw and blade
- Phillips head and standard screwdriver
- spare fuel line
- electrical wiring
- insulation tape
- can of water-displacing spray.

Two means of communication

If possible, carry 2 means of communication, for example, a marine radio and a mobile phone in a waterproof cover.



Be prepared

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Before you go on the water

As the skipper, you're responsible for the safety of the vessel and people on board. Being prepared before heading out on the water is the best way to keep everyone safe and enjoy time on the water.

Carry enough lifejackets

Wearing a lifejacket can save your life. Make sure your vessel is carrying enough approved lifejackets for everyone on board. They must be in good condition and quick and easy to access.

Always wear a lifejacket while on the water. This means that you'll be more prepared for unexpected events, such as suddenly falling into the water.

The rules for wearing a lifejacket depend on your vessel, where you are and the level of risk – see When to wear a lifejacket on page 33.

Know the rules

Before you go out, make sure you know the rules and regulations for using NSW waterways. This handbook covers the key rules to help you stay safe and avoid collisions, including:

- keeping a proper lookout for hazards
- knowing who you must give way to and when
- identifying and obeying navigation marks, lights and sounds
- travelling at a safe speed and keeping a safe distance between your vessel and other people, vessels and objects
- staying under the legal limit for alcohol
- knowing the rules for towing a person on the water and towing a trailer on the road.

Check the weather

Always check the weather before you head out. Be aware of warnings, marine conditions, storms, winds, waves and tides. This can make the difference between an enjoyable day and an emergency situation. If in doubt, don't go out.



Marine Rescue NSW helps vessels when they're in trouble.

Let someone know

Before you leave, contact a friend or relative or use your marine radio to log on with a coastal radio base. Tell them:

- where you're going
- your estimated return time
- your vessel details
- how many people are on board.

Take extra care to let someone know if you are going out alone.

Report in if you extend or change your trip.

You can also use the MarineRescue app to log on and log off with Marine Rescue NSW – see 'MarineRescue App' at **marinerescuensw.com.au**

Know what to do in an emergency

Being on the water can be unpredictable and dangerous. Be prepared for an emergency or incident, and know what to do and who to contact if you run into trouble.

If you're involved in or witness an incident, you must always stop and give as much help as possible. Depending on the severity of the incident – for example, if someone is injured – you may need to give information to authorities.

Marine Rescue NSW provides important services, including safety education, marine radio communication, and emergency search and rescue services. See 'Find your local unit' at **marinerescuensw.com.au**

Check your vessel

Check your vessel is in good working order, including the engine and lights. Check you have all the correct equipment on board before you leave home or launch your vessel.

If your vessel is registered, check the registration has not expired.

Check your vessel is suitable for the waterways you want to travel on. For example, if the vessel is designed for enclosed waters, it may not suit open waters or along the coast where waves are larger.

Check all hatches can be opened from both the inside and outside of the vessel. Keep all hatches unlocked while the vessel is underway.

Anyone driving your vessel should have the skills and experience to handle the vessel on the waterway you're using.

Have the correct safety equipment

Check you have the correct safety equipment on board for where you're going and your vessel type.

Make sure every item is in good condition and easy to access. Everyone on board should know its location and how to use it.

Plan where you want to go

Plan where you're going and know how long the trip will take. Be aware of any special waterways or designated areas. Check the location of harbours, ports and potential refuges from bad weather.

Take extra care in cold water, especially alpine waters, where your risk of cold shock and hypothermia are increased.

Build your experience by starting out on calm, quiet waterways. Take a more experienced person with you, if possible.

Make sure you have enough fuel. Plan to use a third to get there, a third to get home, and have a third in reserve for unexpected events.

Make sure you have a compass and up-to-date chart (or map) for the waterways you will be using, especially if you're going out on open waters.



You must have a chart or map if you plan to go out on open waters.

Prepare children

If you're taking children out on your vessel:

- Make sure they have a lifejacket and are wearing it when required
- Teach them emergency procedures and drills, such as what to do if they fall overboard or the vessel capsizes
- Show them where the safety equipment is, and teach them how to use emergency items, such as the marine radio, EPIRB and flares. Make sure they understand they must only use them in an emergency
- Show them how to get in and out of dinghies and small boats while keeping them stable
- Make sure they do not have any part of their body out of the vessel when it's underway
- Teach them about keeping a proper lookout and a safe distance from other vessels

- If you're planning to tow, make sure they know the rules for towing people aged under 16
- Carry everything they need to be prepared for all types of weather.
- Consider the risk of seasickness, especially if you're going out on choppy water.



Teach children about lifejackets and sunscreen.

Download boating apps

Boating apps give you quick access to helpful information about waterways on your smartphone or tablet. For example, boat ramps, speed zones, navigation aids, weather, special events and safety advice.

The Marine Rescue NSW app has useful safety tools and information. For example, log on and off function, local tides, weather conditions, safety checklists and emergency call procedures. See 'MarineRescue App' at **marinerescuensw.com.au**

Checking the weather

Weather conditions on NSW waterways can change very quickly, especially on open waters. Check the weather forecasts before you go out and regularly while you're on the water. This gives you the best chance to alter course or return to shore safely if the weather changes suddenly.

Bad weather can create a situation of heightened risk. In these situations, the dangers to you and your vessel increase – for example, the vessel may capsize or be swamped by waves, or you may fall overboard.

You should always be prepared for extreme weather conditions. This includes having:

- lifejackets for everyone on board
- warm clothing and wet weather gear
- sunscreen, sunglasses, sun-protective clothing, hats and drinking water
- the required lights and safety equipment on your vessel.

Before you go

When planning your trip, check:

- weather conditions affecting safe navigation – for example, restricted visibility due to fog, heavy rain, glare or darkness
- weather conditions affecting comfort, such as extreme heat or cold
- wind trends – for example, wind changes, storms or a front bringing strong winds
- wave conditions, including swell and wave heights
- tides – the times for high and low tides
- current warnings for the area
- the location and weather conditions at coastal bars – see 'Coastal bars in NSW' at **nsw.gov.au**

For safety information about wave heights and vessel size, see 'Wave heights' at **nsw.gov.au**

If the weather looks likely to change or the water looks rough, postpone your trip or choose a calmer location. If in doubt, don't go out.

Bureau of Meteorology (BOM)

The BOM provides a 24-hour forecast and wind warning service for Australian coastal waters.

Warnings are issued and updated for:

- hazardous surf conditions (wave height and period)
- strong winds (average 26 to 33 knots, plan for gusts of 36 to 45 knots)
- gale force winds (average 34 to 47 knots, plan for gusts of 48 to 65 knots)
- storm force winds (average 48 to 63 knots, plan for gusts of 67 to 88 knots)
- hurricane force winds (average 64 knots or more, plan for gusts of 90 knots or more).

Note that wind gusts may be up to 40% stronger than the forecast average. 'Significant wave height' means that maximum waves may be up to twice the forecast height.

Before you head out, download the BOM app or visit the 'BOM website' at **bom.gov.au** for the latest weather information:

- Marine & Ocean for warnings and forecasts, including hazardous surf warnings
- MetEye for detailed forecasts for your area.



The BOM website provides forecasts and wind warnings for Australian coastal waters.

While you're on the water

When you're on the water, check the weather regularly by:

- listening to your marine radio for Marine Rescue NSW weather warnings broadcast on VHF 16 and 27 MHz 88
- checking the 'BOM mobile website' at **weather.bom.gov.au** to monitor the weather and check for new or updated warnings, forecasts, heavy rain and thunderstorms.

You can also call the BOM Weather Warning Service on **1300 132 536**.

Always keep an eye on the sky and the water. If you see changes – for example, threatening clouds in the sky or whitecaps on the water – make sure everyone is wearing a lifejacket and head for shore.

Weather systems can be deceptive. From a distance they can appear to move slowly, but can change quickly and suddenly. Take extra care when travelling on open waters and alpine waters.

Waterway safety apps

Boating apps give you quick access to helpful information about waterways on your smartphone or tablet. For example, navigation aids, weather and safety. See Download boating apps on page 69.



Weather changes can happen quickly and suddenly. This storm front was clearly shown approaching Sydney on the BOM radar.

Loading your vessel

Vessels are designed and built for different purposes. Understanding whether a vessel is the right size and design for you depends on:

- how many people you want to carry
- how much equipment you need to carry
- the provisions and items you want to carry
- the type of water and the conditions.

Overloading, uneven weight distribution or unexpected movement can cause your vessel to capsize or be swamped, especially in rough conditions. Make sure items are secured and people on board understand the importance of not moving around.

Maximum capacity and load

All vessels have maximum limits for:

- number of people (capacity) – see People on board on page 96
- weight, including people and equipment (load).

For powerboats you must follow the load and capacity shown on the Australian Builders Plate (ABP) or the safety label.

For personal watercraft (PWC) designed to carry more than 2 people, you must follow the load and capacity shown on the ABP or similar plate.

For other vessels – such as sailing vessels, paddlecraft and rowing vessels – the capacity and load are set by the manufacturer. You can find this information on the manufacturer's website or in the printed booklet supplied with the vessel.

It's recommended that you reduce the load in poor conditions or on open water.

Your licence can be suspended or cancelled for overloading a vessel.

Distribute weight evenly

Always stow heavy items as low as possible in a vessel and check they're secured.

Passengers and load need to be distributed evenly to maintain appropriate freeboard and trim. This means keeping enough distance between the water and the gunwale. Your vessel should be level and balanced.

For example, a heavy load at the rear can cause the stern to sit lower in the water and increase the risk of swamping. This can also create more wash.

Paddlecraft and small boats

Paddlecraft – such as canoes and kayaks – are lightweight and narrow. This can result in poor stability. Take extra care when boarding and avoid putting large or heavy items on board.

When getting on or off a small boat or paddlecraft:

- Step on board as near the middle as possible, crouch down and hold onto something
- Never jump into a vessel or pause with one foot on board and the other foot ashore
- When you move around the vessel, keep to the centreline and crouch down to lower your centre of gravity.

Personal watercraft (PWC)

When getting on a PWC in the water, approach from behind. Pull yourself carefully on board and keep your weight centred.

Maintaining your vessel

Before you go on the water, make sure your vessel and the equipment on board are in good working order. If something needs fixing or replacing, do it before you go out.

The major causes of breakdown for powered vessels are:

- engine failure
- fuel shortage or contamination
- mechanical failure
- battery failure.

Some of these can be easily avoided or fixed. It's recommended that you learn how to:

- change the filter and primer bowl
- clean and change spark plugs
- check the spark plugs are sparking
- check and replace fuses
- change the propeller
- check the battery.

It's also recommended that powered vessels are professionally serviced every year.

If you break down, stay in one position by anchoring your boat, if possible. If your personal watercraft (PWC) breaks down, stay with the vessel and do not try to swim to shore.

Maintenance checklist

Safety equipment

Make sure you maintain all the safety equipment and lifejackets on your vessel.

Toolkit and spare parts

Check you have a toolkit with at least the basic items.

Make sure you have spares for parts that can be easily replaced – see 'recommended spare parts' at **nsw.gov.au**

Registration number and safety label

If your vessel is registered, check the registration number is clearly displayed.

All recreational powered vessels (not including sailing boats or PWC) must display a safety label where everyone on board can see it. PWC must have a PWC behaviour label clearly displayed.

Engine

For all powered vessels, check:

- spark plugs, and make sure you have spares
- gearbox for leaks

- propeller is working, and make sure you have a spare shear pin
- cooling water circulation is working by checking if water is squirting from where it's meant to when the engine is running.

For PWC, check:

- engine compartment for fumes – vent any fumes before starting the engine
- engine hood cover is securely latched
- throttle is in working order.

Fuel

Before using any switches or engines, check:

- there are no petrol or LPG odours
- fuel and filter lines are clear and in good condition – filters can become clogged and lines can harden with age and exposure
- you have enough fuel and water – plan to use a third of your fuel for the trip out, a third for the trip back, and have a third in reserve for unexpected events
- there are no leaks in fuel lines, fuel or oil tanks or the exhaust system
- there are no faults in the electrical system and all components are clean
- the boat is well ventilated to prevent carbon monoxide build up from exhaust systems.

If your boat has not been used for a while, replace old fuel with new fuel.

LPG cylinders and appliances

If your boat has LPG burning appliances, check:

- cylinders and appliances are suitable for marine use
- cylinders have been inspected and serviced by a licensed gasfitter
- equipment and hoses are in safe working order
- gas storage bottles are located in a well-ventilated space.

Bilges and pumps

Check:

- bilges – if there's more bilge water than usual, find out why and fix it
- self-draining holes are clear
- you have the bung and it's in place.

Replace the engine water pump if you've been out in the shallows stirring sand or mud, or if you have not used the boat for a while.

For a PWC, check that the pump or intake area is free of debris.

Lights

Check your navigation lights are in working order and that the lenses are clean and clear.

Ropes and lines

Check ropes and lines are in good condition and stored ready for use. Consider rigging lifelines in open areas so that children have enough handholds.

Steering

Check steering cables and connections are in good working order.

Kill switch

If your boat or PWC is fitted with an engine kill switch, make sure you have the correct lanyard.

Battery

Check the battery:

- Ensure the battery is the correct type and strength to operate all electrical equipment and start the engine.
- Terminals should be clean, secure, and properly charged. For lead-acid batteries, check that the fluid is at the correct level.
- The battery should be able to start the engine more than once – batteries can fail if not used for extended periods.
- If using lithium batteries, it is essential to use the correct charger. Using an incorrect charger can increase the risk of fire onboard.

Anchors

Check you have the right anchors on board and that they are properly rigged, stowed and ready for use.

Biofuels

Some marine engines are capable of using biofuels. The 2 most common types of biofuels used in NSW are ethanol and biodiesel. Biofuels can affect the safety and fuel management of powered vessels.

Powered vessels with petrol engines

Generally, ethanol-blended fuel is not recommended for boats with petrol engines. This is because ethanol readily absorbs water and may separate from the petrol and cause engine failure.

Ethanol is a solvent. This may cause problems for carburettors and fibreglass fuel tanks. It can also damage rubber fuel lines, fittings, seals and filtration systems, particularly in older engines and non-standard engines.

To avoid ethanol-blended fuel, use either higher octane fuel, which does not contain ethanol, or regular unleaded petrol.

Powered vessels with diesel engines

Biodiesel has poor oxidation stability and can grow microbes. These factors cause the fuel to break down. This can speed up engine wear. It can also cause engine lubricants to break down and oil and fuel filters to block. Its solvent properties can cause damage to engine components, including seals and hoses.

Diesel blends of up to 5% biodiesel do not require labelling, so always ask before you fill your tank.



Rules

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Proper lookout

As the skipper, you must keep a proper lookout – by sight and hearing – at all times. This helps you judge your situation and the risk of collision. This is essential to keeping everyone safe on the water.

When keeping a proper lookout, look all around, including behind you. Look out for hazards so you can avoid colliding with people, other vessels, structures, land and animals. Look out for vulnerable groups, including swimmers and divers, and smaller vessels, such as sailboards and kayaks, which can be difficult to see.

Be mindful of noise – such as loud music – that could prevent you from hearing sounds or signals from other vessels or people.

Take extra care at times of restricted visibility, for example, at night (between sunset and sunrise) or in poor weather conditions.

Make sure you're travelling at a safe speed. If you have a radar, use it to keep a lookout. Remember to dim the display at night so you do not lose your night vision.

It's recommended that you have a lookout person. They can alert you if your view is blocked.



For people

Keep a lookout for people in the water, including swimmers, snorkellers, spearfishers and divers. Make sure you keep a safe distance.

If you're driving a powered vessel, make sure its spinning propellers do not come near anyone. Propeller strikes can cause serious injuries or death.



The blue and white 'Alpha' flag can be attached to a fluorescent buoy.



The blue and white 'Alpha' flag can be attached to a vessel.

Look out for the blue and white 'Alpha' flag. This means divers, snorkellers or spearfishers are in the water nearby. The flag can be attached to a fluorescent buoy, a vessel or a personal float.



For other vessels

Keep a lookout for other vessels on the water. This includes small vessels, such as sailboards, kayaks and dinghies, and large vessels, such as ships and ferries.

Take extra care in areas where there are large vessels and high-speed vessels, like Sydney Harbour. Be aware that large vessels travel much faster than they appear to. The situation can become dangerous quickly, even if your vessel is travelling slowly.

In channels and rivers, take care at bends. Look out for vessels coming the other way and keep to starboard (right).

In mooring areas, keep a lookout for mooring lines, as well as moored vessels and dinghies.

At night, look out for navigation lights on other vessels.

Look out for seaplanes on Sydney Harbour, Pittwater and the Hawkesbury River and in tourist locations on the north and south coast. Be aware that they may take off or land near you. Avoid making sudden changes of direction, which might confuse the pilot or obstruct the seaplane's path. When they're on the water, seaplanes must follow the same rules as other powered vessels.

For structures

Keep a lookout for structures, including bridges, jetties and overhead powerlines.

If you're navigating under an overhead crossing, you must follow the signs showing the maximum vessel height (clearance height). Bridge heights on maps are measured at the mean high-water mark. It's recommended that you understand the height level on signs and know the height of your vessel. This includes the mast, anything above the deck and any fishing poles.

Remember that clearance heights vary according to water levels. Allow for higher-than-average tides at certain times of the year. Clearance heights may be lower during floods. Your vessel may need more height when it's not carrying a full load.

For submerged and floating hazards

Submerged hazards include sandbanks and sunken vessels. Fishing equipment – for example, oyster leases, traps and lobster pots – can also be hazards.

Keep a lookout for floating hazards, such as logs and debris. Take extra care at night, as these hazards are unlit.

For aquatic animals

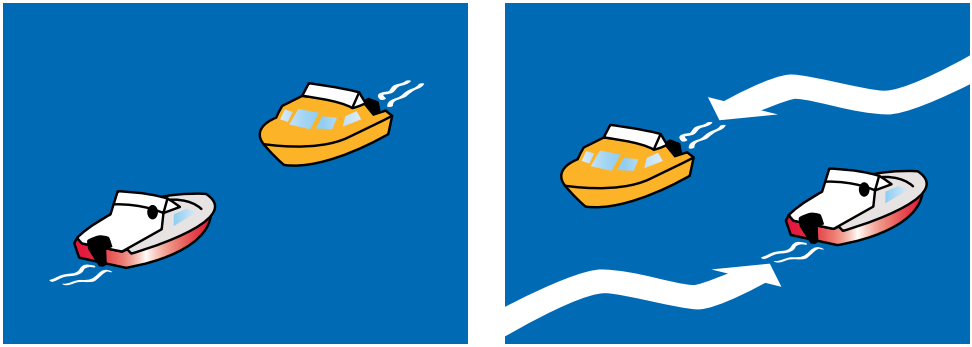
Keep a lookout for animals in the water. This includes whales, seals, dolphins, penguins, turtles and waterbirds. All native mammals, birds and reptiles are protected in NSW. You must avoid harming them – see Protecting marine life on page 168.

When towing

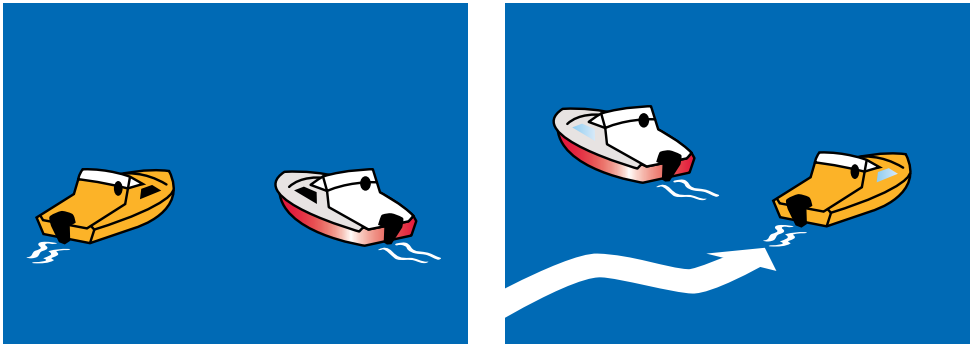
Keep a lookout when you're towing a person, for example, a water skier. Both the driver and the observer must keep a lookout.

Before towing, it's recommended that you check the area for any hazards. These include floating debris, sandbars or snags. Take extra care on unfamiliar waterways or in areas that have recently flooded.

Giving way



Both powered vessels move to starboard (right).



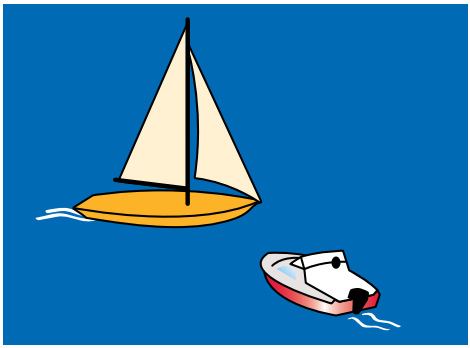
The yellow powered vessel gives way to the red powered vessel by going behind it.

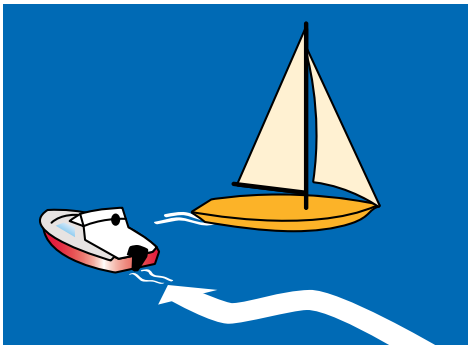
When vessels are approaching each other or overtaking, one has to give way to the other to avoid a collision. This includes vessels that are drifting or holding position without being anchored.

Which vessel gives way depends on the type of vessel and the situation.

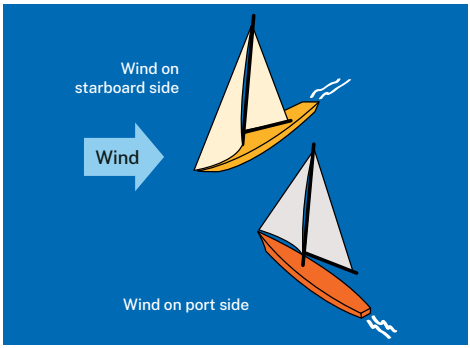
The skippers of both vessels have a responsibility to take action to avoid a collision.

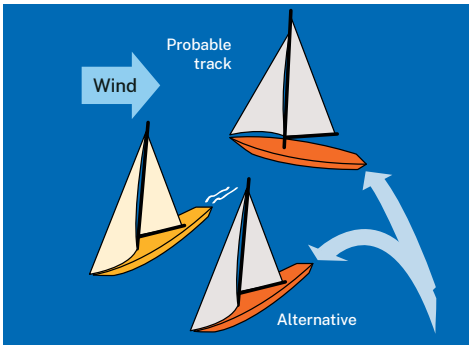
The vessel giving way must alter course or slow down to let the other vessel pass, and it must make its actions clear early. The stand on vessel must maintain course and speed, if it's safe to do so, and be prepared to take action to avoid a collision if necessary.





The red powered vessel gives way to the yellow sailing vessel.





The red sailing vessel gives way to the yellow sailing vessel by either going behind or changing tack to go the other way.

Powered vessels

Powered vessels – including personal watercraft (PWC) – must give way in the following situations.

When meeting head on, powered vessels must turn to starboard (right) and pass at a safe distance.

When crossing, powered boats must give way to the right.

A powered vessel must give way to a sailing vessel, unless it's being overtaken by the sailing vessel.

Sailing vessels

Sailing vessels – including sailboards and kiteboards – must give way in the following situations. (A sailing vessel using its engine must follow the same give way rules as powered vessels.)

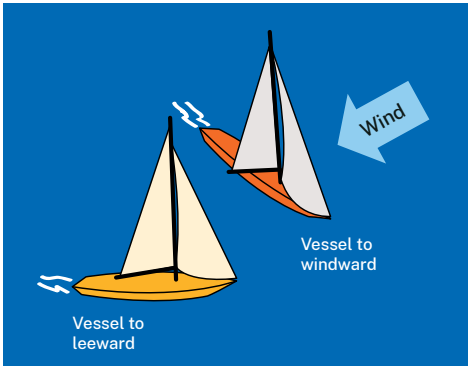
A sailing vessel on a port tack must give way to a sailing vessel on a starboard tack.

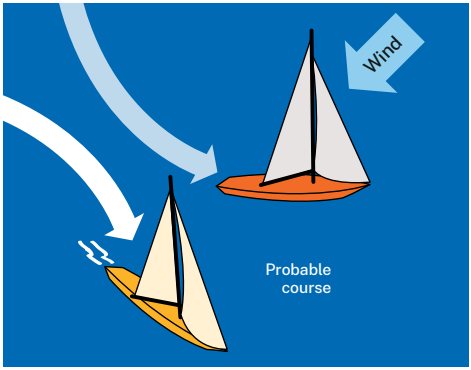
A port tack is when the wind is blowing from the port (left) side of the vessel. A starboard tack is

when the wind is blowing from the starboard (right) side of the vessel.

When both sailing vessels are on the same tack, the sailing vessel to windward – closest to where the wind is blowing from – must give way.

Sailing vessels must keep well clear of ferries on Sydney Harbour that display an orange diamond – see Sydney Harbour on page 140.





The red sailing vessel gives way to the yellow sailing vessel by altering course to windward.

Paddlecraft and rowing vessels

It's recommended that powered vessels and sailing vessels keep a proper lookout and give way to paddlecraft and rowing vessels.

Paddlecraft and rowing vessels should be aware that they sit low on the water and can be difficult for other vessels to see. You should take extra care when paddling near powered vessels and sailing vessels, and crossing channels and busy waterways. Like all other vessels, you have a responsibility to take action to avoid collision.

All vessels

All vessels – powered, sailing, paddlecraft and rowing – must give way to the following vessels.

Overtaking and priority

All vessels including powered boats, sailing vessels, paddlecraft, and rowing boats must give way to any vessel they are overtaking. When overtaking, you must keep well clear and allow the vessel being overtaken to maintain its course and speed. This rule applies regardless of the type of vessel being overtaken.



Keep well clear of big ships – they cannot always alter their course or stop quickly.

Big ships

All vessels must keep well clear of big ships and other large vessels. When a big ship has an escort vessel, do not attempt to pass between them.

If you see a large vessel, keep a safe distance. Large vessels cannot always alter their course or stop quickly. Their stern swings out wide when turning and they lose steerage if they travel too slowly.

Large vessels travel much faster than they appear to. It may also be difficult for the master to see you, even when hundreds of metres away.

You must not:

- cross a channel if you're going to get in the way of a large vessel
- cross in front of a large vessel, unless you are well clear
- pass too close behind a large vessel
- attempt to pass between a large ship and its escort vessel



You must not cross in front of a large vessel unless well clear.

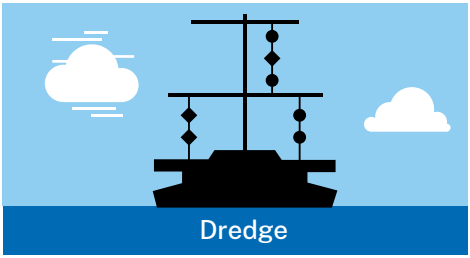
Dredges and work barges

All vessels must keep well clear of dredges and work barges, and take care when passing.

Dredges display shapes or lights to show that they have a limited ability to manoeuvre. The safe side to pass is shown by 2 diamonds. The other side is shown by 2 balls.

Work barges display a red flag and a yellow flag to signal to passing vessels to reduce their wash.

You must not create wash that may damage or unreasonably impact a dredge or work barge.



The safe side to pass a dredge is shown by 2 diamonds. The 2 balls and diamond in the top row show the vessel is restricted in its manoeuvrability.

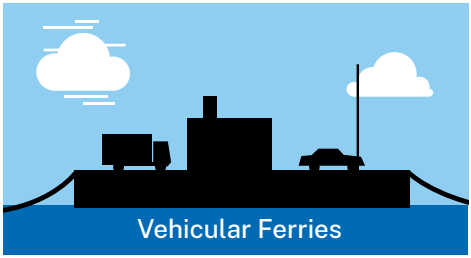
Vehicular ferries

In some areas, vehicular ferries pull themselves across channels using chains, ropes or cables. These ferries are significantly restricted in their ability to manoeuvre.

If a vehicular ferry is moving, all vessels must:

- slow down to 4 knots or less within 100m of the chains, ropes or cables
- pass at a safe distance behind the ferry, preferably when it has reached the shore, to avoid getting tangled
- turn their power off when crossing the chains, ropes or cables.

For give way rules for passenger ferries, see Sydney Harbour on page 140.



Commercial fishing vessels

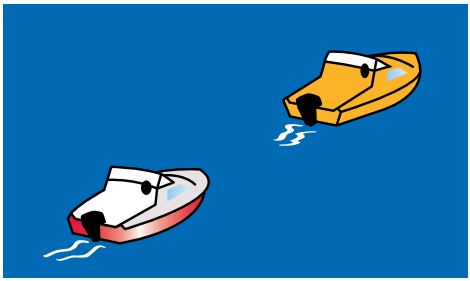
All vessels must keep well clear of commercial fishing vessels. They use fishing equipment that restricts their ability to manoeuvre. These vessels display special shapes and lights – see Identifying vessels at night on page 122.

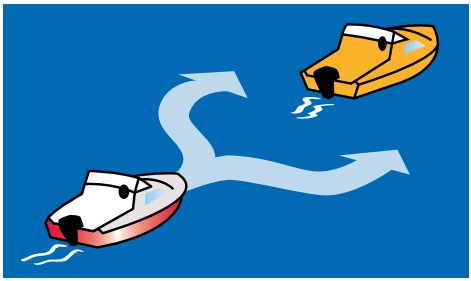
Overtaking

All vessels must keep well clear of a vessel they're overtaking.

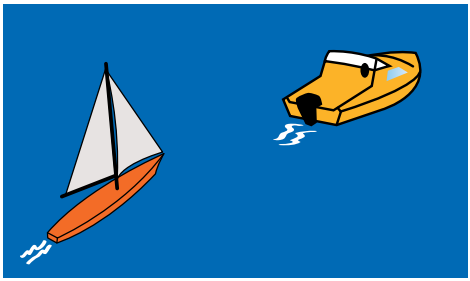
You can overtake on either side of a vessel, but only when it's safe. You must overtake at a safe distance and at a safe speed. You must not cut in front of the vessel you're overtaking.

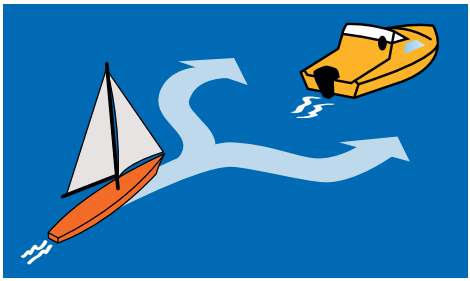
The vessel being overtaken must maintain course and speed, if it's safe to do so.





The red powerboat wants to overtake the yellow powerboat ahead. It can overtake on either the left or right.





The sailing boat must keep well clear of the powerboat when it's overtaking.

Avoiding collision

As the skipper, you must take appropriate action to avoid a collision with another vessel.

You must take action – even when the skipper of the other vessel does not. If a collision takes place, both skippers can be held responsible.

If you're in any doubt about a situation, take action early.

This could be:

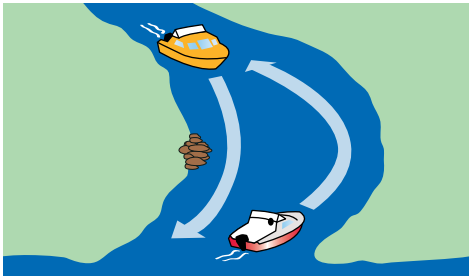
- altering your course
- changing your speed – including stopping or reversing
- passing the other vessel
- letting the other vessel pass
- making a sound signal.

Make your actions big enough to be easily and clearly seen. Avoid making lots of small alterations to your course or speed.

Channels and rivers

It's recommended that all vessels keep to the starboard (right) side in channels and rivers. This helps to make your actions clearer to vessels coming the other way and avoid the risk of collision.

If the channel or river is narrow, you must keep as far to starboard (right) side as is practical.



Keep to starboard (right) side in channels and take extra care at bends.

A channel is considered narrow when a vessel needs a large part of the channel to navigate. For example, when a vessel is restricted in its ability to manoeuvre or needs the deepest part of the channel to pass.

Always travel at a safe speed to avoid sudden dangers. Take extra care at bends, and never block a channel or river.

Safe distance

All vessels must keep a safe distance from people, other vessels, structures and the shore. A safe distance gives you enough space to avoid a collision, injury to people, or damage to things.

As the skipper, you must constantly judge your distance from other vessels and people around you. When judging, you must always consider the circumstances and conditions – for example, the weather, visibility, other vessels, your speed and any obstructions.

Minimum distances

You must always keep a safe distance. In certain situations, there are also specific minimum distances you must keep from people, other vessels, structures and the shore.

The only exceptions to keeping these minimum distances are when you're:

- supporting swimmers or divers in the water
- launching or removing your vessel from the water
- in a paddlecraft or rowing vessel – for example, a canoe, kayak, surf ski or rowing boat
- in a sailing vessel up to 5.5m long without an engine (including a sailboard or kiteboard)
- participating in Surf Life Saving NSW or lifeguard activities.

When you're in one of these vessels or situations, or if it's not possible to keep the minimum distance, you must always keep a safe distance and travel at a safe speed.

From people

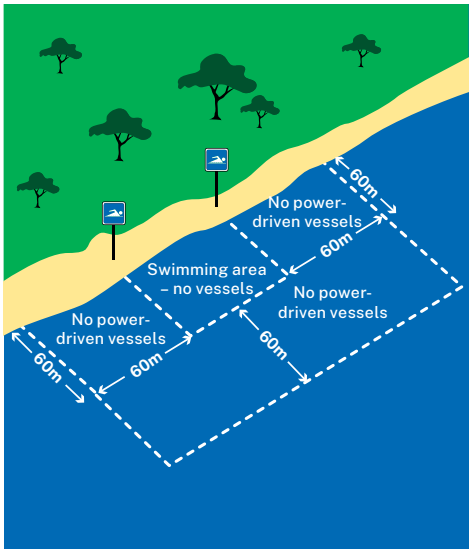
Powered vessels – including sailing boats over 5.5m long and personal watercraft (PWC) – must keep a minimum distance of **60m** from:

- people in the water, including swimming and surfing areas
- the boundaries of designated swimming areas and surf zones (marked by signs)
- a dive flag or float.

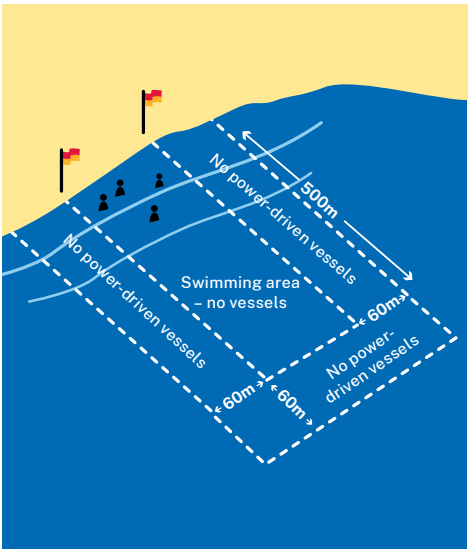
Take extra care when you're within **200m** of divers and spearfishers – they can be up to **100m** from their float or flag.



Divers can be up to 100m from their float or flag.



A swimming area extends 60m from the shore between signs for swimmers.

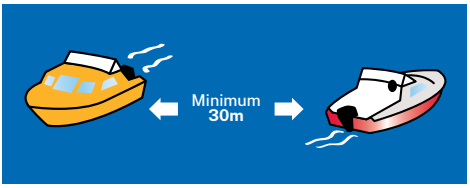


A designated swimming area in a surf zone extends 500m from the shore between surf patrol flags or signs.

From other vessels, structures and the shore

Powered vessels – including PWC – travelling at a speed of 6 knots or more must keep a minimum distance of **30m** from:

- other vessels – including when these vessels are moored or at anchor
- structures – including jetties, bridges and navigation markers
- the shore.



When you're driving a PWC, you must not drive in an irregular manner when:

- you're within **200m** of shore within a PWC restriction zone, or
- you're within **200m** of shore in all waterways, when one or more dwellings are visible from the water and located within **200m** of shore.

Driving in an irregular manner includes:

- driving in a circle or other pattern
- weaving or diverting
- surfing down or jumping over or across a swell, wave or wash.



From naval vessels

All vessels must keep a minimum distance from the 'moving exclusion zones' around naval vessels. When a naval vessel is underway, you must keep a minimum distance of:

- **200m** from the bow
- **60m** from the side.

When a naval vessel is at anchor, the minimum distance is **60m**.

When towing

There are minimum distances you must keep when towing. These minimum distances apply to your vessel, your towing equipment and the person being towed – see Towing a person on page 101.

From whales and dolphins

You must also keep minimum distances from whales, dolphins and other marine life – see Marine mammals on page 171.

Safe speed

All vessels must travel at a safe speed at all times. A safe speed gives you enough time to stop or turn your vessel to avoid any sudden danger, such as a collision, injury to people, or damage to things.

Most NSW waterways have no speed limit. However, you must always travel at a safe speed.

Judging a safe speed

A safe speed depends on many variables. These include the conditions, time of day, type of vessel, and your experience driving it. As the skipper, a safe speed is something you must constantly judge and adjust as you travel.

When judging your vessel's speed, you must always consider these circumstances and conditions:

- visibility – for example, rain, fog, mist, smoke or glare
- other vessels – on busy waterways and near moored or anchored vessels, commercial vessels displaying special signals, and large vessels that are restricted in their manoeuvrability
- manoeuvrability of your vessel – in particular the distance it takes to stop or turn. Your manoeuvrability is affected by your speed, the wind and current, and the vessel's design
- at night (between sunset and sunrise) – potential hazards may not be lit or easily seen. Background lights on the shore – or even lights on your own vessel – can make it hard to see other vessels
- navigation hazards – such as unmarked or unlit hazards, and signs, buoys, marks or lights that have moved or been damaged
- shallow water – water depth can vary and change frequently.

In these circumstances or conditions you may need to slow down to travel at a safe speed.

If you drive at a speed that's not safe for the conditions, your licence can be cancelled and your vessel can be taken away.

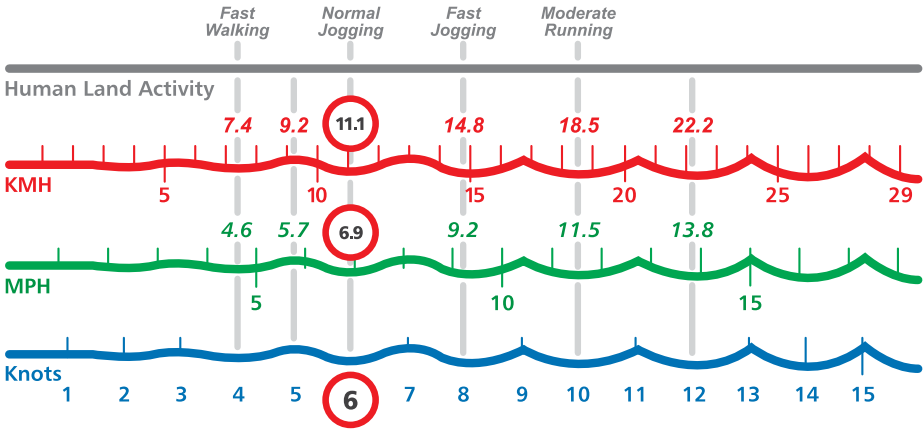
Speed limits

Some areas do have speed limits. Where there's a speed sign, you must not travel faster than the speed shown on the sign.

Even when there's a speed limit, you must travel at a safe speed at all times. This may mean going slower than the speed limit.

Speed limits are in knots, in the direction shown by arrows on the sign. They are usually 4 or 8 knots, but can also be 6, 10 or 15 knots.

There are also speed limits when towing – see Towing a person on page 101.



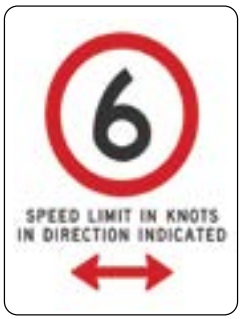


knots or more, keep at least 30 m clear of other vessels, land or structures.
Slow down and minimise your wash

Comparing knots to land activities and other speed measurements.



Speed limit sign
(4 knots is about 7km/h or a fast walking speed).



Speed limit sign
(6 knots is about 11km/h or a jogging speed).



Speed limit sign
(15 knots is about 28km/h or a fast running speed).

The Sydney Harbour Bridge Transit Zone has a 15 knot speed limit.

Alcohol limits

You must not drive a vessel when your blood alcohol concentration (BAC) is over the legal limit or if you're under the influence of illegal drugs.

Driving under the influence of alcohol or any drug puts everyone on the water at risk.

It's recommended that passengers also stay under the legal limit. Studies show that passengers are just as likely as drivers to be involved in incidents – such as falling overboard – as a result of drinking alcohol. Passengers may also need to respond quickly in a collision, or if the vessel capsizes or is swamped.

When you're on the water, alcohol can affect your coordination, judgement, vision, reaction time and balance more than when you're on land. Waves, motion, vibration, engine noise, weather, wind and spray can all multiply the effects of alcohol.

If you end up in the water, you're more likely to drown if you've been drinking alcohol.

Blood alcohol concentration (BAC) limits

BAC limits apply to:

- the driver – anyone steering or exercising control over a vessel's course or direction
- the observer in a vessel that's towing a person
- anyone being towed by a vessel.

As the skipper, you must not let another person drive your vessel if you believe they're over the BAC legal limit or under the influence of illegal drugs.

The BAC legal limit depends on your age and whether you're driving a recreational or commercial vessel.

Age and vessel	BAC limit
Aged under 18 (all vessels)	0.00
Aged 18 and over (recreational vessel)	Under 0.05
Aged 18 and over (commercial vessel)	Under 0.02

It's very difficult for you to estimate your own BAC, even if you know how many drinks you've had. Your size and weight, how tired you are, and variation in alcohol servings can all affect your BAC.

The only way to be sure you're under the limit is to not drink alcohol at all.

If you do intend to drink, it's recommended that you have a plan, such as a designated skipper to get you, your passengers and your vessel home.



Skippers must stay under the alcohol (BAC) limit and it's recommended that passengers do, too.

Random testing

Police regularly monitor NSW waterways. They can stop you for random breath testing (RBT) and random drug testing (RDT) when your vessel is underway, including when it is drifting.

If you're over the legal limit, police can give you a court attendance notice. If a court convicts you of an offence, your licence can be cancelled.

It's recommended that you stay under the legal limit when moored, berthed or anchored, just in case you need to move your vessel.

People on board

As the skipper, you're responsible for making sure your vessel does not have more people on board than it's designed to carry. Overloading can cause a vessel to become unstable, which can result in capsize or swamping.

You're also responsible for making sure people on board behave safely. All vessels must carry enough approved lifejackets for everyone. At times of heightened risk, passengers must wear a lifejacket when you tell them to.

On powerboats

You must follow the capacity shown on the Australian Builders Plate (ABP) if your vessel has one. The capacity is the maximum number of people the boat can carry. The ABP also shows the maximum weight (load), including people and equipment. See Loading your vessel on page 73.

Powerboats must also have a safety label. If your powerboat has an Australian Builders Plate, copy the maximum number of passengers on the ABP onto your Safety Label. If your powerboat does not have an ABP, use the table on the back of the safety label which shows how the capacity is calculated for calm waters:

- each person aged over 12 (adult) is counted as 90kg, which includes an allowance for their gear
- each child aged between 1 and 12 years is counted as half an adult
- children aged under 1 year are not counted.

For example, if the capacity is 4 people, this would be the equivalent to 3 people aged over 12 years and 2 children under 12 years.

Although children aged under 1 year are not counted towards the capacity, you must carry lifejackets for them – see Children and lifejackets on page 42.

Make sure you consider the weight of the equipment you're carrying. For example, if you have diving gear, you may need to take fewer people to avoid overloading.

It's recommended that you reduce the load in poor conditions and on open waters.

On personal watercraft (PWC)

A PWC designed to carry more than 2 people has an ABP, or similar plate, showing its capacity. Children aged between 1 and 12 years count as an adult on a PWC.

The PWC owner and driver are responsible for making sure the PWC does not have more people on board than it's designed to carry.

On other vessels

The capacity and load for other vessels – for example, sailing vessels, paddlecraft and rowing vessels – are set by the manufacturer. You can find this information on the manufacturer's website or in the printed booklet supplied with the vessel.

Keeping within a powered vessel

Passengers on board a powered vessel (including sailing boats using an engine) must not extend any part of their body beyond the sides or bow while the vessel is underway. This includes:

- being on the bow in a position that increases the risk of falling overboard ('bow riding')
- sitting with their legs hanging over the side of vessel
- sitting on, riding on or hanging onto a swim ladder, swim platform or transom attached to a vessel
- holding onto the stern while the vessel is underway ('teak surfing').

As well as the passengers themselves, the skipper is also responsible for keeping passengers within the vessel when it's underway.

The exceptions to this rule are when a person is:

- doing something related to the operation of the vessel – for example, hoisting sails, anchoring, mooring or casting off
- fishing while the vessel is at anchor, moored or drifting
- doing something to secure the safety of a person or property.

People must never climb a vessel or attach themselves – or help attach another person – to a vessel without authority or consent. The only exception is in an emergency or to avoid immediate risk of injury or damage.



'Wash' is the waves and wake created by a vessel moving through the water.

Wash

You must not create excessive wash with your vessel when using NSW waterways. Wash is the wave effect or wake created by a vessel moving through the water.

Excessive wash is wash that damages or unreasonably impacts on any:

- other vessel, including when moored or at anchor
- bank, shore or waterside structure
- construction or other works in progress
- dredge or floating plant.

As the skipper, you're responsible for any damage your vessel's wash causes.

Minimise your wash

Wash can cause and contribute to a range of problems – from shore erosion to damage to seawalls and pontoons. It can also be dangerous and a nuisance to other vessels, especially to smaller vessels, and people in the water. Excessive wash can damage aquatic vegetation, including seagrasses, reeds and mangroves.

Most powered vessels create the greatest wash when 'half on the plane', less when planing, and even less when going at a slow idle speed.

When you're close to other people, other vessels or the shore, always aim to move quickly to or from planing speed. This minimises excessive wash. When approaching a busy beach or anchorage, slow down to a safe speed well in advance. This helps avoid your wash disturbing others.

Look behind your vessel regularly to check the wash and its impact on others and the shore. Slow down if necessary.

Follow wash signs

'Minimise Wash', 'Reduce Wash' and 'No Wash' signs are placed in areas at more risk of damage from wash. For example, damage to the shore or other vessels, or injury or annoyance to people.





When you see these signs, travel at a speed that creates minimal wash. Check your wash and slow down if you need to. If your wash is causing other boats to rock, or is causing waves to break or slap on the shore, you're creating too much wash and need to slow down.

Even if you're travelling at the speed limit shown on a sign, you may still create excessive wash. You should slow down to reduce your wash.

Bridges and navigation aids

It is illegal to secure any vessel to any navigation aid or bridge without lawful authority.



Towing

Towing a person 101
Towing a trailer 107

Towing a person

Towing involves a vessel pulling a person and watersport equipment with a rope (or line) to skim on the surface of the water. Towing activities include:

- water skiing
- kneeboarding or aquaplaning
- parasailing (open parachute)
- wakeboarding
- riding on an inflatable inner tube, raft or biscuit.

Towing a person with a vessel is a high-risk activity. It's a leading contributor to death and serious injuries on NSW waterways. When you're towing a person or you're near someone being towed, take extra care. Follow the rules to keep everyone safe while having fun.

See the 'What to Know Before You Tow' brochure at **nsw.gov.au** for detailed information about the rules and safety when towing.

The vessel

Boats

There must be a driver and an observer on a boat when towing.

The boat must:

- be registered, if applicable – see Registering a vessel on page 23
- have a safety label (for powered vessels, not including sailing boats with an engine)
- carry the required safety equipment, including lifejackets.

Personal watercraft (PWC)

There must be a driver and an observer on a PWC when towing. The only exception is tow-in surfing, where there can be just a driver. In this case, you must follow the special rules for tow-in surfing without an observer, including carrying the required safety equipment.

The PWC must:

- be registered
- have a PWC behaviour label
- be designed to carry 2 or more people.

The tow rope

The tow rope must be long enough for the person being towed to be a minimum of **7m** behind the vessel.

This is to avoid any risk from carbon monoxide emissions or contact with the propeller. The only time the rope can be shorter is when you've considered and reduced the risks associated with carbon monoxide emissions and the propeller is forward of the back of the hull.

Avoid a heavy or sudden load on tow ropes, for example, when the tow rope is slack and the vessel speeds up quickly. This can cause serious injuries to people on the vessel or in the water.

The driver

As the driver of a boat that's towing a person, you must:

- have a boat licence – if driving over 10 knots or more in a powerboat or a sailing boat using its engine
- wear a lifejacket when required – see When to wear a lifejacket on page 33
- be under the alcohol legal limit.

As the driver of a PWC when towing, you must:

- have a PWC licence
- always wear a lifejacket
- be under the alcohol legal limit.

As the driver, you're responsible for:

- the safety of the vessel
- the safety of the person being towed, including making sure they're wearing a lifejacket
- keeping a proper lookout
- making sure the tow rope is the correct length
- making sure the tow rope or equipment does not cause any danger or obstruction to yourself or others
- keeping both the vessel and the person being towed a minimum distance from people, other vessels, structures and land.

As the driver, you must never:

- tow more than 3 people at one time, or
- pull a person through the water while they are holding onto the back of a vessel ('teak surfing').

The observer

There must also be an observer when towing so the driver can concentrate on driving and keep a proper lookout.

As the observer, you must:

- have a boat licence or PWC licence if you're aged under 16
- wear a lifejacket on a boat when required – see When to wear a lifejacket on page 33
- always wear a lifejacket on a PWC
- be under the alcohol legal limit
- not have any hearing, sight or other medical condition or disability that could affect your ability to observe
- be familiar with the standard hand signals – see 'Towing hand signals' at **nsw.gov.au**
- keep a proper lookout
- always face backwards to watch the person being towed.

As the observer, you're responsible for:

- watching the person being towed
- communicating with the person being towed

- reporting any safety issues to the driver
- telling the driver about other vessels approaching from behind.



The observer must always face backwards to watch the person being towed.

The person being towed



Everyone being towed must wear a lifejacket.

As the person being towed, you must:

- always wear a lifejacket, including tow-in surfers and wakesurfers
- be under the alcohol legal limit
- keep a minimum distance from people, other vessels, the shore and structures
- return to the shore safely by keeping well clear of people on the shore and in the water, and approaching the shore at a safe speed.

Safe speed

You must always drive at a safe speed when towing.

You must not drive faster than:

- **10 knots** if you're aged 16 or under (unless exempt as part of an organised event)
- **60 knots** when the person being towed is aged under 18
- **60 knots** when anyone on the vessel is aged under 18.

Always travel at a safe speed when returning the person to shore. When a person returns to the shore with a 'fling finish' or 'whip turn' too fast it can be extremely dangerous, especially if the person is less experienced. This has led to death and serious injuries. To do this safely, both the driver and the person being towed need considerable skill and experience.

If it's safe, it's recommended that you stop the vessel and bring the person on board.

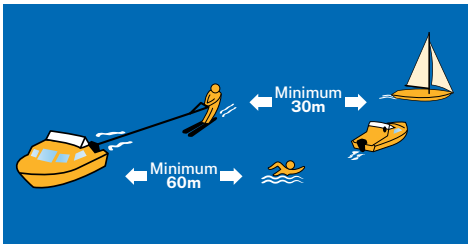
Safe distance

As the driver, you must keep the vessel, towed equipment and person being towed a minimum distance of:

- **60m** from people in the water, including swimming and surfing areas
- **60m** from the boundaries of designated swimming areas and surf zones (marked by signs)
- **60m** from a dive flag or float
- **30m** from other vessels, the shore and structures when driving faster than 6 knots or more.

If these distances are not possible, keep a safe distance and safe speed.

Structures include jetties, bridges and navigation markers. Other vessels include both moving and moored or anchored vessels.



You must keep a minimum distance from other vessels and people in the water.

If towing aerial equipment – for example, for parasailing – you must keep a minimum distance of **200m** from:

- other vessels
- cables, wires and pipelines
- bridges and other structures.

You must keep these distances when approaching other vessels or people from any direction.



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

This includes when following another vessel.

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

When towing with a PWC, you do not have to follow the distance restrictions for driving in an irregular manner.

Turning

When towing near other vessels, make sure you have enough room to turn so the person being towed does not collide with oncoming vessels.

Take extra care when turning. The person being towed will go wider, and they may have no control over the towing equipment, especially if they're riding on an inflatable inner tube, raft or biscuit.

This is very important when towing on narrow rivers, when there are trees or snags in the water, and when towing children.

When you can tow

You must never tow at night (between sunset and sunrise).

Where you can tow

It's strongly recommended that you only tow where you can keep a minimum distance, for example, in more open and less congested areas.

Always keep a lookout for floating logs, shoals, snags or other unexpected hazards and structures in the area.

When towing on coastal and inland rivers, be aware of cold water, fast currents and riverbanks.

In some areas, you must not tow. This may be because of the excessive wash caused by the vessel or nearby hazards. You must follow any signs showing what activities are not allowed. See Exclusion and restriction zones on page 141.

Tow-in surfing

Tow-in surfing is when a PWC tows a person on a surfboard onto a breaking wave. You can only do this in open waters at surf breaks where there are no other surfboard riders.

You can drive your PWC without an observer when tow-in surfing. In this case, you must follow these special rules.

Both the PWC driver and the tow-in surfer must:

- have a PWC licence
- have a first-aid certificate
- wear a lifejacket.

The PWC driver must:

- only tow 1 person at a time
- give way to all other water activities
- keep a minimum distance of **200m** from all vessels and people in the water
- carry the required safety equipment.

Wakeboarding and wakesurfing

Wakeboarding is when a powered vessel pulls a person on a wakeboard with a rope. They cross the wake to perform aerial activities.

Wakesurfing is when a person on a wakesurf or skim board trails behind a powered vessel, riding the vessel's wake. They're not pulled by a rope from the vessel.

The driver must make sure the wakeboarder or wakesurfer is a minimum of 7m from the centreline of the vessel's stern, whether or not using a rope. The only exception is when the driver has considered and reduced the risks associated with carbon monoxide emissions and the propeller is forward of the back of the hull.

Wakeboarders and wakesurfers must always wear a lifejacket.

The driver should take extra care to minimise the impact of wash on other vessels and the shore.



When undertaking aerial displays, choose an area where the boat's wash will not have an unreasonable impact on other waterway users or the shore.

Towing a trailer

Take extra care when driving a vehicle towing a trailer. You need more knowledge and skill than for regular driving.

Learner drivers must not tow a trailer. Provisional P1 drivers must only tow light trailers that weigh less than 250kg when empty.

When towing, you must:

- not tow more than one trailer at a time
- not have any person travelling in the trailer or vessel you're towing
- control the movement of the trailer.

If your vehicle and trailer is over 7.5m long, you must stay a minimum of 60m behind other long vehicles (over 7.5m). The only exceptions to this rule are when:

- driving on a multi-lane road
- driving on a road in a built-up area
- overtaking.

See 'Towing' at **nsw.gov.au**



Check road rules and requirements before towing a trailer.

Dimension limits

There are dimension limits for light vehicle and trailer combinations on NSW roads. These limits are for overall height, width and length, and rear overhang.

You may be eligible for an exemption if the length or weight of your vessel causes your vehicle and trailer combination to go over these limits – for example, when carrying a yacht, dragon boat, outrigger canoe, kayak or surf ski. See 'Light vehicle road access' at **nsw.gov.au**



Powerboat passing a port mark (red) while heading downstream.

Navigation marks, lights and sounds

Navigation marks	109
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Navigation marks

Navigation marks help you safely navigate a waterway. They show you how to travel through a channel or enter a port, and how to avoid hazards.

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.

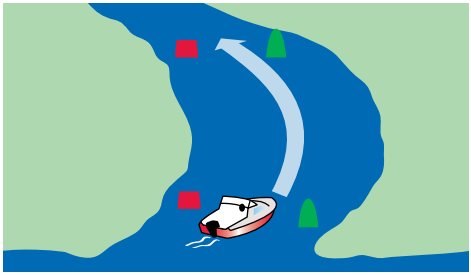
Use these navigation marks in combination with your maps and charts to navigate safely.

Lateral marks

Port marks and starboard marks are called lateral marks. They define the sides of a channel or waterway.

Lateral marks in pairs

When port marks and starboard marks are near each other – in a pair – you should travel between the two.





Port marks (red) define one side of the channel. They have a can-shaped topmark or buoy. If lit, they display a flashing red light.



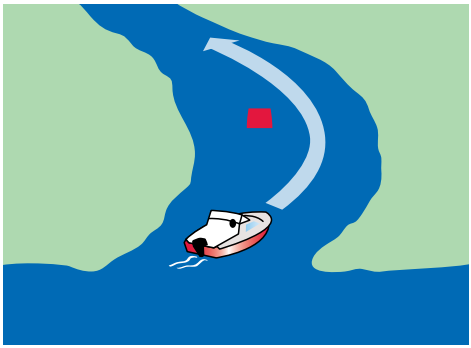
Starboard marks (green) define the other side of the channel. They have a cone (triangle) topmark or buoy. If lit, they display a flashing green light.

Single lateral marks

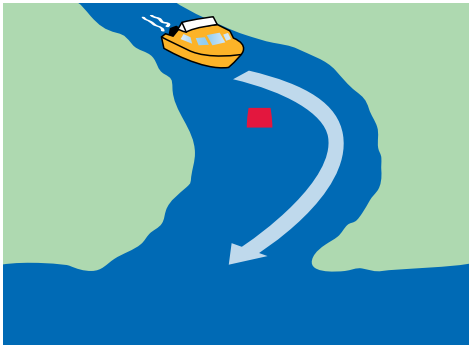
If there's a single mark, the safe side to pass depends on whether you're travelling upstream (away from the sea) or downstream (towards the sea).

Single port marks (red)

When you travel upstream, keep port marks on your port (left) side.

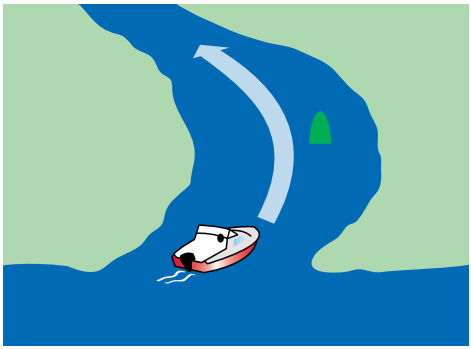


When you travel downstream, keep port marks on your starboard (right) side.

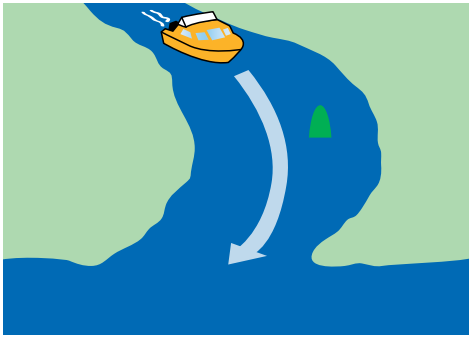


Single starboard marks (green)

When you travel upstream, keep starboard marks on your starboard (right) side.



When you travel downstream, keep starboard marks on your port (left) side.



Use your vessel's sidelights to help you remember: green to green when going upstream, green to red when seas are ahead.

Cardinal marks

Cardinal marks show the safe side to pass hazards, such as rocks, reefs or shallow water.

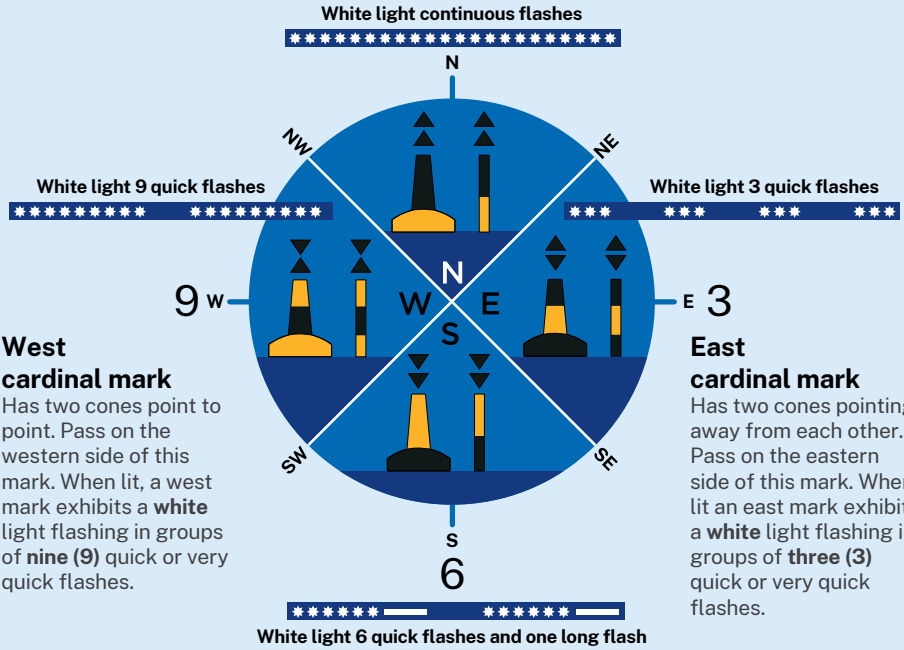
For example, a north cardinal mark shows that the safe water is to the north. Specifically, the safe water is in the quadrant between NW (north-west) and NE (north-east) of the north cardinal mark.

The arrangement of the cones and black and yellow bands show which cardinal mark it is – north, south, east or west.

If you remember the coloured bands, you can read a cardinal mark, even if the cones are missing or hard to see from a distance.

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.

North cardinal mark

Pass on the northern side.

Both cones point up, so the black bands are above the yellow bands.

To remember, think of a compass: north is up.

East cardinal mark

Pass on the eastern side.

One cone is pointing up and the other is pointing down, so the black bands are on the top and bottom with yellow in the centre.

To remember, 1 cone up and 1 cone down looks like an egg: 'e' is for egg, 'e' is for east.

South cardinal mark

Pass on the southern side.

Both cones are pointing down so the black band is on the bottom and yellow is at the top.

To remember, think of a compass: south is down.

West cardinal mark

Pass on the western side.

Both cones are pointing in towards each other, so the yellow bands are at the top and bottom with black in the centre.

To remember, both cones pointing in towards each other looks like a wineglass: think 'w' for wine glass, 'w' for west.

Lights on cardinal marks

Cardinal marks have flashing lights so that you can read them at night (between sunset and sunrise) or at times of restricted visibility.

A good way to remember the light flashing pattern is with a clock face:

- N (north): continuous
- E (east): 3 flashes
- S (south): 6 flashes and 1 long flash
- W (west): 9 flashes.

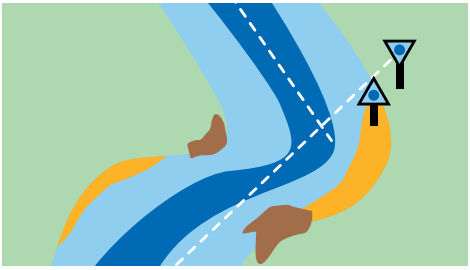
Lead marks

Lead marks (leads) guide you into a port or through sections of a waterway to avoid hazards. They are commonly used for crossing coastal bars and in shipping ports.

Lead marks are made up of 2 marks: one in the foreground and the other behind and above it. They are usually lit at night.

To keep your vessel in safe water:

- line up the 2 marks, one above the other
- travel directly towards or away from the lined-up marks.



At minor ports, lead marks are usually blue triangular or vertical lights mounted on bright orange or red triangular boards.

In shipping ports, lead marks are usually bigger and more varied. For example, in Port Jackson the lead marks for the eastern channel are white towers with fixed red lights.

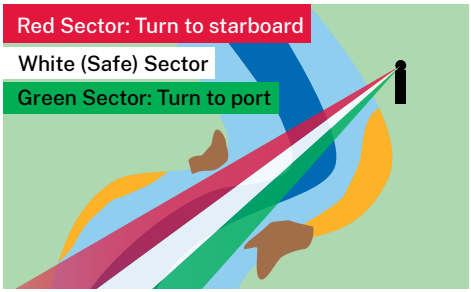
All lead marks and sector lights are shown on maps and charts. For your safety, check your chart before travelling on unfamiliar waterways.

Sector lights and directional lights

Similar to lead marks, sector lights guide you into a port or through sections of a waterway. They use coloured lights to show the safe 'sector'.

For example, sector lights on the coast may display 1 colour to vessels coming from the south-east and another colour to vessels coming from the north-east of the light.

Sometimes there are 3 different sectors, each with a different colour.



When a sector light is used at the entrance to a port – for example, Port Macquarie – it's called a directional light.

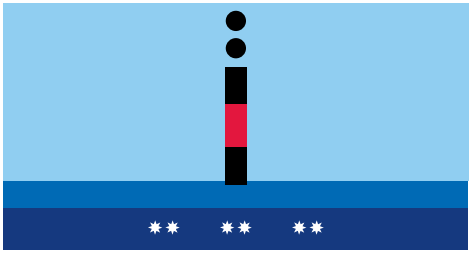
A directional light displays red, white and green over a very narrow sector. It can be seen during the day and at night.

When you're approaching a directional light and you see a:

- **red light** – you're too far to the left
- **green light** – you're too far to the right
- **white light** – you're in safe water and can travel directly towards the light.

Isolated danger marks

An isolated danger mark shows a specific danger – for example, a wreck – surrounded by generally safe water.



You can pass an isolated danger mark on any side, but not too close.

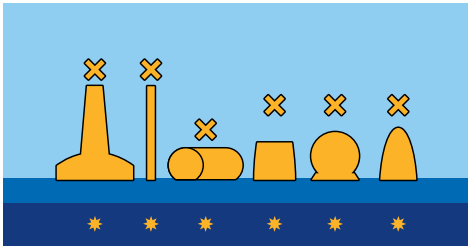
The mark is black with a red band in the middle. It has 2 round black topmarks. If lit, it displays a white light flashing in a pattern of 2 flashes.

Special marks

These yellow marks show special features or areas, such as:

- tide poles – graduated posts that measure the rise and fall of the tide
- spoil grounds – areas for waste, such as dredged material
- underwater pipes.

They may have a yellow 'X' topmark. If lit, they display a yellow light which may flash in any pattern.



Special marks may be used as lateral marks. If they have a can-shaped or cone (triangle) buoy, pass them as you would a lateral mark:

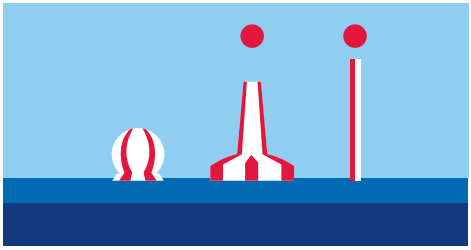
- **can:** port mark
- **cone:** starboard mark.

Safe water marks

These marks are used to show there is navigable water all around them. They may be used to separate traffic in large shipping channels. Safe water marks are not common in NSW.

Safe water marks have red and white vertical stripes. They may be round, pillar-shaped or spar-shaped, and may have a red, round topmark.

If lit, they display a white flashing light.

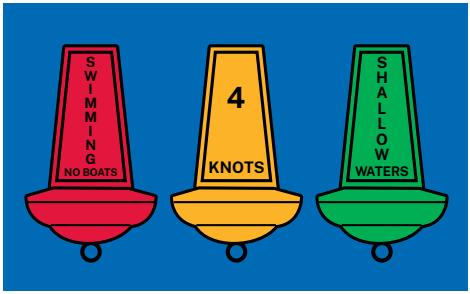


Where a safe water mark is used to show the centre line or turning point of a shipping channel, keep the mark on your port (left) side when passing it.

Aquamark minibuoys

Aquamark minibuoys are used in some areas instead of conventional marks.

They are small red, yellow or green buoys, and often have messages on them that you must follow.



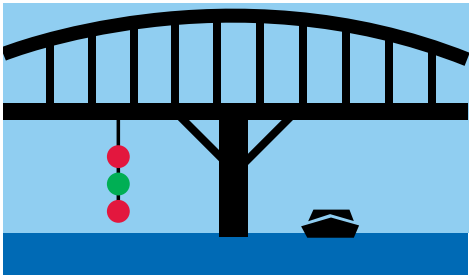
Channel blocked or closed signals

These signals are used to show when a:

- bridge span is blocked
- channel is blocked
- port is closed.

You will see 3 shapes in a vertical line, from top to bottom: ball, cone, ball.

At night they are lit, from top to bottom: red, green, red.



If you see these marks, avoid travelling in that part of the channel.



Understanding navigation buoys, marks and lights helps you safely navigate a waterway.

Lights to display on your vessel

The navigation lights you display on your vessel help keep everyone safe on the water. They show what size and type of vessel you're in, whether you're at anchor or underway, and your direction of travel.



Vessels – including powered vessels, sailing vessels, canoes, kayaks and rowing boats – need lights to be seen.

You must display navigation lights:

- at night (from sunset to sunrise)
- at times of restricted visibility, such as when there's fog, smoke or glare.

The types of navigation lights you must display depend on your vessel type and size.

Make sure that background lights or any other lights you use – such as spotlights – do not interrupt your night vision (or anyone else's).

It's recommended that all vessels carry a torch, where practical. This is in case you're caught out on the water at night. For example, if you're in a kayak and a strong current prevents you from returning to the shore before sunset.

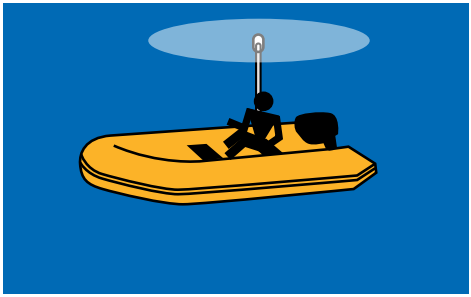
Types of lights

All types of navigation lights have a range of visibility. This is the distance the light is visible from at night.

All round white light

An all round white light is a white light displaying an unbroken light over an arc of the horizon of 360 degrees. This light should not be obstructed by any part of the vessel or person.

Minimum range of visibility: 2nm



Masthead light

A masthead light is a white light placed over the centreline (bow to stern) of a vessel, displaying an unbroken light over an arc of the horizon of 225 degrees. It is fixed to display from anywhere ahead to just behind the beam of the vessel.

Minimum range of visibility:

- vessels up to 12m long: 2nm
- vessels between 12 and 20m long: 3nm.



A powerboat with all round white light over the centreline, and sidelights.

Sidelights

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

On vessels up to 20m long, the sidelights may be combined in one light unit, carried on the centreline (bow to stern) of the vessel.

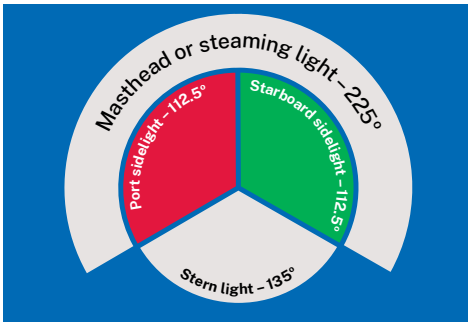
Minimum range of visibility:

- vessels up to 12m long: 1nm
- vessels between 12 and 20m long: 2nm.

Sternlight

A sternlight is a white light placed near the stern, displaying an unbroken light over an arc of the horizon of 135 degrees. It is fixed to display from behind the vessel.

Minimum range of visibility: 2nm.



Combined lantern (tricoloured)

The combined lantern (tricoloured) is sidelights and sternlight combined at the top of the mast of a sailing boat.

It's recommended that you do not use a combined lantern where there are lots of lights on the shore, for example, on Sydney Harbour. In these areas, use sidelights and a sternlight to make your vessel more visible.

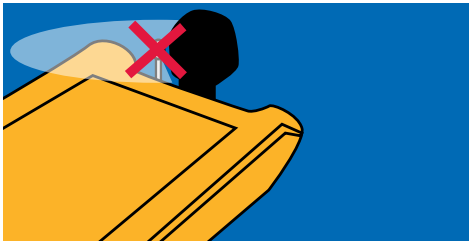
Placement of lights

Navigation lights should be installed correctly so they display the appropriate arc of light and the minimum range of visibility. They should not be obscured by the vessel's superstructure – such as the cabin – or occupants, or interfered with by deck lights. This reduces the vessel's visibility and is dangerous.

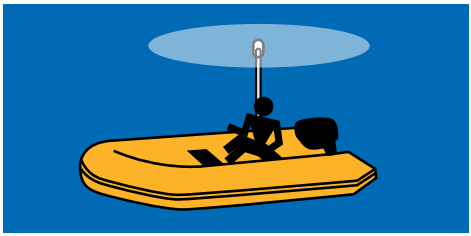
It's recommended that lights are fitted by the vessel's manufacturer or an authorised person. Smaller vessels have a number of options, including bracketed or combination suction-capped lights. These are available from marine dealers.



Make sure sidelights are installed pointing out across the water. They should not point straight up or only forward.



The masthead and/or all round white light must be fitted (if practical) on the centreline (bow to stern) of the vessel. It must be mounted so that it's above any obstructions – such as the cabin or occupants – and so that it does not shine directly into the driver's eyes.

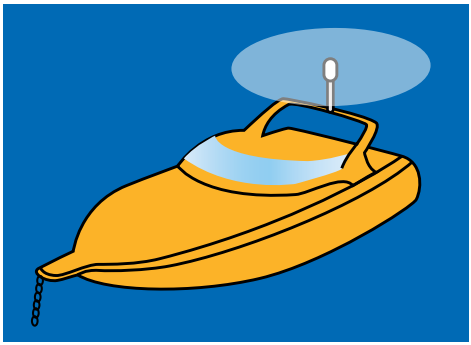


Lights to display at anchor

When at anchor, all vessels up to 50m long must display an all round white light in a place where it can best be seen.

When at anchor in a busy area, keep a proper lookout and display other lights – such as deck lights or cabin lights – to make sure you're seen.

Be aware that if your vessel displays sidelights when underway, you must switch those lights off when your vessel is at anchor.



Lights to display when underway

The lights for a vessel underway depend on whether it's a powered or sailing vessel, and its size. This is so that other vessels can identify the type of vessel, how large it is, the direction it's moving and how fast.

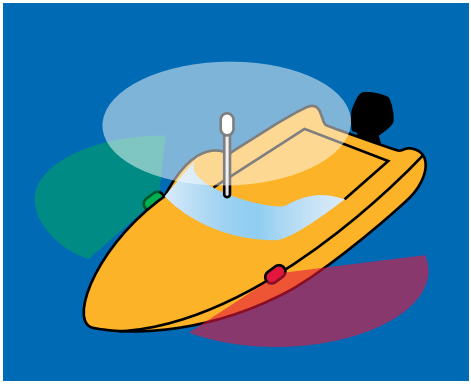
If your vessel is drifting, or making use of a GPS-guided electric engine to hold position, it's underway.

Powered vessels

Most powered vessels must display navigation lights. This includes sailing vessels using an engine.

Personal watercraft (PWC)

PWC do not have to carry lights, because they must not be on the water at night (between sunset and sunrise). However, it's recommended that you carry a torch when driving a PWC in case you're caught out at times of restricted visibility.



Up to 7m long

If the vessel's maximum speed is 7 knots, it must have an all round white light and, if possible, separate and/or combined sidelights.

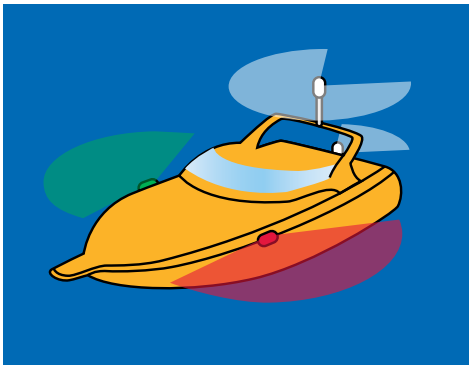
If the vessel can travel at a speed faster than 7 knots, the same rules as for powered vessels up to 12m long apply.

Up to 12m long

Must have separate or combined sidelights with either:

- a masthead light and a sternlight
- an all round white light.

The masthead or all round white light must be a minimum of 1m above the sidelights.



Between 12m and 50m long

Must have a masthead light a minimum of 2.5m above the gunwale and either:

- separate sidelights and a sternlight
- combined sidelights and a sternlight.

Combined sidelights must be a minimum of 1m below the masthead light.

Sailing vessels

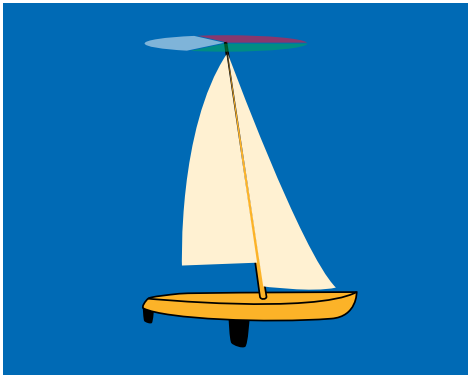


Up to 7m long

Must display sidelights and a sternlight, if possible.

If it's not possible to attach lights to the vessel – for example, on a small dinghy – use your torch.

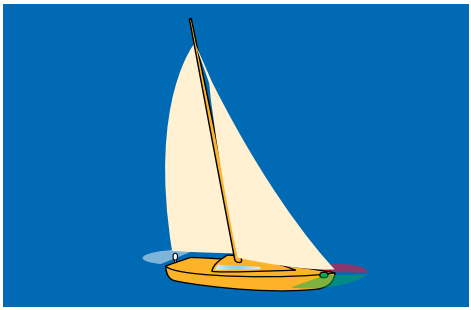
Shining your torch on your sails or deck can help other vessels see you, and could help prevent a collision



Between 7m and 20m long

Must display either:

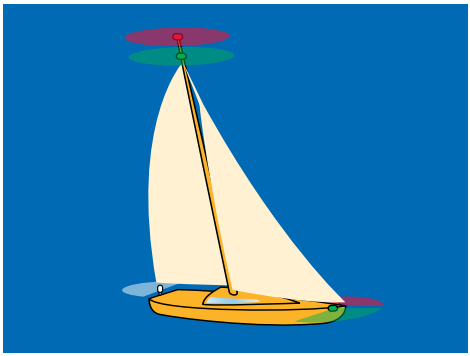
- a combined lantern (with sidelights and a sternlight) at or near the top of the mast
- separate sidelights and a sternlight.



Over 20m long

Must display sidelights and a sternlight.

Must not carry a combined lantern.



Optional lights

A sailing vessel of any length with sidelights and a sternlight (but not a combined lantern) may also carry 2 all round lights in a vertical line at or near the top of the mast. The upper light should be red and the lower light should be green.

Sailing vessels using an engine

Must follow the same rules as powered vessels.

Paddlecraft and rowing vessels

Paddlecraft and rowing vessels must carry a torch or lantern displaying a white light. The light must be ready to display in time to prevent a collision.

This includes rowing shells and rowing boats, kayaks, canoes and surf skis, and powerboats and sailing boats being rowed.

If you're using a paddlecraft, it's recommended that you wear a head torch.

Over 4m long

It's recommended that paddlecraft and rowing vessels over 4m long also display:

- 2 all round white lights, one at each end of the vessel.

The lights can be continuous or a combination of continuous and flashing.

These recommended additional lights are set out in the 'Code of Conduct for Rowing' at **nsw.gov.au**

Check your lights before heading out

Before going out on the water at night (between sunset and sunrise) or at times of restricted visibility:

- Check switches are on
- Check navigation lights are on and working
- Look at each light to check it is on
- Turn off all other lights and dim electronic displays so they do not reduce your night vision.

Identifying vessels at night

To stay safe on the water at night or at times of restricted visibility, you need to be able to recognise lights on other vessels. These lights help prevent collisions.

A vessel's navigation lights tell you:

- whether it's at anchor or underway
- the direction it's travelling
- the vessel type and size.

Keep a lookout for lights that may not be bright, such as those on smaller vessels. These vessels may only display a single white light or a torch light.

A single white light can also mean a vessel is at anchor, or travelling away from you. If you see a white light, be aware that something is ahead of you and prepare to take appropriate action.

If you see a lot of lights, or lights up high, it's probably a large vessel, such as a ship or commercial fishing boat. Keep well clear.

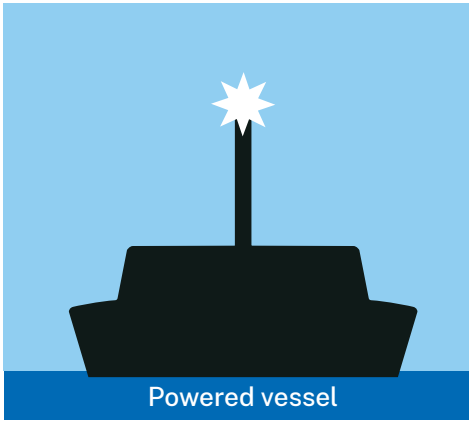


Lights on your vessel help people to see you at night and know what you're doing.

On the next pages are some examples of navigation lights you may see.

Vessel at anchor

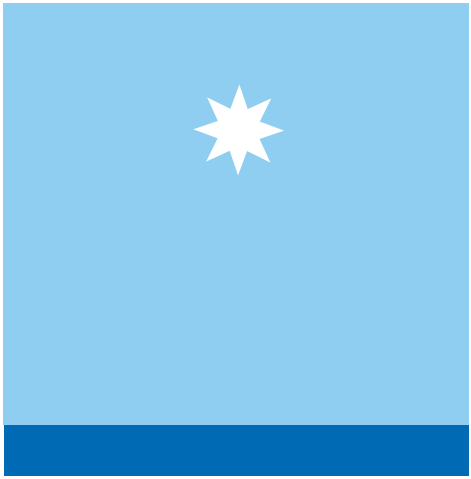
All round white light.



Any vessel up to 50m long at anchor.

Small vessel underway

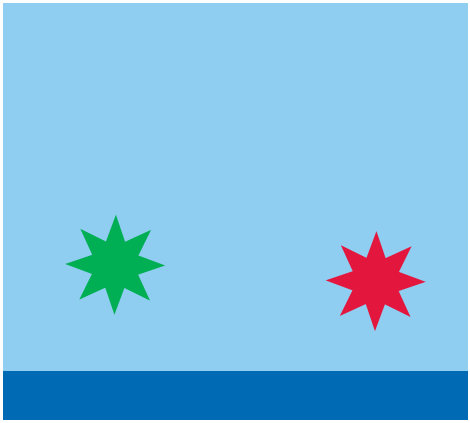
All round white light or torch light.



Any vessel up to 7m long. It may be going in any direction – towards you, away from you, crossing left or right – or it may be at anchor.

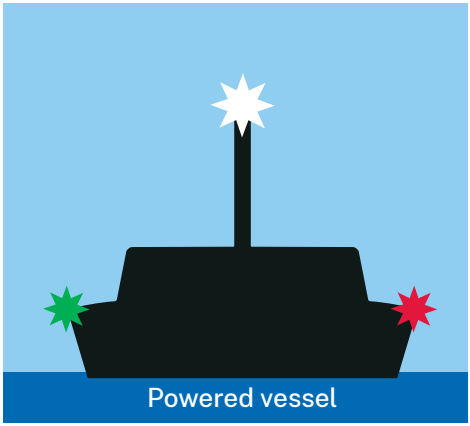
Vessel travelling towards you

Green light to your port (left) and red light to your starboard (right).



Sailing boat coming towards you.

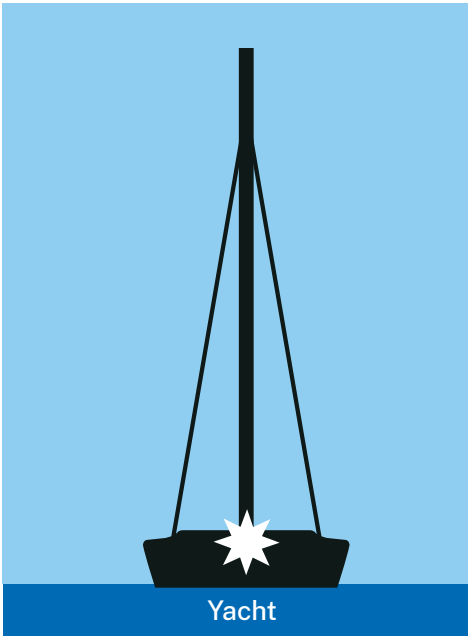
Powerboats and sailing boats using their engine also display a masthead light.



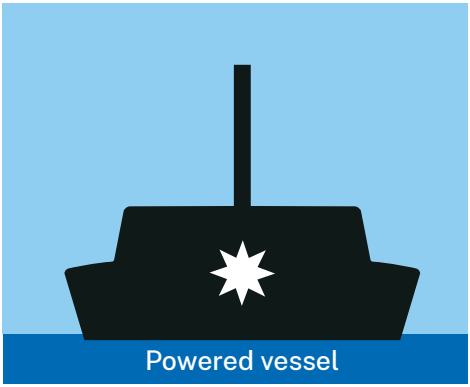
Powerboat or sailing boat using its engine up to 50m long coming towards you.

Vessel travelling away from you

All round white light or white sternlight.



Sailing boat travelling away from you.

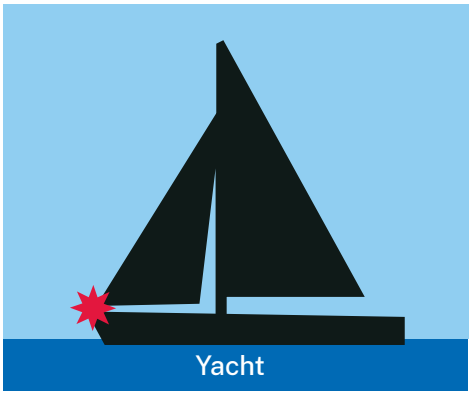


Powerboat or sailing boat using its engine up to 50m long travelling away from you.

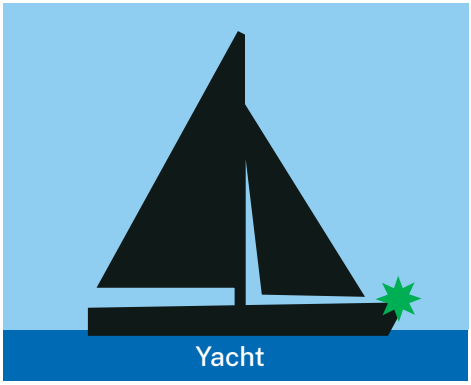
Vessel crossing your path

If a vessel is crossing your path, the colour of its sidelight shows you which direction it's travelling:

- red sidelight – crossing your path from your starboard (right) side to your port (left) side
- green sidelight – crossing your path from your port (left) side to your starboard (right) side.

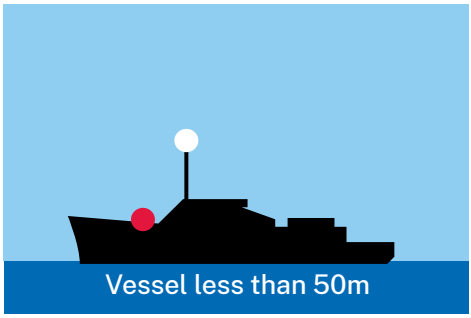


Sailing boat seen from port (left) side.



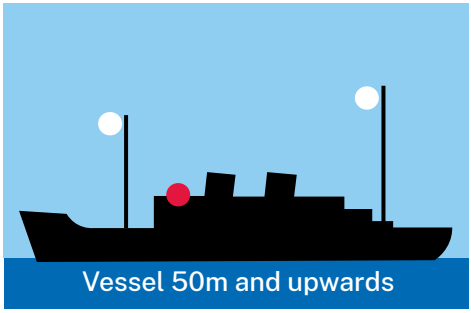
Sailing boat seen from starboard (right) side.

A powerboat or sailing boat using its engine also displays a masthead light.



Port side view of powerboat or sailing boat using its engine up to 50m long crossing your path.

Ships or other large vessels over 50m long display 2 masthead lights.



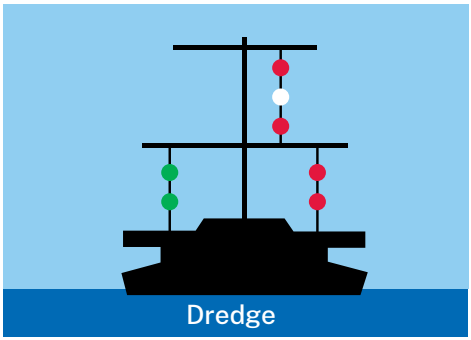
Port side view of ship over 50m long crossing your path.

Dredge

A dredge's top 3 lights show that it's restricted in its manoeuvrability.

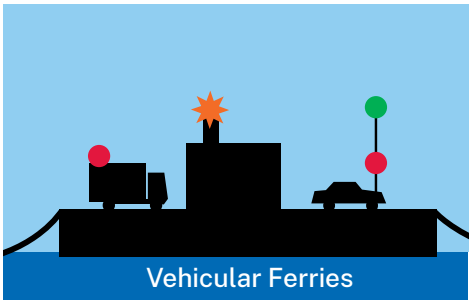
Its sidelights show you the safe side to pass:

- green – safe side to pass
- red – obstruction this side (do not pass).

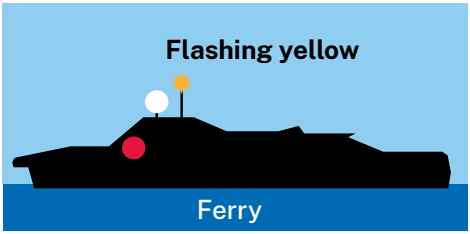


Vehicular ferry

Displays 2 red lights at either end and a green light above the red light in the direction of travel. Also displays an all round orange flashing light.



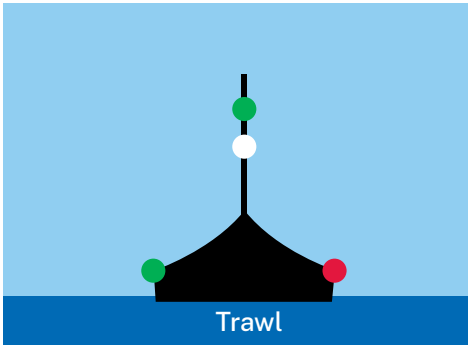
High-speed ferry on Sydney Harbour

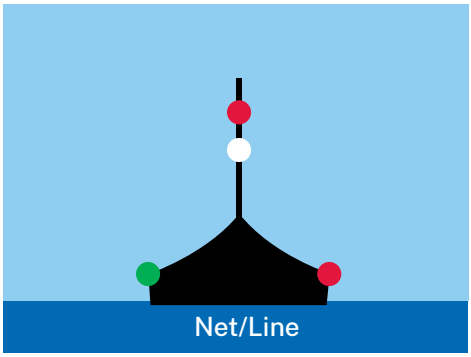


Displays the normal lights for a powerboat underway, plus an all round flashing yellow light when travelling at speed.

Commercial fishing vessel

Displays special lights when its activity – such as trawling – restricts its manoeuvrability.





Sound signals

When your vessel is underway and you can see other vessels, you can use sound signals to let other vessels know your intended movements. For example, if you plan to alter course or are slowing down. These signals can help prevent collisions.

Powerboats and sailing boats must carry a sound signal device – such as an air horn, bell or whistle – as part of their safety equipment.

The signals can be in short or long blasts. A short blast is about 1 second and a long blast is 4 to 6 seconds.

You can accompany these sound signals with light signals.

Sound signals	Meaning
1 short blast 	I'm altering course to starboard (right)
2 short blasts 	I'm altering course to port (left)
3 short blasts 	I'm operating engines astern (stopping, slowing or reversing)
5 short blasts 	I'm unsure of your intentions and I doubt whether you're taking sufficient action to avoid collision
1 long blast 	I'm nearing a blind bend and you might not be able to see me



The Coolongolook River winds through Forster and Tuncurry to open waters. Destination NSW photo.

Waterways and designated areas

Open waters 129
Enclosed waters 133
Coastal bars 135
Alpine waters 138
Sydney Harbour 139
Exclusion and restriction zones 142
Mooring and anchoring 144

Open waters

Open waters are navigable waters that are not enclosed by land or not within a river, bay, harbour or port. They include coastal and ocean waters.

Open waters can be dangerous. You can encounter rough, choppy seas and large waves. Coastal bars can be challenging to cross. You're far more exposed to changes in the weather than on enclosed waters. The risk of your vessel getting swamped or capsizing is much higher. You need to be experienced and know how to handle your vessel in these different conditions.

Make sure you're prepared for the conditions and hazards of open waters.

Plan for open waters

Many open waters start well inshore from the ocean, for example, inside the entrance to harbours, ports and rivers. It's recommended that you check whether you're heading into open waters before you go.

Marine Safety Regulation 2016 Schedule 2 and Schedule 3 list boundaries for open waters. They are also marked on Transport for NSW (Maritime) boating maps – see 'Boating maps' at **nsw.gov.au**

Check your vessel

Vessels designed for enclosed waters are not usually suited for open waters, especially along the coast where waves are larger. The way a vessel handles in open waters depends on many factors – for example, the hull design and strength, engine power, steering, and weight distribution on board.

You should always know the limits of your vessel's capability.

Before you head out on open waters, check your vessel is watertight.

Check your safety equipment

Make sure you have the right safety equipment for your vessel on open waters.

Wear a lifejacket

There's a higher risk of ending up in the water when travelling on open waters or crossing a coastal bar. Everyone must wear a lifejacket when crossing a coastal bar and in heightened risk conditions. A lifejacket can only save someone's life if they're wearing one.

Check the weather

Check the weather before you set out and regularly while you're on the water. Weather conditions can change very quickly on open waters.

While on the water, keep a lookout for signs of squalls – threatening clouds and whitecap waves. If you see these kinds of changes, make sure you and any passengers are wearing a lifejacket and head for shore.

Keep a lookout for shallow areas

Look out for shallow areas, particularly along the coastline and close to the shore. Keep a lookout for bomboras. These are shallow areas – often created by rocks or reefs – that can cause breaking waves.

In good weather, bomboras can be hard to identify because the water may be calm. The waves may only be intermittent, with flat conditions between sets of dangerous waves. Unexpected waves in these areas can capsize your vessel.

Take extra care when anchoring near bomboras. Stay in deep water and beware of currents that can push your vessel in too close.

It's recommended that you check maps and ask locals about the location of bomboras.

Keep in touch

When travelling to open waters, always let someone know where you're going.

It's recommended that you have a minimum of 2 means of communication. For example, a marine radio and a mobile phone.

Check emergency procedures

Review and practise emergency procedures. Make sure everyone on board knows what to do in case of an emergency or incident.

Keep a safe speed

Always travel at a speed that allows you to steer your vessel. Without power to maintain steerage, your vessel can drift side-on or beam-on to the sea. This increases the risk of capsizing.

Be careful in rough or choppy conditions. Slow down or alter the angle of your course to the waves. This minimises pounding and keeps passengers comfortable.

Avoid overloading your vessel

It's recommended that you carry fewer people and less load when on open waters. Check all items are secured to avoid them being thrown around in rough weather. See Loading your vessel on page 73.

Handling your vessel on open waters

Open waters can be rough and choppy, and waves can be big. You can experience rough waters caused by the direction of the sea, for example, in head, beam or following seas.

If you get caught in really rough water with big waves, the safest thing you can do is head into them. Going across them or with them can be more dangerous.

Head seas

Generally, the safest way to tackle a head sea – when waves come from directly ahead – is to control the direction and speed of your vessel.

Take big waves bow-on, or up to about 30 degrees off the bow. Too much power can cause the vessel to leap over the crests and crash down into the troughs. Too little power can cause waves to break onto or over the vessel. Use the right amount of power to minimise this slamming action.



It's safer to take bigger waves head-on rather than across the beam.

Beam seas

A beam sea – when the water rolls against the side of your vessel at right angles – increases the rolling of your vessel.

You can reduce rolling by varying the angle of your vessel to the sea. The bow is usually the strongest part of a vessel and is designed to take the initial impact of chop and waves.

Keep a lookout for bigger waves. Consider altering course or speed to ride over or with the seas.

Following seas

A following sea – when the sea is moving in the same direction as your vessel – has the greatest potential for disaster. The risk of broaching sideways, swamping or capsizing increases. You have less steering power, and using your throttle to control the vessel is critical.

As with crossing a coastal bar, you should try to maintain a position on the back of waves. Use your throttle to keep ahead of waves breaking behind the vessel.

Rough weather

If you run into rough weather and you're close enough, return to the shore. Otherwise look out for a safe harbour or the lee side of an island – where you're sheltered from the wind and the waves are smaller.

If you doubt your chances of reaching a safe place, ride out the initial onslaught by keeping your bow into the wind and waves. Make sure everyone holds on firmly.

Sudden squalls usually only last for a short period and sometimes come before a change in wind direction. These winds generally blow at much stronger speeds than the wind that follows.



Always watch for changes in the weather such as threatening clouds that could signal a sudden squall.

Enclosed waters

Enclosed waters are navigable waters enclosed by land or a port. They include:

- inland and coastal rivers and lakes – for example, the Hawkesbury River, Tweed River, Lake Macquarie and Wallis Lake
- creeks and lagoons – for example, Pipers Creek and Glenbrook Lagoon
- enclosed coastal bays, ports and harbours – for example, Sydney Harbour, Pittwater, Port Macquarie and Jervis Bay
- estuaries – for example, Brisbane Water and Terranora Broadwater
- dams – for example, Chaffey Dam and Wyangala Dam
- all alpine waters.

Enclosed waters can be dangerous, even when they appear calm. Low water temperatures, shallow areas, strong currents and remote locations increase risk.

Make sure you're prepared for the conditions and hazards on enclosed waters.

Check your safety equipment

Make sure you have the right safety equipment for your vessel for enclosed waters.

Keep a proper lookout

Enclosed waters can be murky and hide hazards, such as submerged trees, rocks and other snags. If you're unsure about an area, reduce your speed and use your depth finder, if you have one. You may need to slow down to keep a proper lookout.

In rivers and estuaries be aware that shallow areas may not be marked and can shift. Take extra care. Keep a lookout for objects ahead, as well as those above, such as overhead powerlines and low bridges. Look out for other vessels and swimmers. Enclosed waters at popular locations can be very busy. Be aware of blind spots created by river bends or shoreline features.



Submerged trees can be dangerous on enclosed waters.

Familiarise yourself with the area

Use maps and, where possible, talk to people who know the waterway. They may have valuable local knowledge about currents, water depth and hazards.

Check currents

Strong currents in major rivers and creeks can flow quickly. This can restrict the manoeuvrability of your vessel and reduce your ability to avoid hazards. Smaller vessels, such as canoes, can more easily hit rocks or trees. Take extra care after heavy rain or flooding when currents can be stronger.

Take extra care on dams

Avoid spillways or any other areas where water may be released. The water can be dangerously fast-moving and turbulent.

Take care when launching and retrieving your vessel on the shore. If the shore is soft, your vehicle can get bogged.

Take extra care in windy conditions. The surface of the water in shallow dams can become extremely rough. Waves can be short and steep, and as high as those in coastal areas. Check wave conditions before you go – see 'Wave heights' at **nsw.gov.au**

Beware of cold water

Beware of lower water temperatures in lakes, rivers and dams. These low temperatures can happen in alpine waters all year round, and on most NSW waterways in winter and parts of spring and autumn.

Take extra care in narrow channels

Be careful at bends and always keep to starboard (right) in narrow channels. Avoid anchoring or fishing where you may obstruct other vessels.

Keep in touch

If you're travelling to a remote location, let someone know where you're going.

Reception can be unreliable on remote waterways. It's recommended that you have a minimum of 2 means of communication, for example, a marine radio and a mobile phone.

Coastal bars

Coastal bars are shallow, shifting sandbanks at the entrance to rivers and coastal estuaries. They can have strong currents and large breaking waves.

You may need to cross a coastal bar when going out or coming in from open waters. See the list of all coastal bars in NSW at **nsw.gov.au**

Crossing coastal bars can be very dangerous. Channels through the bars can change frequently. Waves can change quickly with the tide and weather. Even in apparently calm conditions, vessels can be swamped, damaged or wrecked, which can result in death.

For videos and safety information, see 'Coastal bars in NSW' and 'Coastal bar safety booklet' at **nsw.gov.au**

For your safety, never attempt to cross a coastal bar without seeking local knowledge and experience. Check conditions before you go and be prepared to cancel or delay the crossing. It's strongly recommended that you cross a coastal bar with an experienced skipper before you try it yourself. If in doubt, don't go out.

Make sure you're prepared for the conditions on coastal bars.

Check conditions

Monitor coastal bar conditions in different weather and tide combinations. Watch the conditions in person, or via live webcams of 'coastal bars' at **nsw.gov.au**

Know the tide times and check the weather. Get current forecasts with expected wind and sea conditions. Get advice from the local Marine Rescue NSW base – see 'Find your local unit' at **marinerescuensw.com.au**





Coastal bars can have dangerous conditions, including large breaking waves.

Prepare your vessel

Check your vessel, especially steering and throttle controls, watertight hatches and drains. The vessel must be seaworthy, suitable for the conditions, and designed to take some impact from waves.

Secure loose items and make sure everything is either stowed in lockers or secured to prevent movement.

Check your safety equipment

Make sure everyone on board knows where the safety equipment is and how to use it, and what to do in an emergency or incident.

Wear a lifejacket – everyone on board must wear a lifejacket at all times when crossing coastal bars.

Cross safely

Whether you're going out or coming in:

- Cross with an incoming tide – it's always safer
- Avoid crossing with an outgoing (ebb) tide – this is the most dangerous time to cross because dangerous waves are more likely
- Once you start crossing, keep going – trying to turn around in the middle of a bar can be risky, including an increased risk of swamping. Try to stay calm and not panic in difficult conditions.

How to go out safely

Try to take waves as close to head-on as possible. Avoid letting waves break onto your vessel.

Avoid hitting waves at high speed. If your vessel becomes airborne, you lose control and it can cause damage and injury.



When heading out across a coastal bar, speed up through flat spots.

If it's safe to go out:

- Idle towards the breaking waves, watching for any lulls
- If you see a flat spot, 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. If possible, head for the lowest part of the wave (the saddle). This is the last part to break
- Back off the power just before meeting the next wave
- Pass slowly through the wave and accelerate again to the next wave
- Repeat the process until through the break zone.

How to come in safely

Be aware that conditions may have changed.

If it's too dangerous to come in:

- Wait for conditions to improve
- Wait for the tide to change
- Look for safe harbour somewhere else.

If it's safe to come in:

- Approach the break zone and try to pick the spot with the least activity
- Keep any lead marks in transit as breaking waves 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, making sure:
  - you avoid overtaking the wave and running down its face
  - you stay ahead of any wave behind you
- When the wave ahead of you has broken, carefully accelerate through the white water
- Beware of steep waves bouncing back off the entrance or shore, and adjust speed to handle these waves and any outgoing current.

Alpine waters

Alpine waters are enclosed waters in alpine areas. They include lakes, rivers, dams and reservoirs.

In NSW, alpine waters are:

- 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 Kosciuszko National Park.

Alpine waters can be dangerous. High altitudes can bring cold and windy conditions that change quickly. It can be dangerously cold at any time of year, even in summer. Remote locations, submerged hazards and cold water temperatures all increase risk.

Make sure you're prepared for the conditions on alpine waters.

Be aware of cold weather and water

Exposure to cold weather and cold water present serious risks, such as hypothermia. Make sure you know how to reduce the risk – see Cold water and hypothermia on page 159.

Wear a lifejacket

If you fall overboard, cold shock and hypothermia increase your risk of drowning. For your safety, always wear a lifejacket on alpine waters.

Check your safety equipment

Make sure you have the right safety equipment for your vessel on alpine waters.

Reduce the risk of capsizing

Because of the cold, capsizing in alpine waters can be life-threatening. Take extra care. Avoid overloading your vessel. Distribute weight evenly and stow heavy items as low as possible.

Monitor the weather

At high altitude, the weather often changes quickly. Being surrounded by hills or mountains also reduces how much sky you can see and it can be difficult to see approaching changes. Check the weather continuously while you're out. Watch for warnings and be prepared to change your plans if needed.

Keep a proper lookout at all times

Hazards – such as submerged trees and other snags – may not be marked. As water levels can change, hazards can exist just below the surface.

Take extra care in small vessels

Conditions can be very cold and windy. If you're in a small vessel designed for calm water conditions, take extra care. Keep close to the shore and avoid travelling too far from shelter.

Sydney Harbour

Sydney Harbour is an extremely busy waterway. It's used by recreational and commercial vessels, from big ships and high-speed ferries to small powerboats, yachts and kayaks.

It has busy navigational channels and special rules.

The risk of collision is much higher on the harbour, so always keep a proper lookout for other vessels, swimmers, marine life, hazards, and seaplanes. Be prepared to take action to avoid a collision with another vessel. You may need to slow down to travel at a safe speed and keep a safe distance.

You must ensure you keep right at all times.

If you're planning to go on the harbour, know your responsibilities and take extra care. Make sure you have the right safety equipment and lifejackets for enclosed waters before you go.

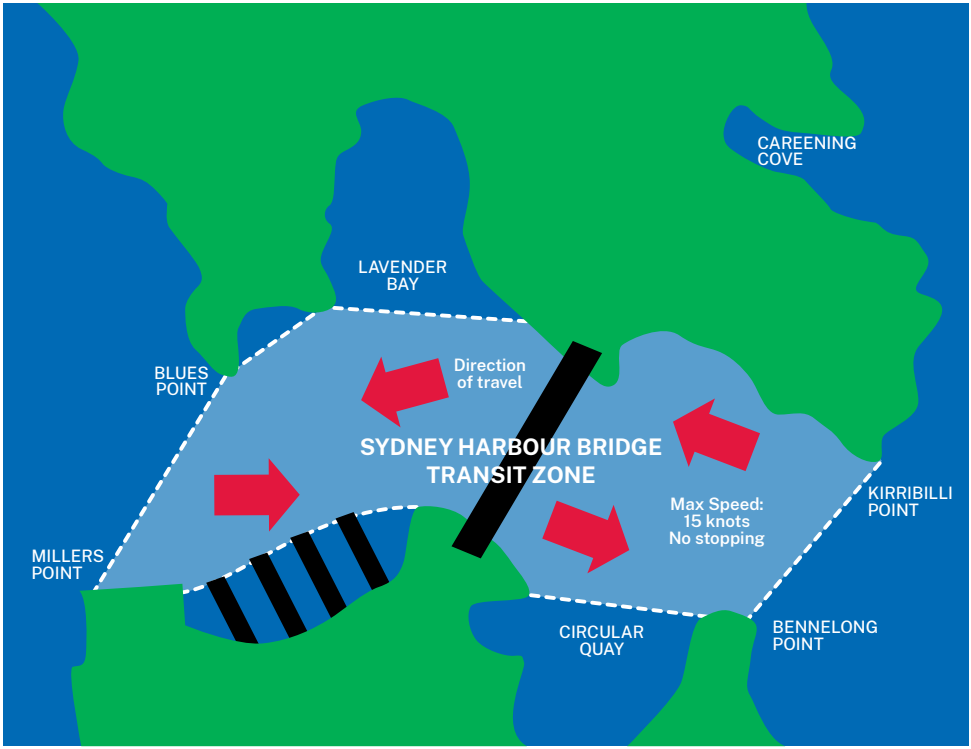
Sydney Harbour Bridge Transit Zone

The Sydney Harbour Bridge Transit Zone was created to allow safe navigation through this very busy part of the harbour. It prohibits vessels from stopping or drifting under Sydney Harbour Bridge.

The zone includes the area around the Sydney Harbour Bridge between Bennelong Point and Kirribilli Point in the east and Millers Point to Blues Point in the west. It does not include Walsh Bay, Circular Quay, or Lavender Bay north of Blues Point or the south of Milsons Point Ferry Wharf. Ensure you stay right at all times.

You can only travel through the zone to get to an area alongside or outside the zone.

Vessels must not travel faster than 15 knots or anchor or drift in the zone, except in an emergency.



Exclusion zones

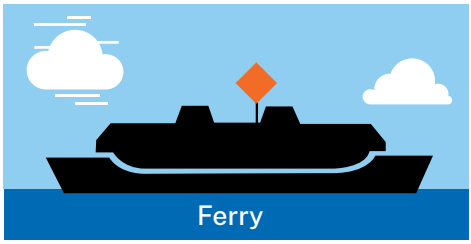
Check if and where you can take your vessel on the harbour.

- personal watercraft (PWC) – you must not drive a PWC anywhere on Sydney Harbour. This includes its tidal bays, rivers and tributaries, Parramatta River, Middle Harbour and Lane Cove River
- kiteboards – you must not use a kiteboard on the harbour
- sailboards – many areas within the harbour are restricted. Check maps and signage.

See Exclusion and restriction zones on page 142.

Ferries

You must follow the give way rules on Sydney Harbour.



There are special rules for ferries that display an orange diamond shape. This shape is called the 'priority over sail signal'. This replaces the usual 'power gives way to sail' rule during the day, meaning that sailing vessels must keep well clear of these ferries. The 'priority over sail signal' does not apply at night or if the ferry is overtaking a sailing vessel.

Sailing vessels must keep a minimum distance from these ferries of:

- **200m** from the bow
- **30m** from the sides or stern.

High-speed ferries display an all round yellow flashing light when travelling at speed. Be aware that they may be travelling much faster than they appear to be.

Shipping channels

Sailing vessels, powered vessels, paddlecraft and rowing vessels must keep well clear of big ships in Sydney Harbour's shipping channels. These vessels are limited in their ability to manoeuvre. You must keep to the starboard (right) side and give way.

Sydney Vessel Traffic Services (VTS) broadcasts safety messages and shipping movements every 2 hours on VHF 16/13. The broadcasts start daily at around 1am.

Exclusion and restriction zones

Some areas of NSW waterways have restrictions and exclusions. Before you go out, plan where you want to go and check maps or charts. See 'Boating maps' at **nsw.gov.au**

When you're on the water, keep a lookout for signs, such as 'No Boating Zone' signs.

Swimming areas and surf zones

To keep people in the water safe, some shores have swimming areas that extend 60m into the water. Signs mark these areas.

There are also designated swimming areas in surf zones. These extend 500m from the shore between surf patrol flags or signs.

Powered vessels, including sailing boats over 5.5m long and personal watercraft (PWC), must keep a minimum distance from these areas – see Safe distance on page 83.

Areas for organised events

All vessels must keep a safe distance from areas being used for organised aquatic events. These include competitions, races, displays, regattas and exhibitions in sections of waterways normally available to the public.

To get exclusive use of a section of a NSW waterway to run an organised event, you must apply for an aquatic licence – see 'Applying for an aquatic licence' at **nsw.gov.au**

For a list of aquatic licences and special events on NSW waterways, see 'Marine Notices' at **nsw.gov.au**

You do not need an aquatic licence for organised sailing events that are low-risk and have minimal impact on other vessels and people. These events can only take place in designated aquatic activity areas and you must complete a Sailing Event Notification form. See 'Sailing Event Notification System' at **nsw.gov.au**

Kiteboard and sailboard exclusion and restriction zones

Sydney Harbour is an exclusion zone for kiteboards. Sailboards are also restricted in many areas within the harbour. Check maps and signage.

Seaplane take-off areas

Keep well clear of take-off areas for seaplanes. These include Pittwater off Station Beach, and Rose Bay on Sydney Harbour. These areas are marked by signs to the north and south of the seaplane wharf. Seaplanes also use tourist locations on the north and south coasts of NSW.

When taking off and landing, seaplanes must give way to all vessels. However, they are restricted in their manoeuvrability and cannot move quickly on the water. Where possible, keep a minimum distance of 60m from the front of a seaplane and 30m from the back.

Personal watercraft (PWC) exclusion and restriction zones

There are PWC exclusion zones on NSW waterways, including Sydney Harbour – see 'PWC operating areas' at **nsw.gov.au**

The way you drive a PWC is restricted in the Sydney basin area, between Port Hacking, Wamberal and the Blue Mountains (not including open waters). You must not drive a PWC in an irregular manner within 200m of the shore in the bays, rivers and other waterways within this area.

Port restricted areas

Some waterways, wharves and marine installations have access restrictions, for example, near airports.

You must not go within 100m of wharves and installations used to ship or store oil, inflammable liquids, dangerous goods or explosives. Check 'Boating maps' at **nsw.gov.au** and keep a lookout for signage.

Naval vessels

All vessels must keep a minimum distance from the 'moving exclusion zones' around naval vessels when they are underway or at anchor – see Safe distance on page 89.

Mooring and anchoring

Moorings and anchors are used to secure a vessel in a particular location.

A mooring is something you can tie your vessel to. It may be a buoy, a marina berth pontoon or jetty.



There are special safety rules for mooring areas.

An anchorage is a place where you can stop and secure your vessel using its anchor. In an anchorage, there may also be courtesy moorings you can tie your vessel to instead.

Knowing where and how to moor and anchor your vessel safely helps protect you, other vessels and the environment.

Moorings

Some waterways have specific mooring areas. There are rules to help you navigate safely through and near these areas.

You must:

- be aware of mooring area locations – take extra care at night as moored vessels may not be lit
- keep a proper lookout for people in the water, small dinghies and trailing ropes
- keep a minimum distance – when travelling at 6 knots or more in a powered vessel you must keep a minimum of 30m from any moored vessel. If that's not possible, you must keep a safe distance and travel at a safe speed.

It's recommended that you know the different types of moorings on NSW waterways. You can identify a mooring type by the colour of its buoy:

- **pink buoy –** free moorings available to the public for a 24-hour period
- **yellow buoy –** private moorings that you need a licence for
- **orange buoy –** commercial moorings for licensed businesses – for example, charters, commercial fishing and boat repairs
- **red buoy –** club moorings for boating and sailing clubs
- **blue buoy –** emergency moorings for police and Transport for NSW (Maritime) staff to store vessels.



Yellow buoys identify a private mooring.

Moorings are often identified on local maps or charts, or see 'Mooring maps' at **nsw.gov.au**

You must have a licence or be authorised to use private, commercial or emergency moorings. To apply for a licence, see 'Moorings' at **nsw.gov.au**

If your mooring is over a seagrass bed, it's recommended that you use a seagrass-friendly mooring to protect marine life. If you need to move your mooring, contact Transport for NSW (Maritime) to check your options.

How to moor your vessel safely

To moor your vessel safely:

- Slow down almost to a stop, manoeuvre slowly and keep wash to a minimum
- Consider winds and currents – it's usually easiest to approach the mooring towards the wind or current
- Point the bow towards the mooring buoy, then reverse to stop the vessel just before the bow hits the buoy. Put the engine into neutral and pick up the mooring.

When you're tying up to a wharf or marina berth:

- Keep your vessel secure by tying it up with rope to both the bow and stern
- If the mooring site has bollards or rings, tie to those a short distance beyond the bow or stern
- Be aware of the rise and fall of the tide.

When you're leaving a mooring, wharf or marina berth:

- Start your engine and have it in idle before you untie
- Check your surroundings and other traffic before you untie
- Make sure all ropes are inside the vessel and not trailing in the water where they can be caught in the propeller
- Keep wash to a minimum.

Anchorages

Safe anchorages are places where you can anchor or moor your vessel temporarily, protected from wind, waves and currents. Be aware that some anchorages are only safe in certain wind or swell directions.

Check maps and signage for where to anchor safely, and for designated non-anchoring areas. Be aware that some areas – such as those with seagrasses – may not have signs.

You must not anchor:

- in a navigation channel
- anywhere you might obstruct other vessels' access to or from wharves, launching ramps or moorings
- within 200m of underwater cables.

Look out for 'Submarine Cable' signs. These underwater cables carry electrical power or telecommunication signals.

If your anchor becomes snagged in a cable, do not pull it out. Cut the anchor line as close as possible to the anchor.

Avoid anchoring:

- near historic shipwrecks
- on bomboras, shallow rocks, reefs, banks or shoals
- in sensitive habitats, such as shallow areas with seagrasses.

How to anchor your vessel safely

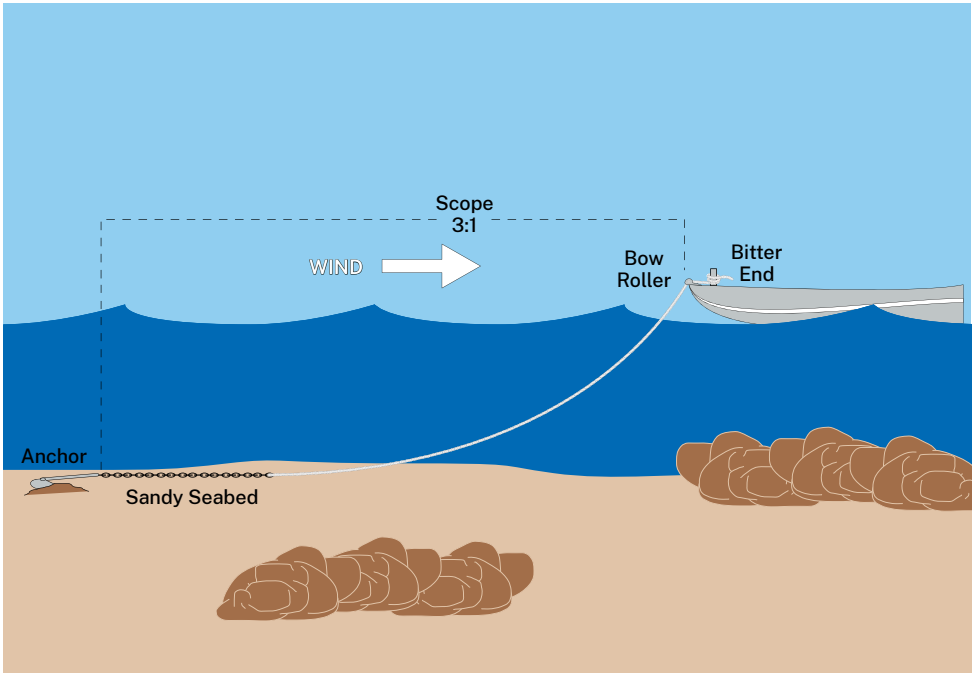
Before you go on the water, make sure you have the right size and type of anchor for your vessel and the sea bed.

When preparing to anchor:

- Slow down and minimise your wash – do this well in advance if you're anchoring near other anchored or moored vessels
- Have your anchor and line ready. Make sure that the other end is secured to the vessel.

To anchor safely:

- Lower the anchor to the bottom and let the vessel travel backwards until enough line is let out. Allow 3 times as much line as the depth of water
- If the weather deteriorates, or in strong currents, increase the line to depth ratio to 5:1 or more
- Always anchor by the bow not the stern – anchoring by the stern can result in swamping and flooding
- Watch your feet – getting the line wrapped around a foot is a common anchoring incident
- Take into account local tides and possible wind changes when choosing your anchoring position
- Make sure you have enough swing room to keep your vessel away from other nearby vessels or hazards. This is especially important at crowded anchorages, if you plan to stay overnight, or leave your vessel unattended
- Take a few minutes to make sure your anchor has held. If in doubt, check your position against nearby landmarks
- Check your anchor regularly if winds or currents are strong.



Carry a length of anchor line that is 3 times the depth of water – or longer in bad weather or emergencies.



Emergencies and incidents

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Alerting search and rescue services

To alert search and rescue services in an emergency, you can:

- make distress calls on your marine radio
- set off distress flares and display a V sheet – when rescuers are in sight
- activate your EPIRB to send an electronic distress alert via satellite
- use your mobile phone to call Triple Zero (**000**) or the Joint Rescue Coordination Centre (JRCC Australia) on **1800 641 792**.

Raising and lowering your arms to attract attention is an international distress signal.

As the skipper, you're responsible for making sure that distress signals are only used in an emergency.

Marine radio distress channels

You can use your marine radio to make distress calls to other vessels in the area or to shore stations.

There are several channel frequencies for distress calls. Very high frequency (VHF) channels provide a wider coverage than high frequency (HF).

Radio type	Channel frequencies
VHF	16
27 MHz	88
HF	4125, 6215 and 8291 kHz

For information about using the HF component of the National Coast Radio Network, see 'Radio network services' at **nsw.gov.au**

Emergency words

When making a distress call on your radio, use the following words depending on the level of emergency. It's recommended that you repeat each word 3 times.

If you do not get an answer, repeat the call and message on other available frequencies.

Mayday

Use a 'mayday' call for an emergency message when there's imminent danger to a vessel and the passengers. For example:

- 'Mayday, mayday, mayday, this is Phantom, this is Phantom, this is Phantom, a 5m red half-cabin. I'm 3 nautical miles off Red Head. We've been swamped by a wave and are sinking. There are 4 people overboard. Over.'

If you hear a mayday call, you should not transmit, but continue to monitor the radio. If a shore station – such as the local Marine Rescue NSW unit – does not respond to the call, try to relay the message and help the vessel.

Pan pan

Use a 'pan pan' call for an urgent message when a vessel is in trouble, but not in imminent danger. For example:

- 'Pan pan, pan pan, pan pan, this is Phantom, this is Phantom, this is Phantom, a 5m red half-cabin. I'm 3 nautical miles off Red Head. We've been disabled by a wave and need a tow. There are 4 people on board. Over.'

Securite

Use a 'securite' call (pronounced saycure-e-tay) before a navigational safety message, such as a weather report or navigation hazard update. 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.'

If you're involved in an incident

If you're involved in a marine incident, you must always stop and give as much help as possible. If you need help, alert search and rescue services.

Marine incidents include when:

- a person is killed or injured on a vessel
- a person falls overboard
- a person is hit by a vessel or its propeller
- a vessel is involved in a 'close quarters' situation – for example, when taking evasive action to avoid colliding with another vessel
- a vessel sinks, capsizes, runs aground or floods
- a vessel collides with another vessel or object
- there's a fire or explosion on board a vessel
- a vessel causes damage to the environment.

What to do after an incident

Stop your vessel and give as much help as possible. As the skipper, you must show any required licence or certificate of competency and give your details to everyone involved in the incident.

If Transport for NSW (Maritime) authorised officers or police attend, the skipper of each vessel involved must give:

- full identification, including their name and address
- time, place and description of the incident
- name and/or registration or permit number of their vessel
- name and address of every person involved, including any witnesses
- extent of any injury or damage caused by the incident
- any required boat or PWC licence or certificate of competency.

When to report an incident

The skipper of each vessel involved must submit a Vessel Incident Report if:

- a person is killed or injured
- there's more than $5000 worth of damage to a vessel or other property, or
- there's damage or a risk of damage to the environment.

You must submit the report within 24 hours. Download the 'Vessel Incident Report form' from **service.nsw.gov.au**, or get a hardcopy from a service centre, police station or 'Marine Rescue NSW' or 'Marine Rescue NSW head office', see **marinerescuensw.com.au**

You do not need to submit a report if you gave these details to authorised officers at the incident.

Incident investigations

Transport for NSW (Maritime) investigates a range of marine incidents, including those involving recreational and commercial vessels, ports and ships.

They also investigate breaches of legislation, for example, not following navigation rules, licensing rules, environmental regulations or speed limits.

Fire

A fire on board a vessel can spread rapidly, generate intense heat and cause explosions. Fuel spills and gas leaks can cause fires. A fire can also happen immediately after refuelling.

What to do

If a fire starts on your vessel:

- Warn passengers and make a distress call on your marine radio
- Shut off fuel lines and gas lines immediately
- Try to put out the fire using your bucket and fire extinguisher
- If a burning object can be safely moved, throw it into the water quickly
- Close all hatches, vents and ports to reduce oxygen
- Remove LPG cylinders from the heat source. If this is not possible, spray water on cylinders to keep them cool. If flames are threatening to engulf a gas cylinder, you should abandon the vessel
- Manoeuvre the vessel downwind
- Keep a close watch on the area once the fire is out.

Abandoning your vessel

If you have to abandon a vessel with a fire on board, do not move the vessel towards another vessel.

Abandon your vessel on the windward side – the side the wind is blowing from – in case the vessel drifts and spreads fuel in the water. Make sure everyone is wearing a lifejacket.

Helping another vessel with a fire

Give what help you can, depending on your knowledge and experience. Keep to the windward side of the vessel. Your first responsibility is to your passengers and vessel.



Fires on board are hard to fight once started.

Fire: Reduce the risk

- Have a fire drill and practise it regularly on board
- Make sure you have an approved fire extinguisher for the type of fuel you have on board. Do not store it close to the stove or engine compartment
- Do not store combustible materials in the bilge or engine compartment
- Check the electrical system for faults and keep all components clean
- Take care when using fuel stoves and lamps
- Take care when refuelling
- Do not fill fuel caddies in your vessel – always fill them on shore
- Keep engine compartments ventilated, especially on hot days and when refuelling
- Use a blower or ventilation system before starting the engine or operating any electrical equipment
- Make sure LPG cylinders and appliances are suitable for marine use
- Make sure any LPG cylinders and appliances are firmly secured and away from draughts. Get them serviced by a licensed gasfitter
- Clean up fuel spills quickly
- Maintain your engine, check for fuel leaks and service your vessel regularly.

Carbon monoxide and gas leaks

Engines, generators and cooking appliances on a vessel can produce toxic gas emissions. These gases can harm people on board.

Carbon monoxide poisoning

Carbon monoxide is a colourless and odourless gas. It's produced when a carbon-based fuel – such as petrol, diesel, propane, charcoal or oil – burns. Engines, generators and fuel-burning cooking equipment can produce carbon monoxide.

Inhaling high concentrations of carbon monoxide can cause death within minutes.

Symptoms of carbon monoxide poisoning include:

- irritated eyes
- nausea
- headaches
- dizziness.

Carbon monoxide poisoning can be mistaken for seasickness or intoxication. This means someone who's poisoned may not receive the medical attention they need.

Liquefied Petroleum Gas (LPG)

LPG is a non-corrosive and clean-burning fuel used for appliances on boats. It has a strong smell. LPG is heavier than air and will flow downwards and gather in the bilge.

If LPG leaks on board your vessel, it can cause explosions and fire. Inhaling LPG can cause asphyxiation.

What to do

Be alert for any signs of carbon monoxide build-up or gas leakage – for example, passengers feeling ill or a strong smell of LPG. If you think this may have happened, you should:

- Stop the engine.
- Turn off cylinder valves and all appliances
- Ventilate the area – use all equipment available, such as a bilge blower
- Evacuate the area and move everyone into fresh air
- Avoid using any electrical switches until the air is clear
- Keep a close watch on anyone affected. Give oxygen if possible. If the person is not breathing, perform CPR until help arrives
- Make a distress call on your marine radio and contact medical help.

Toxic gases: Reduce the risk

- When using the engine, makes sure the cabin and cockpit areas are well ventilated. Open windows and hatches and roll up cockpit covers
- Never sit on marlin boards or swim platforms when a powered vessel with a rear-vented exhaust system is underway or idling. If possible, avoid using these areas for a minimum of 15 minutes after the engine or generator has been switched off
- Be aware of onboard generators. Even when a boat is anchored or moored, generators still produce carbon monoxide. Never swim under swim platforms on houseboats
- Install a carbon monoxide detector alarm in your boat
- When towing a person, make sure they're a minimum of 7m behind your vessel
- Regularly check your vessel's exhaust system for signs of leaks – for example, rust, black streaking, water leaks or cracked fittings
- Maintain your engine and exhaust systems. Organise regular inspections by trained technicians – poorly tuned engines generate more carbon monoxide
- Avoid leaving your engine or generator running while your vessel is moored. Keep a minimum distance of 6m from other vessels when their engine or generator is running. Exhaust from other vessels can release carbon monoxide into your cabin or cockpit
- Have LPG cylinders, appliances and hoses installed, serviced and inspected by trained technicians.

Person overboard

If someone falls overboard, try not to panic. Do not jump in after them – this puts you both at risk of drowning.

What to do

If you fall overboard

If you fall overboard, try to get as much of your body out of the water as possible, for example, by climbing back on to the vessel. If you cannot climb onto the vessel, try to grab hold of it or any other floating object. Try to stay with the vessel. Only swim to shore if it's very close. Distances on the water can be deceptive.

If you are driving a personal watercraft (PWC) or small powerboat and it has a kill switch lanyard, this will shut down the engine when you fall in the water. Some PWC have an automatic idle and self-circling capacity. When you fall off, it will circle slowly, giving you a chance to climb back on. Try to climb on at the stern.

If someone else falls overboard

If someone else falls overboard:

- Slow down immediately
- Throw the person a lifejacket or marker immediately – if you lose sight of them this will help you find them
- Warn approaching vessels
- Move towards the person from downwind or against the current
- Keep the person in sight while you manoeuvre to pick them up, taking care not to collide with them. Tell any other passengers to keep a lookout
- Turn off the engine or place the engine in neutral while trying to pick the person up
- Establish your position using shore marks or your GPS position. An accurate position will help search and rescue
- Once the person is alongside, stop the engine. Balance the weight on the vessel before attempting to bring them on board. Consider bringing them over the stern if the vessel is unstable.

Person overboard: Reduce the risk

- Have a person-overboard drill and practise it regularly and in all conditions
- Wear a lifejacket. It can save your life if you fall overboard or end up in the water because of collision, capsizing or swamping
- Avoid alcohol and drugs – as the driver, you must stay under the blood alcohol concentration (BAC) legal limit
- It's recommended that passengers also stay under the alcohol legal limit. They're more at risk of falling overboard if they've been drinking alcohol. They may also need to take action in a collision, or if the vessel capsizes or is swamped
- Never ride on the bow of a powered vessel when it's underway. This significantly increases your risk of falling overboard.

Cold water and hypothermia

Water can be dangerously cold, even on sunny days. Water temperatures below 15°C are dangerous. These low temperatures can happen in alpine waters all year round, and on most NSW waterways in winter and parts of spring and autumn.

Your risk of hypothermia is higher when you're exposed to the elements. Falling into cold water can be life-threatening.

Hypothermia

Hypothermia is the result of heat loss from the body's core. It happens when your body temperature drops below 35°C. This affects your brain, heart and other internal organs.

As soon as you enter the water, your body begins to cool, but the full effects of hypothermia can take around 30 minutes to develop.

Some of the signs of hypothermia are:

- intense shivering in the early stages as the body tries to maintain its core temperature
- slurred speech and confusion
- slowing pulse as blood flow to the hands, feet and skin slows down
- dilated pupils
- no shivering in the later stages.

Eventually a hypothermic person will lose consciousness.

Hypothermia can be mistaken for drowsiness. Look out for these signs and symptoms:

- adults – cold to touch, pulse slow, weak or faint, breathing slow and shallow
- children – cold to touch, quiet, lacking appetite.

Cold shock

Cold shock is an uncontrollable reaction in your body when it enters cold water suddenly. Your breathing and heart rate speed up sharply. You can inhale water while trying to catch your breath.

Cold shock goes away quickly, but can be dangerous in the first few moments.

What to do

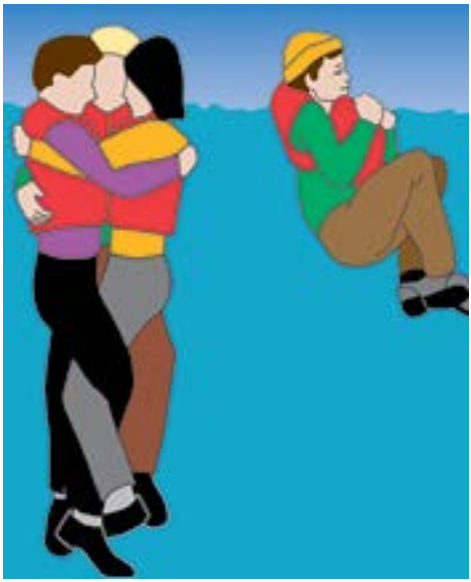
In the water

If you fall overboard, try to stay calm. Resist the temptation to swim – this increases body heat loss. Stay with the vessel.

If you're stuck in cold water, these techniques can help extend survival time.

HELP (Heat Escape Lessening Posture)

If you're alone, the best option to limit body heat loss is the HELP position. Draw your knees to your chest and wrap your arms around your knees. Clasp your hands together so you're in a tucked position. Stay in this position.



Survival techniques in cold water – huddle (left) and HELP.

Huddle

If you're in the water with others, huddling is the best method of reducing the risk of hypothermia. Huddle close together to protect your chests and arms. This can reduce the rate at which your bodies lose heat and can increase survival time by up to 50 per cent.

How to treat hypothermia

When treating hypothermia, the aim is to reduce any further heat loss and to try to warm up the person slowly. You must act quickly, but gently.

If you suspect someone has hypothermia:

- Replace all wet clothing with warm, dry clothing or blankets, if available.
- Be gentle and keep them still.
- Let them warm up slowly – never put them close to a heater or in a hot bath. Use:
  - an aluminium space blanket
  - warm towels and blankets
  - a wrapped hot water bottle, and/or
  - body heat
- Give them warm drinks, but never alcohol – it increases the body's heat loss
- Give them CPR, if necessary, and call for help as soon as possible.

Cold water: Reduce the risk

- Wear a lifejacket over clothing or wet weather gear. If you fall into the water, a lifejacket will help you manage cold shock, conserve your energy and prevent you from inhaling water. It will also give you more time to get back into your vessel or for someone to help you
- Be prepared before you go on the water, especially in winter and on alpine waters
- Know the water temperature and check weather conditions
- Wear warm clothing under your wet weather gear.

Capsizing and swamping

Capsizing and swamping can be caused by a number of situations, including big waves, overloading or damage to your vessel. Swamping is when your vessel fills with water, increasing the risk of sinking.

If you're in a small open powerboat or paddlecraft – such as a canoe or kayak – take extra care. These vessels can more easily capsize or be swamped.

If your vessel capsizes or is swamped, act quickly to keep yourself and anyone else on board safe.

What to do

If your vessel capsizes or is swamped:

- Make sure everyone is wearing a lifejacket. Give one to passengers who are not already wearing one
- Use your marine radio, if it's working, to make a distress call
- If your vessel is swamped, try to empty the water with your bucket and bilge pump
- Stay with your capsized vessel – this makes it easier for rescuers to find you
- If it's safe to do so, get the EPIRB and distress flares out of the vessel to alert search and rescue services
- Make yourself as visible as possible to other vessels and aircraft by displaying your V sheet
- Put on more clothes if you can – this helps keep you warm and may delay or prevent hypothermia
- Abandon the vessel only as a last resort. Take the EPIRB and distress flares with you, if possible.

Capsize and swamping: Reduce the risk

- Always wear a lifejacket. It can save your life if you end up in the water after capsizing or being swamped
- Make sure essential safety equipment – such as lifejackets, flares and an EPIRB – is easy to access in case you need to abandon the vessel quickly
- Never overload your vessel. Loading your vessel with people or gear beyond its capacity can make it unstable
- Never anchor a small boat, or a vessel not equipped for anchoring, by the stern. This can lead to swamping and flooding
- If crossing a coastal bar, plan ahead. You must wear a lifejacket and know how to handle your vessel. Even in calm conditions vessels can be swamped, damaged or wrecked on coastal bars
- Take extra care when travelling with a following sea – when the sea is moving in the same direction as your vessel. Your vessel can tip sideways, increasing the risk of swamping and capsizing
- Check your boat is fitted with appropriate internal buoyancy, such as airtight compartments or foam. This helps your boat stay afloat if it capsizes or is swamped.

Propeller strikes

A strike from a boat propeller can cause serious injury or death. As the skipper, you should consider the area around the propeller a hazard zone. This means making sure that no person or any part of their body goes near a spinning propeller.

Keep a proper lookout at all times when underway, especially near swimmers. Take extra care when you see an 'Alpha' flag showing divers are nearby, and when you're towing.



The area around boat propellers is a hazard zone.



What to do

Always turn the engine off when you're near people in the water. Some propellers can continue to spin even in neutral.

Fitting propeller guards to outboard engines reduces the risk of injury. It's recommended that sport and recreational organisations use propeller guards, especially when running activities with a high risk of capsize.

Prop strike: Reduce the risk

- Before starting the engine, inspect the area near the propeller to make sure it's all clear
- Follow minimum distance rules to keep well clear of people in the water, designated swimming areas and other vessels
- Make sure everyone on board knows the risks around propellers, especially the driver
- Make sure the driver wears a kill switch lanyard – this stops the engine if they lose control of the boat
- Make sure everyone on board keeps within the boat while it's underway. This means no part of their body hangs over the sides or bow, including 'bow riding' and 'teak surfing'
- Consider installing wireless engine cut-off switches, propeller guards and alternative propulsion systems
- When towing a person – such as a water skier or wakeboarder – make sure the tow rope is long enough. The person being towed must be a minimum of 7m behind the vessel, unless you've reduced the risks associated with carbon monoxide emissions and the propeller is forward of the back of the hull.



Whales on their annual migration off the coast of Sydney. Destination NSW photo.

Protecting the environment

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Waste and sewage disposal

Protecting our waterways is a shared responsibility. Disposing of waste correctly is one way you can respect and care for the marine environment. Never leave anything in the water.

General waste

You must not dispose of rubbish or any other waste from your vessel into the water.

You can help protect the marine environment by:

- collecting all your rubbish on board and disposing of it properly on shore
- using low-phosphate or no-phosphate soaps and detergents in sinks and showers
- wiping cooking utensils and plates clean with a paper towel before washing.

Cleaning your vessel

When you wash your vessel, you must do everything you can to protect the environment. Practical steps include:

- Where possible, use an approved slipway or wash bay with waste containment and wastewater controls
- Rinse trailered vessels with fresh water after each trip
- When your vessel is moored, remove any slime or growth that's beneath the waterline with a soft cloth, brush or sponge
- When cleaning, avoid removing surface coatings – such as antifouling paint – while your vessel is in the water
- Minimise use of chemicals or degreasers
- Check product labels and use non-toxic, low- or no-phosphate and chlorine-free cleaners
- Use highly diluted detergent solutions
- Do not let the wastewater run back into the waterway.

Oil and chemicals

You must not discharge oil and chemicals from your vessel into the water.

Make sure you:

- keep bilges clean to prevent pollutants being discharged
- refuel small vessels and refill fuel containers on shore, away from the water, avoiding overfilling
- clean up any oil or fuel spills quickly.

You must report marine oil or chemicals spills to:

- Transport for NSW (Maritime) on **13 12 36**, or
- Port Authority of NSW on **9296 4999**, or
- NSW Environment Protection Authority (EPA) on **13 15 55**.

Sewage

You must not discharge sewage into NSW waterways. For recreational vessels, your options for sewage storage are:

- an onboard toilet with a holding tank
- a small portable toilet with a holding tank
- onshore toilets.

Houseboats must have an onboard toilet with a holding tank.

Sewage from a holding tank must be discharged at a pumpout facility or toilet. For more information, see the **www.transport.nsw.gov.au/vessels-sewage-faqs**.

For a complete list of pumpout locations, visit: **www.nsw.gov.au/driving-boating-and-transport/using-waterways-boating-and-transport-information/protecting-environment-and-waterways/pump-out-facilities**.

Some vessels built before November 2005 have an approved onboard sewage treatment system. If your vessel has one of these systems, the treated sewage must be discharged at a pumpout facility. You must never discharge sewage in or near marine parks, waterways used for aquaculture – such as shellfish harvest areas – or for recreation.



Help stop marine pollution – take your rubbish with you.

Protecting marine life

You can help protect NSW waterways for future generations by taking extra care around marine animals and plants.

Marine animals

All native mammals, birds and reptiles are protected in NSW. These include seals, penguins, turtles, whales and dolphins, as well as a wide variety of waterbirds.

You must keep a proper lookout and a safe distance to avoid harming these animals. You must be a minimum distance away when whale and dolphin watching.

Little penguins are an endangered species. Parts of Sydney Harbour have been declared a critical habitat for little penguins, including the Spring Cove area near Manly. You must follow the access, fishing and anchoring restrictions in these areas during the penguin breeding season (July to February).

Noise can also disturb wildlife. Reduce noise around waterbirds and other animals. Keep well clear of any birds or animals that might be feeding or roosting on the shore. If birds take flight when you approach, you're too close.

If you see an animal and there's a risk of collision, put your engine in idle until the animal moves away. Once it's safe, move off slowly and carefully.

Seagrasses

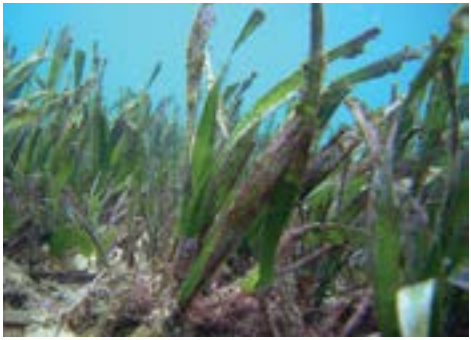
Seagrass beds provide food and shelter for a wide variety of fish and invertebrates. They also help bind the sea floor and improve water quality.

To help protect seagrasses:

- Do not enter shallow, weedy areas – propellers can damage seagrasses
- Avoid stirring the sea floor with your propeller. In shallow areas trim your engine up and move slowly, or switch off the engine and use oars or a paddle to move to deeper water
- Do not anchor on seagrass beds – these often look like darker patches on the sea floor.

See 'Seagrasses' at **nsw.gov.au**

If your mooring is over a seagrass bed, it's recommended that you use a seagrass-friendly mooring. If you need to move your mooring, contact Transport for NSW (Maritime) to check your options.



Seagrass beds are easily damaged by anchors and propellers.

Aquatic weeds and other pests

Aquatic weeds can reduce oxygen and sunlight in the water. Heavy weed infestations can overtake native habitats and make it difficult to use the waterway. They can also harm or displace native marine life.

Aquatic weeds include freshwater plants, such as salvinia, cabomba and alligator weed. The marine alga caulerpa taxifolia has been found in several estuaries along the south and central coasts of NSW. It has the potential to overtake native seagrass and overgrow other habitats.

You may be carrying these weeds on your vessel and unknowingly spreading them throughout NSW waterways.

To help stop the spread of weeds and pests:

- Avoid shallow, weedy areas and places with heavy aquatic plant growth
- Avoid local exclusion zones and fishing closures
- Inspect ropes, anchors and fishing gear before and after use
- Remove marine growth on the hull when your vessel is moored for extended periods
- Clean your vessel, trailer and equipment before and after you go on the water
- Learn to recognise aquatic weeds and pests, and report them if you see them.

For more information about aquatic pests or to report a suspected infestation, see 'Stop the spread of aquatic pests' and 'Aquatic pests & diseases' at **dpi.nsw.gov.au**



Heavy infestations of marine algae are harmful to marine life.

Bank erosion

The wash from your vessel can erode banks. This can destroy sensitive habitats for native fauna and flora. The more wash, the greater the potential for bank erosion – see Wash on page 98.

To help protect banks:

- Take extra care in sheltered waterways
- Avoid creating excessive wash behind your vessel
- Slow down if your vessel's wash is causing other vessels to rock, or waves to break or slap on the shore
- When towing a person, keep well clear of soft or eroding banks by using more open areas of the waterway.

Marine mammals

Whales, dolphins, dugongs, seals and sea lions are protected marine mammals in NSW. To keep these animals and your vessel safe, you must follow rules when watching and approaching them.

See 'Approaching marine mammals in NSW' at **environment.nsw.gov.au**



Keep your distance

All vessels must keep a minimum distance and reduce speed when near marine mammals.

Whales, dolphins and dugongs

Powerboats, sailing boats and paddlecraft must keep a minimum distance from whales of:

- **100m**, or
- **300m** if there are calves.

You must travel at a constant slow speed and leave minimal wash within 300m of whales.

You must keep a minimum distance from dolphins and dugongs of:

- **50m**, or
- **150m** if there are calves.

You must travel at a constant slow speed and leave minimal wash within 150m of dolphins and dugongs.

If you're driving a personal watercraft (PWC), you must keep a minimum distance of 300m from whales, dolphins and dugongs. PWC can make fast and erratic movements and less noise underwater than other vessels. This means PWC are more likely to collide with a marine mammal.

If there are predominantly white whales, all vessels, including PWC, must keep a distance of 500m.

Seals and sea lions

All vessels, including PWC, must keep a minimum distance from seals and sea lions of:

- **10m**, or
- **80m** if there are pups.

Approaching whales, dolphins, dugongs and seals

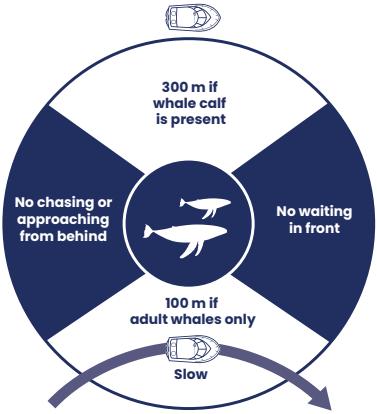
When approaching whales, dolphins, dugongs and seals, you must keep minimum distances. You should start your approach at an angle of at least 30 degrees to their direction of travel. This helps you avoid cutting across their path or putting your vessel directly in front of or behind them.

If there are other vessels approaching, wait your turn. No more than 2 vessels should approach at a time.

If an animal approaches your vessel:

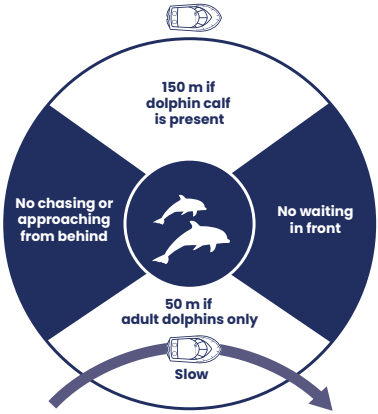
- Stop or slow down to minimise your wash
- Move away or disengage your vessel's gears
- Avoid making any sudden movement
- Minimise noise.

Whale approach distances



You must keep a minimum distance from whales.

Dolphin approach distances



You must keep a minimum distance from dolphins and dugongs

Noise

You must not make any noise that could offend, disturb or be harmful to someone outside your vessel. This could be noise made by your engine or by people or music on board.

You must not modify the engine noise control equipment on your boat or personal watercraft (PWC).

Offensive noise

Noise can be disruptive – not only because of its volume, but also because of the type of noise it is. Always consider how your activities affect other people on the water, on the shore and local residents.

Even a relatively quiet vessel may offend others if it's early in the morning or if you stay too long in the same area.

Whether a noise is offensive depends on how a 'reasonable person' would react. To work out whether the noise from your vessel's engine may be offensive, consider:

- character of the noise – for example, tone, impulse (sharp sounds) and fluctuation
- noise quality – for example, whether it could be considered annoying
- volume – how loud it is and whether it's louder than background noise
- the effect the noise has on activities around you
- time of day – noise travels further when it's calm and quiet
- how far you are from the shore
- how many people are nearby
- whether you're near a residential area
- which direction the wind is blowing – noise can travel further with the wind.

Noise can also disturb wildlife, especially waterbirds and other animals – see Protecting marine life on page 168.

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