

Safe Operation

Boat Handling

Setting Off

Start your engine, allowing it to warm up before you set off. Untie any mooring ropes from the jetty or wharf, leaving them tied to the boat, coiled and ready for future use. Make sure all ropes are inside the boat and not trailing in the water where they can be caught in the propeller. Check that the area is clear of traffic before moving away, taking note of any speed limits or 'no wash' signs that may be in the area. Be careful not to create excessive wash when passing people fishing, passive craft or moored boats to avoid rocking them about. Keep to the right side of the channel (see the section on Navigation Markers for more information).

Slowing Down and Stopping

Boats don't have brakes, so give yourself plenty of time to stop. In a powerboat ease off the throttle and move into neutral, using short

bursts in reverse gear to slow down and come to a final halt. Remember, some craft are more difficult to handle when in reverse. You may need an occasional forward boost to gain better control.

Steering

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

Using a tiller is simple, though different to a wheel, providing you remember that pushing to the right will make the boat head left and vice versa. Be patient and plan ahead – the boat will take a few seconds to respond.

Tying Up

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

tightly. Be aware of the rise and fall of the tide. Make sure you know how to use your ropes properly. Keep them coiled, free of knots and ready for use.

Mooring

Slow down almost to a stop and carry out all your manoeuvres as slowly as possible. Move your boat very slowly, pointing the bow towards the mooring buoy, then use reverse to stop the boat just before the bow hits the buoy. Put the engine into neutral.

Anchoring

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

You should have a length of chain between the anchor and the anchor line to cushion the vessel's motion and help the flukes to dig in. The chain also stops the anchor line chaffing on the

bottom. The bigger the vessel, the more chain you require.

In choosing your anchoring position, you should take into account local tides, possible wind changes and swing room required to keep your vessel away from any other vessels or hazards nearby. These factors are particularly important at crowded anchorages, or if you plan to stay overnight or leave your vessel unattended for even a brief period. If the water is fairly shallow, you may have to periodically adjust the amount of line you have out to allow for changes in depth caused by tides.



Propeller Safety:
Fit prop guards in consultation with an approved engine supplier/dealer.

Avoid anchoring in sensitive habitats such as seagrass. Areas of seagrass are usually visible as dark patches on the sea bed. Damage from an individual anchor can potentially set off progressive seagrass loss over a wide area. Historic shipwrecks are also easily damaged by anchors and anchoring in their vicinity should not be attempted.

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

Boating on Inland Waters

Boating on inland waterways including rivers, creeks and dams demands special care. Many of these areas present issues not encountered in coastal waters including submerged trees and other snags which may be encountered. Inland waterways are often murky and constantly changing so it is important to keep a lookout for objects that can impede your navigation. If you have one, use a depth finder to tell you the depth of the water. If you don't have a depth finder, play it safe and reduce speed.

Familiarise yourself with the area and use maps and charts wherever you can – they will give you a good idea of areas to stay away from. Talk to local operators as they can often provide you with information that you won't find on a chart, such as how the current runs after rain and water depth following drought.

It is also important to keep a good lookout for objects ahead or above you such as overhead powerlines, low level bridges and anything else that may impede your progress and compromise your safety.

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

Be careful in dams subject to water releases. These releases mean the areas near spillways can be extremely dangerous due to turbulence as the water flows through spillway gates. Boats can easily become caught in the turbulence and trapped against the gates or even forced through them. Stay well clear of such areas.

Also remember that during release periods, the foreshore can become soft, trapping vehicles during attempts to launch and retrieve boats.

The surface of the water in shallow dams and storage areas can become rough in windy conditions. If you are out when weather conditions change, store any unnecessary gear (removing any conductors of electricity if lightning is present) and make sure that everyone is wearing a lifejacket. If land is near, head for it.

If you are forced to ride out the storm, keep the bow into the waves, wind and/or current. If the motor fails, an anchor from the bow will allow the boat to ride up and over most oncoming waves as anchoring from the stern can cause water to rise over the transom, flooding or even capsizing the boat.



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

In some areas good phone or radio coverage is not always possible, making assistance difficult if any problems occur. And remember not to overload your vessel. While these rivers and dams may look peaceful, always consider the low water temperature and remote location could prove risky should trouble occur.

Alpine Lakes (Eucumbene, Jindabyne, Tumut, Blowering and Burrinjuck)

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

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

Alpine Weather

There is no specific boating forecast provided by the Bureau of Meteorology for alpine lakes. Any person boating in those areas needs to review the available general weather conditions and forecasts and determine how they may affect the waterway they propose to operate on. It must be remembered that weather conditions in high altitudes can change dramatically within

a matter of minutes and proper trip preparation is essential.

Wind and Waves

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

The following recommendations apply in these situations:

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

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

Cold Water

The water temperature of inland waterways varies considerably. The risk of hypothermia always exists and can be exacerbated by a wind chill factor, even in the warmer months of the year.

Note: Waders may be ok for fishing from the shoreline but in a boat they can add to the risk of drowning should your boat capsize, be swamped or you fall overboard.

When getting dressed for boating in cold areas, stop and ask yourself: 'could I swim in all this gear if I had to?' If the answer is no or you are unsure ... put a lifejacket on, it will help insulate you against the cold and assist you to stay afloat should you end up on the water.

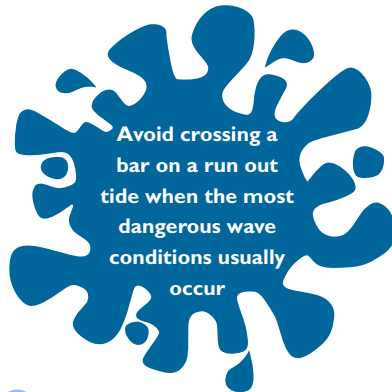


Crossing Coastal Bars

Shallow sand bars which can form at the point where rivers, creeks, lakes or harbours meet the sea are locations for experienced vessel drivers only. Any channel through such bars can change frequently. Even in apparently calm conditions, vessels can be swamped, damaged or wrecked on bars and lives have been lost. Avoid crossing a bar on a run-out tide when dangerous waves may occur.

Knowledge & Experience

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



- spend considerable time watching the bar conditions in all combinations of weather and tide
- cross the bar with other experienced skippers before trying it yourself
- obtain and read a copy of the bar crossing brochure from NSW Maritime.

Preparation & Planning

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

Know the times of the tide and obtain an up-to-date weather forecast (especially expected wind conditions).

Observe the bar conditions – be prepared to cancel or delay the crossing.

Check the vessel – especially steering and throttle controls, and watertight hatches and drains. The vessel must be seaworthy and suitable for the conditions, and able to take some impact from waves.

Ensure that all loose items can be stowed away in lockers or tied down to prevent movement.

Check that all watertight hatches can be closed



and sealed properly and that drain holes are free and bilge pumps work.

On the Water Prior to Crossing

Secure all loose gear and equipment. Brief your passengers / crew about the dangers – put on lifejackets type I.

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

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

When crossing coastal bars, you should not lose your nerve in the white water. Once committed, keep going. Trying to turn around in the middle of a bar entrance can be disastrous. Try to take waves as close to head on as possible.

Going Out

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

- idle towards the breaking waves watching for any lulls
- if a flat spot occurs speed up and run through it
- if the waves keep rolling in, motor to the break zone
- gently accelerate over the first part of broken water
- apply more power and run to the next wave, heading for the lowest part (the saddle) if possible because this is the last part to break
- back off the power just before meeting the next swell
- pass slowly through the wave and accelerate again to the next wave
- repeat the process until through the break zone.

Coming In

Be aware the conditions may have changed. If dangerous, consider alternatives such as:

- wait for conditions to abate
- change of tide
- or seek alternate safe harbour.

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

- approach the break zone and try to pick the spot with the least activity
- keep any leads in transit; breakers may obscure your vision of the entrance
- choose a set of waves suitable for your entry
- position the vessel on the back of a swell and maintain speed, ensuring that:
 - you do not overtake the wave and run down its face
 - you stay ahead of any wave behind you
 - when the wave ahead of you has broken, accelerate through the white water
 - beware of steep pressure waves



- bouncing back off the entrance or shore
 - adjust speed to counter any pressure waves or any outgoing current.

NSW Maritime has a number of initiatives on bar crossings including a brochure *Boats 'n' Bars - A Safety Guide* brochure, a list of coastal bars, bar crossing seminars and a bar crossing safety checklist sticker. Call your local NSW Maritime Operation Centre for more information. NSW Maritime is also conducting a bar web camera trial to assist in trip preparation. Visit www.maritime.nsw.gov.au for more information.

Lifejackets are compulsory to wear when crossing coastal surf bars

Handling a Vessel at Sea

The way a boat handles at sea will depend on:

- its hull design and strength
- the amount of power used to propel it
- wave direction
- the way the boat is steered.

Bomboras

When boating along the coastline, particularly when close to a shoreline, be aware of bomboras. Bomboras are shallow areas such as those created by rocks or reef that cause waves to break. It is advisable to check maps and charts, talk to locals, and be aware of the existence of bomboras. The danger posed by these formations can be higher in good weather as a bombora may not be identifiable because

it may not always have breaking waves. Boaters need to be cautious anywhere bomboras may exist.

Head Seas

Generally, the best way to tackle bigger waves is to take them bow on or about 30 degrees off each bow. Too much power will result in the boat leaping over the crests and crashing down into troughs. This slamming action is not good for either the boat or the people on board. Too little power may mean that the waves break onto or over the vessel. Control the speed and direction steered to achieve the most comfortable and safest ride.

Beam Seas

The danger from travelling beam onto waves is that rolling is increased. The amount of rolling can be reduced by varying the angle to the seas. Watch out for waves that are larger than others and consider changing course or speed to ride over or with it.



Following Seas

Travelling with a following sea has the greatest potential for disaster with broaching sideways and swamping/capsize a real possibility. Steering power is reduced by following seas and judicious use of the throttle controls is critical. As in crossing a bar, you should attempt to maintain a position on the back of waves, using throttle to keep ahead of waves breaking behind the boat.

Remember When Conditions Worsen

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

Handling a Vessel in Rough Weather/Hazards

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

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

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

Sudden squalls usually only last for a short period and sometimes precede a change in wind direction, usually blowing at much stronger speeds than the wind that will follow. If you doubt your chances of safely running back to harbour you may prefer to ride out the initial onslaught by keeping your bow into the wind and waves. The main criteria is to keep a speed sufficient to allow you to steer the vessel, but no faster. Without power to maintain steerage, a vessel will drift side on (beam on) to the sea and be vulnerable to capsizing. A sea anchor, or a strong bucket tied to the bows will help to keep you pointing into the waves should your engine fail.

Always wear your lifejacket at times of heightened risk.

Seaplanes

Seaplanes when on the water are just like any other vessel. They are subject to all the restrictions and privileges of other boats and conduct their operations accordingly. Like other boat operators, seaplane pilots hold marine boating licences to operate a vessel at speed in excess of 10 knots. Don't be alarmed if a small seaplane alights or takes off in the waterways near you. Seaplane pilots are specially trained and qualified to operate upon the water. If you're running straight don't suddenly change course to avoid the seaplane.

Water Traffic Rules

Speed

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

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

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

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

Visibility – drive slowly in rain, fog, mist, smoke or glare. At night, special caution is required because many potential hazards may not be lit or may not be easily seen. Background shore lighting may confuse you.

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

Navigation hazards – slow down in shallow areas, or in unfamiliar waterways. Water depth can vary and change frequently. Not all hazards may be marked or lit, and signs, buoys, marks or lights may have shifted or been vandalised.

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

Manoeuvrability of the vessel – Stopping and turning ability depends on the speed travelled, wind and current and the boat's design (such as hull shape, engine and propeller type and number.) If your vessel does not have a speedometer, you must be able to determine if you are exceeding a local speed limit. For example, if your boat is planing in a restricted speed zone it is likely that you are exceeding the speed limit, so slow down.

Avoiding Collisions

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

Lookout

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

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

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

Bow Riding



It is an offence to allow a person to extend any part of their body over the bow, side or stern of a powerboat which is underway.

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

Giving Way

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

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

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

Note: In a collision, all masters involved can be held responsible even if the give-way vessel does not give way, because all masters are required to exercise caution and take avoiding action if the other vessel does not. Always keep a safe distance off other vessels so the vessel can be stopped or manoeuvred to avoid any sudden danger. The faster the speed, the greater the safe distance must be. When altering course make your intentions clear to others as early as possible.

Sound Signals

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

- 1 short blast ...** I am altering course to starboard (the right).
- 2 short blasts ...** I am altering course to port (the left).
- 3 short blasts ...** I am operating engines astern (stopping/slowing).
- 5 short blasts ...** I am unsure of your intentions and I doubt whether you are taking sufficient action to avoid collision.

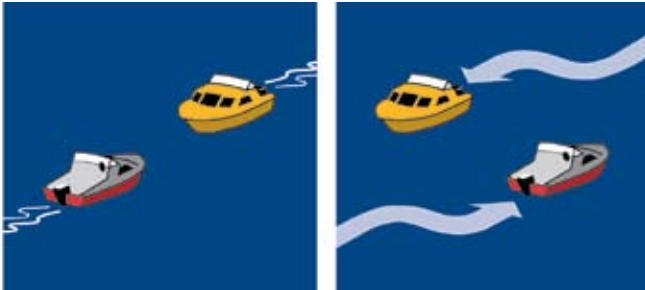
Power Gives Way to Sail

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



Power Driven Vessels Meeting Head on

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



Power Driven Vessels Crossing

In crossing situations, give way to the right.



Action to Avoid Collision

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

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

Vessels Overtaking

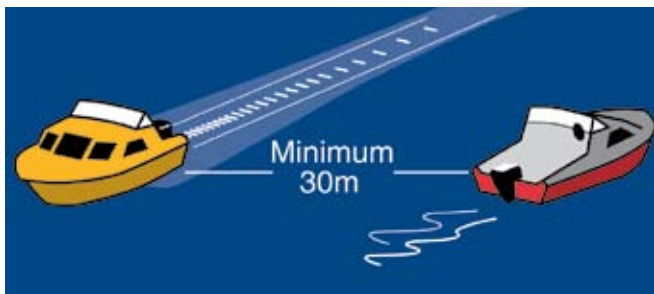
Any vessel (including a sailing boat) which is overtaking another vessel must keep well clear of the vessel being overtaken. You can overtake another vessel on either side but only when it is safe, and you must stay well clear. In narrow channels you must be particularly careful when overtaking. In all instances, make sure you do not cut in front of the vessel you have overtaken.



Distance Off (Vessels Other Than PWC)

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

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



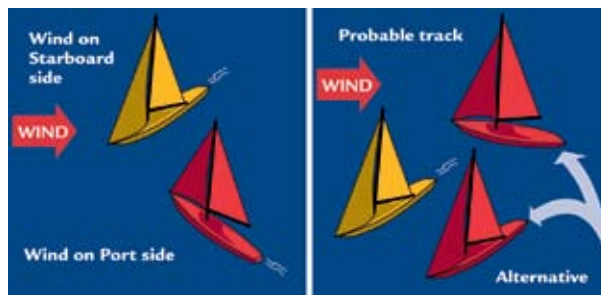
- **60 metres** from non-powered vessels (sailing and passive) or persons or if that is not possible a safe distance
- **100 metres** from a dredge or work barge, if you are travelling faster than 4 knots.
- a safe distance from any vessel towing a person

There are also special requirements if you are using aerial equipment, such as when para-gliding and kitesurfing. Before using this type of equipment you should contact your local NSW Maritime office for advice.

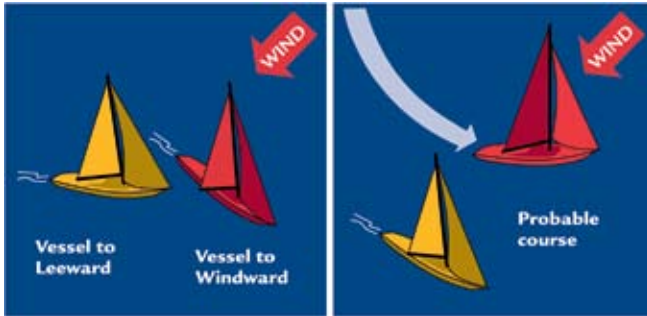
(A **safe distance** between a vessel and a person or thing (including another vessel) is a distance that will ensure that the vessel will not cause danger or injury to the person, or damage to the thing, having regard to all relevant safety factors, including weather conditions at the time, visibility,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

Sailing Vessels and Sailboards

When two sailing vessels have wind on different sides, the vessel with wind



on the port side gives way.



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

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

Mooring Areas

On many waterways in NSW, areas are set aside for the mooring of vessels. These vessels are not required to be lit at night and the masters of other vessels must be aware of the location of such moorings. Check local maps or charts, or contact your local NSW Maritime Operations Centre for details of mooring areas.

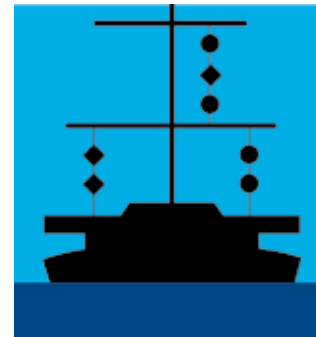
When navigating near, in or through a mooring area:

- drive slowly and keep wash to a minimum
- keep a lookout for people in the water, small dinghies, and trailing



ropes and

- when travelling at 10 knots or more you must stay at least 30m from any moored vessel.



Safe side to pass (Diamonds)



Obstruction this side (Balls)

Safe Side to pass (Green - Go)

Obstruction this side (Red - Danger)

Dredges

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



Diving Activities

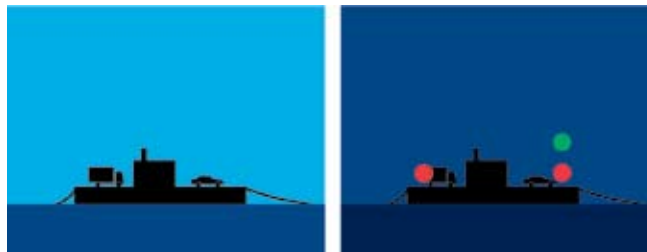
The diver's flag must be shown when people are engaged in diving activities from a vessel.

It must be no less than 400 mm x 400 mm in size and flown in a vertical position above the superstructure. It is recommended that this flag be shown when diving/snorkelling from shore. As divers may not always be in close proximity, it is important that as soon as you see a dive flag you slow down, keep well clear and keep a good lookout. If you are within speaking distance of the dive master get their instructions as to a safe direction to travel to avoid any possible encounters. If there is no dive master about then it's your responsibility to keep a good lookout, at all times, for any divers above and below the surface and then determine a safe distance. If you see a snorkeller in the water, remember to remain a safe distance. If you are travelling at a speed of 10 knots or more keep a minimum of 60 metres from them in the water. When you see a diver's flag slow down, keep well clear and keep a lookout.



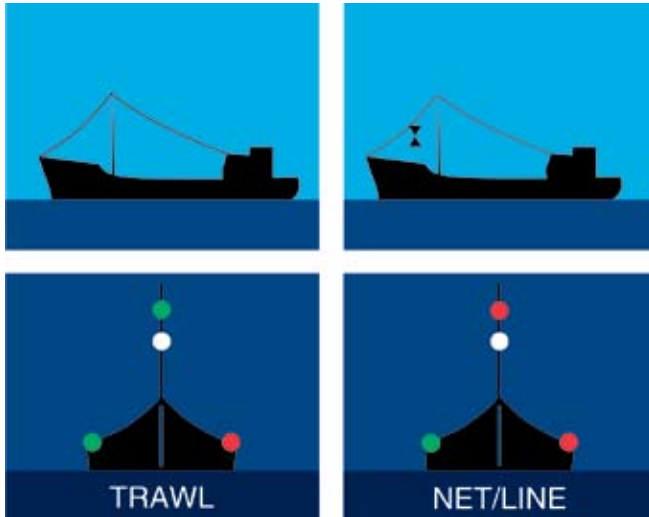
Vehicular Ferries

In some areas vehicular ferries drag themselves across channels using wires or chains. Because these wires/chains are often below the water you may not see the danger. You must slow down to 4 knots or less when within 100 metres of the wires or chains of a vehicular ferry, when it is underway, and disengage power when crossing the wires or chains. Always pass astern of the ferry. Preferably wait until it has reached the shore to avoid becoming entangled in the wires.



Commercial Fishing Vessels

Licensed fishing vessels (LFB) display special shapes and lights when their manoeuvrability is restricted by their fishing apparatus. You should keep clear of these vessels when you see such shapes or lights or notice they are working with nets and lines. (Contact your local Fisheries office for more details about the rights of commercial fishing vessels).



Navigating channels

When navigating in a channel or fairway always consider the following:

- keep as far to the right-hand side as is safe and practicable
- a vessel of less than 20 metres in length or a sailing vessel shall not impede the passage of a vessel which can safely navigate only within a narrow channel or fairway
- when engaged in fishing you must not impede the passage of any other vessel navigating within a narrow channel or fairway
- take extra care when approaching the bend of a channel, always keep to a safe speed and maintain a proper lookout
- do not anchor in a narrow channel.

Sydney Harbour

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

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

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

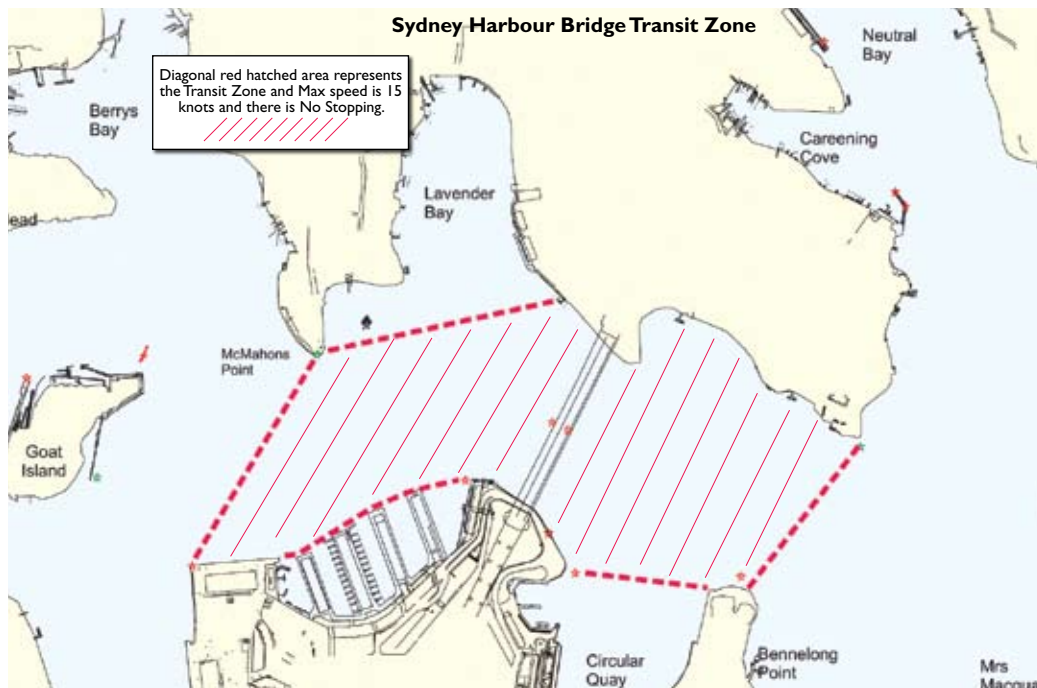
The number of vessels on the Harbour is increasing each year, providing a greater challenge in managing the potential for additional conflict and incidents, whilst ensuring safety on the waterway. There is a continuing need for an understanding and commitment to water safety by all people using the Harbour. The different types of boating may not always be compatible and can lead to potential conflicts.

For example, people sailing in organised events and commercial vessels operating to timetables.

Following an investigation into a fatal boating accident, NSW Maritime established a Sydney Harbour Bridge Transit Zone. The Vessel Transit Zone has a 15 knot maximum speed limit, in the vicinity of the Harbour Bridge between a line drawn between Bennelong Point and Kirribilli Point to Millers Point and Blues Point but does not include Walsh Bay, Sydney Cove or Lavender Bay north of a line

between Blues Point and the southern extremity of Milsons Point ferry wharf. Within this zone anchoring or drifting is effectively prohibited unless in the event of an emergency.

This means that vessels may only effectively travel through to reach an area alongside or outside of the transit zone.



Priority Over Sail

Some commercial ferries on Sydney Harbour display an orange diamond shape which grants priority of way over sailing vessels. Do not attempt to cross the path of an approaching ferry displaying this signal.



Jetcats or Rivercats (on Sydney Harbour)

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



MARINE BROKERS
ASSOCIATION
A division of the Boating Industry Association of NSW Ltd

Boating Industry Association
www.bia.org.au

Big Ships and Small Boats

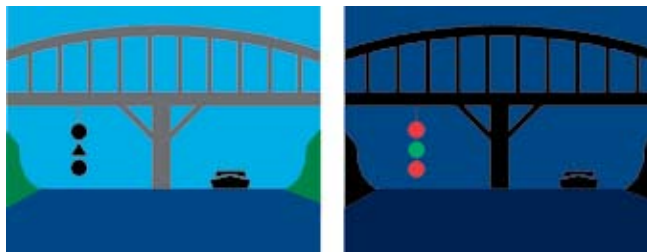
- Large vessels are restricted to particular channels and cannot deviate from their set course.
- These vessels are restricted in their ability to alter their course due to their size and need a large area to turn.
- Its stern swings out wide when negotiating a turn.
- They lose steerage if they travel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

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

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

NSW Maritime provides more information regarding Big Ships and Small Boats on its website, including map sections showing the shipping channels. Visit www.maritime.nsw.gov.au

Channel Blocked / Closed



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

- Bridge span blocked
- Channel is blocked
- Port closed

Recreational Boat Users Aware

- It is important recreational boaters maintain a proper lookout at all times and do not impede any commercial vessel in its navigation.
- A recreational boater must make clear their intentions to an approaching vessel well in advance. For the master of a large ship who is unclear of your intentions, you should indicate that you are getting out of the way of a large vessel at least one kilometre in advance of that vessel.

- It is important that you do not anchor in the navigation channel.
- Ensure that at all times you can be seen clearly. Dull aluminium tinnies can be difficult to see, especially in overcast and poor conditions. Wear bright clothing and be seen.
- After sunset and in restricted visibility ensure you have the correct navigation lights fitted and that they are in proper working order. Your lights must be bright and must be visible for a distance of kilometres. Lights not only tell the other vessels what sort of vessel you are, but also what you are doing and where you are going. Make sure that if someone 'interprets' your lights, that they are getting the right message.

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

Sydney Harbour Control VHF 16/13 (24 hrs). Nav warnings / Met broadcast VHF Ch 13 (5 min. past the hour). Unless otherwise directed, sailing vessels and motor vessels are not to impede the passage of commercial shipping/naval vessels inside the shipping channels. Navigation Collision Regulation 1983 apply.



Navigation at Night

Be Bright – Be Safe at Night

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

Boating at night: Go slow, be seen, keep a lookout and be bright

Go Slow

When fog, glare, smoke or darkness restricts your visibility, you must slow down to a safe speed.

A safe speed is one at which you can stop and avoid a collision, considering the circumstances and conditions at the time. You wouldn't drive fast on a dark road without headlights – the same applies on dark waterways – be bright

Remember – the faster you go, the faster you approach hazards and hitting a hazard at speed can have a greater impact on you, your passengers and your boat

Be seen

You may be able to see others but can they see you? At night, every type of craft on the water needs lights in order to be seen.

Whether you are paddling, rowing, sailing or motoring, everyone

needs to be able to recognise where you are and what you are doing. Make sure you have the right lights for your craft and that they work properly. Use them as soon as the sun goes down or when visibility is poor.

Your lights should be mounted in a position that gives you optimum night vision and allow others to see you from every direction.

Carry a working waterproof torch. It may help others see you if you shine your torch on your sails or superstructure. Make sure you don't adversely affect your night vision, or the vision of other boat skippers.

If you anchor at night, show an all-round white light where it can best be seen.

CONSIDER UPGRADING TO HIGH-VISIBILITY LED LIGHTS.

Keep a lookout

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

Navigation lights may not be as bright as other lights and background lights may hide something that is closer.

If it is a large ship, the lights might be high and you may not realise that you are looking at the sides of a black hull.

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

Know your waterway

Navigation markers can aid you in safe passage of a waterway.

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

Different lights

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

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

Sidelights: a green light on the starboard (right) side, and a red light on the port (left) side of a vessel.

Each shows an unbroken light over an arc of the horizon of 112.5 degrees, and is fixed to show from ahead, to just behind the beams of the vessel, on its respective side.

On a vessel of less than 20 metres in length, the sidelights may be combined in one light unit,

carried on the fore and aft centreline of the vessel.

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

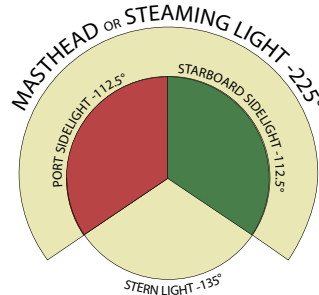
Range of visibility

Vessels 12 metres to 20 metres

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

Vessels under 12 metres

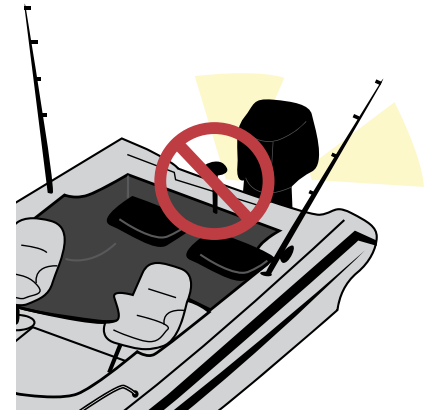
- Masthead light – 2 miles
- Sidelight – 1 mile



- Stern light – 2 miles
- All round lights – 2 miles

Placement of lights

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

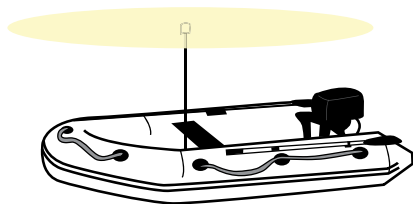


Masthead

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

Power vessels underway

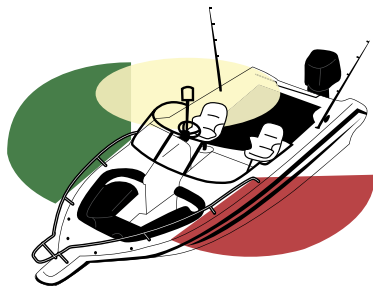
Vessels under seven metres and less than seven knots



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

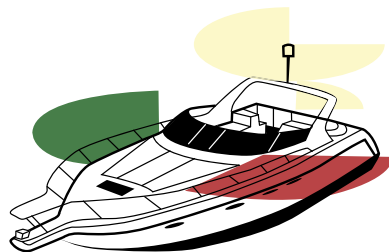
Vessels under 12 metres

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



- ii. Separate or combined sidelights and an all round white light

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



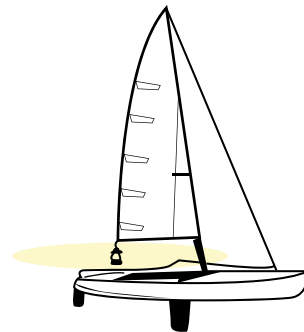
Vessels 12 metres to 20 metres

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

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

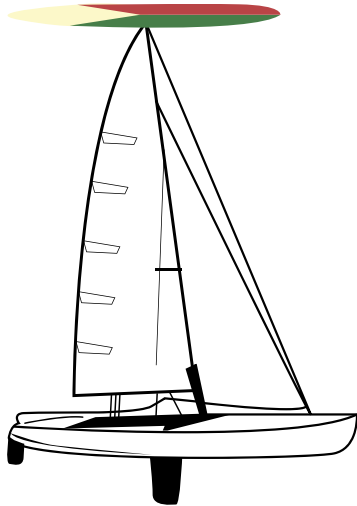
Sailing vessels underway

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



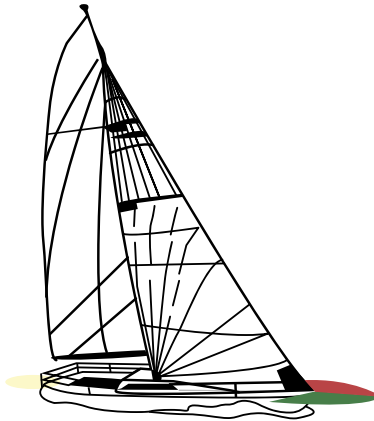
Sailing vessels under seven metres

Sailing vessels of less than seven metres in length, or vessels being rowed, shall exhibit the lights required for sailing vessels over seven metres. If not they should have ready use of an electric torch or lighted lantern showing a white light which shall be exhibited in sufficient time to prevent collision.



Sailing vessels seven metres to 20 metres

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

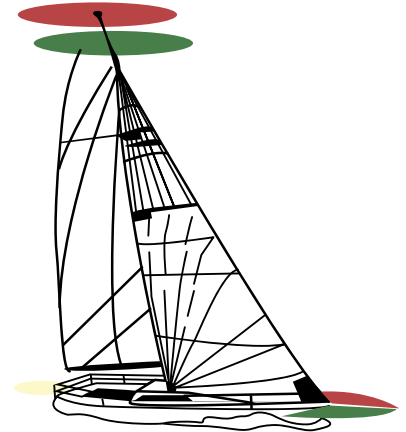


Sailing vessels over 20 metres

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

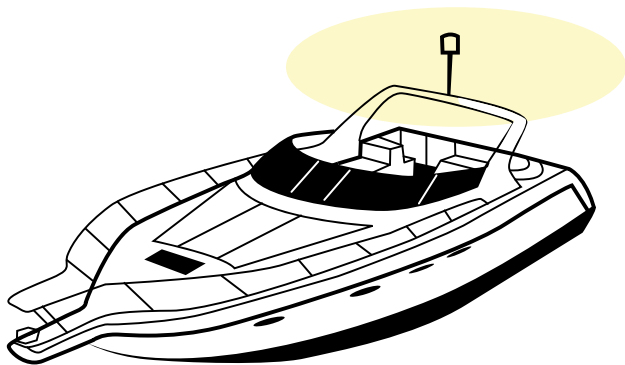
Optional lights for sailing vessels

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



Power and sailing vessels at anchor

Vessels less than 50 metres in length at anchor, shall exhibit an all round white light placed where it may be well seen. Anchor lights must always be shown from sunset to sunrise. If you



are at anchor in a busy area, then show additional lights to ensure you are seen and keep a good watch.

Rowing/Paddle Vessels

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

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

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



Why buy a boat when you can use one of ours...

you could be enjoying time on a luxury cruiser from \$795 per month.

Sydney Harbour 02 8765 1067
Pittwater 02 9999 4940
The Spit 02 9969 0127

pacificboating.com.au



pacific boating
The Ultimate Boat Membership Programme

Personal Watercraft

Personal watercraft (PWC) is the term used to describe vessels otherwise known by trade names such as Jet Skis, Waverunners and Sea Doo's. Regardless of the type of PWC it is important to remember PWC are just another form of powerboat, and are generally subject to similar regulations and laws. However, there are also some special rules that apply to the use of these craft. PWC are much more manoeuvrable than traditional power boats, have different handling characteristics and when used carelessly they can present a danger and nuisance to both the operator and to other people using our waterways.

PWC Drivers Licence

To obtain a PWC Licence, or to upgrade an existing General Licence, you must make an appointment to attend a NSW Maritime office, or attend a Boating Safety Course and successfully answer additional licence test questions (fee applies).

Note: Heavy penalties apply to PWC owners if their craft is driven by a person who does not hold a current PWC licence.

Registration

All PWC must be registered if used on NSW waterways.

Registration numbers, not less than 100mm high, must be displayed on **both sides** of the craft (not on the central control arm).

Registration numbers must stand out against any decals and striping on the PWC and be clearly visible when the vessel is being operated.

The registration label must be attached on the port side where it is visible.

Ride Smart Behaviour Stickers

PWC operators are required to display a "behaviour sticker" on their craft. This sticker summarises the key safety issues required to be followed while on the water.

The sticker must be affixed to the PWC near the controls where it can be easily seen.

Ride Smart
WHEN RIDING A PWC YOU MUST:

- BE PWC LICENSED**
 - Carry your PWC licence at all times.
- EXCLUSION ZONES AND IRREGULAR DRIVING**
 - Remember riding a PWC is prohibited in an exclusion zone eg. Sydney Harbour.
 - Irregular driving is prohibited in the Sydney PWC Restriction Zone or within 200m of the shore near residences.
- WEAR A**
 - PFD 1 or 2 offshore.
 - PFD 1, 2 or 3 on enclosed waters.
- KEEP YOUR DISTANCE**
When operating at 10 knots or more stay:
 - 60m from people, small non power driven craft, surf or swimming zones.
 - 30m from other vessels, objects, structures or shore.
- AVOID OFFENSIVE BEHAVIOUR.**
 - CONSIDER OTHER PEOPLE.
 - REMEMBER: NOISE ANNOYS.

RIDING A PWC BETWEEN SUNSET AND SUNRISE IS PROHIBITED

PWC Behaviour Sticker

Note: Inflatable lifejackets are not recommended when riding a PWC.

PWC Operating Restrictions

PWC may be prohibited or have restrictions placed on their speed and/or driving pattern as follows:

(1) PWC Exclusion Zones

The operation of PWC is prohibited in certain areas such as:

- Sydney Harbour, including the waters of all tidal bays, river and tributaries (includes Parramatta River, Middle Harbour and Lane Cove River)
- Darook Park at Port Hacking
- La Perouse at Botany Bay.

Check with your local NSW Maritime office.

(2) PWC Restriction Zones

This zone encompasses the bays, rivers and other waterways within the Sydney basin area which lies between Port Hacking, Wamberal and the Blue Mountains but does not include water off the coast.

PWC are not permitted to be used for

'irregular driving' within 200m of the shoreline of the above. Examples of 'irregular driving' are:

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

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

(3) All Other Navigable Waters

In all navigable waters, other than (1) and (2), and including all of the NSW coast, 'irregular driving' is not permitted within 200m of the shoreline where one or more dwellings are visible within 200m of that shore.

Note: Irregular driving does not apply when a PWC is towing a water skier or aquaplaner. However, as soon as towing activity is finished the no irregular driving rule comes into effect.

After Sunset

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

Keep Your Distance

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

- **30 metres** from power-driven vessels (including other PWC), land and structures (including jetties, bridges, moorings and navigation markers) or, if that is not possible a safe distance
- **60 metres** from non-powered vessels (sailing and passive) or persons, or if that is not possible a safe distance.
- a safe distance from any vessel towing a person

Riders and passengers should also beware the 'jet stream' from the engine. At close range this jet stream can be harmful to a person.

Distances to be kept when a PWC is towing

When towing a water skier or aquaplaner the same rules apply as for other vessels.

Tow-in Surfing

Tow-in surfing is a technique where a surfer is towed onto a wave by a person riding a PWC.

The following conditions apply to tow-in surfing.

- tow-in surfing is only permitted at surf breaks where there are no paddle surfers present
- both the operator of the PWC and the surfer must have a current PWC licence, current first aid certificate and wear an appropriate lifejacket when the activity is being undertaken
- both must attend any course or pass any test required by NSW Maritime
- the operator may not tow more than one person at a time and must give right of way to all other boating or recreational activities

- the operator of the PWC must maintain a distance of at least 200m from all vessels and people in the water.

The PWC is to be equipped with a:

- rescue sled
- second kill switch wrapped around the handle bars
- two-way communication device
- dive mask
- dive fins
- safety knife
- tool kit
- torch
- quick release floating tow rope with a minimum length of 7m
- bow tow-line with a minimum length of 7m.

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

Heavy penalties apply for non compliance.



NOTE: PWC may not be ridden on Sydney Harbour even though signs may not be in evidence. Penalties exist for breaches of PWC exclusion zones.

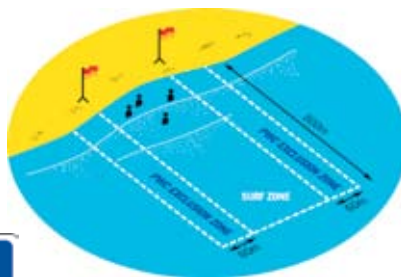
Surf Zone/Swimming Areas

What is a Designated Surf Zone/ Swimming Area?

Remember the same rules apply for PWCs as other vessels operating near surf zones/swimming areas. A designated surf zone is defined as the area extending 500 metres out from shore between surf patrol flags or signs. A swimming area is defined as the area extending 60 metres out from shore between signs for swimmers.



Swimming permitted



A vessel must not be operated in these zones or within 60 metres either side of the flags or signs marking such zones unless it is a vessel operated by Surf Life Saving NSW or Council lifeguards. Local councils can erect signs, designating PWC free zones. Such exclusion zones would be posted on the NSW maritime website when operational.

Safety Equipment

The driver and passengers must wear a suitable lifejacket.

On enclosed waters an approved lifejacket of type 1, 2 or 3 is required. On offshore waters an approved lifejacket type 1 or 2 is compulsory.

Noise Annoys

One of the most common complaints received about PWC is noise.

Many PWC operators tend to congregate near residential or popular recreational areas and drive around repeatedly in the same area. This can aggravate other people and disturb wildlife and result in on-the-spot fines, or heavier penalties. Be considerate, particularly:

- early in the morning (in calm conditions noise travels a long distance)
- when winds are blowing towards residential areas, the noise travels there too
- in environmentally sensitive areas.

Continuous driving of a PWC close to residential, picnic or recreation areas should be avoided.



Towing People

The Ski/Towing Boat

- Must have current registration
- must have a minimum crew of two
- the master (driver) and an observer (also applies to PWC when towing)
- must have a safety label (behaviour label for PWC)
- must carry appropriate safety equipment
- tow rope must be at least 7m in length.

The Driver

- must hold a General Licence if the vessel will be operated at 10 knots or more, or PWC Licence when operating a PWC at any speed
- is responsible for the safety of the boat and towed people and for maintaining the minimum distances off applicable to the boat and the skier(s).

The Observer

- must be 16 years of age or older, or the holder of a Young Adult Licence
- must not suffer hearing, sight, or other

disabilities which could affect the performance of observation duties and must not be under the influence of alcohol or a drug

- has the prime responsibility of observing the towed people and reporting all matters affecting them to the master
- tells the driver about other vessels approaching from behind
- should be familiar with the standard hand signals.

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



The Towed Person

- No more than 3 persons can be towed at once
- Must maintain the minimum distances off, and when returning to shore must do so safely
- Must not be under the influence of alcohol or a drug

Distances Off

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

- **30 metres** from power-driven vessels not towing skiers, the shore, jetties, moorings, pump inlets, bridges
- **60 metres** from persons (e.g. fallen skiers and aquaplaners, swimmers) and non-powered vessels (sailing and passive)

If towing aerial equipment (e.g. paraflaying) keep both the vessel, towed person and equipment at least:

- 300 metres from any bridge, cable, wire, pipeline or structure

Note: This regulation also applies to two or more vessels towing people travelling one behind the other.

No Towing Areas

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

Towing Prohibited

Towing is prohibited between sunset and sunrise. Teak surfing is prohibited at all times.

Kite Surfing

A surf kite and board is classified as a “vessel” and therefore comes under NSW marine legislation.

Requirements:

Distance off when travelling at 10 knots or more

- Kite surfers and their equipment, including kite and lines, must maintain a minimum distance of 60m from any persons or non-powered vessels or 30m from powered vessels and any objects in the water at all times
- Stay out of a designated surf zone.
A designated surf zone is defined as the area extending 500 metres out from shore between surf patrol flags or signs
- Stay out of a swimming area, which is defined as the area extending 60 metres out from shore between signs for swimmers.



Lifejacket

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

No-Go/Caution Areas

Sydney Harbour is a no-go zone for kite surfing. The no-go zone is an area between North and South Head and the head of navigation on the Parramatta River and includes Middle Harbour and the Lane Cove River.

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

Safety Tips

- Take extreme care when launching
- Keep a proper lookout at all times
- Kite surfers must maintain proper distances off when operating in the vicinity of surfers outside the designated surf zone



- Kite surfers must keep a proper lookout at all times for obstructions, other craft or swimmers
- Look all around – even behind you.

Give Way

Power driven craft must give way to sailcraft such as kite surfers unless the kite surfer is in the process of overtaking. A kite surfer overtaking any other craft (power or sail) must keep well clear of the vessel being overtaken.

Navigation Markers

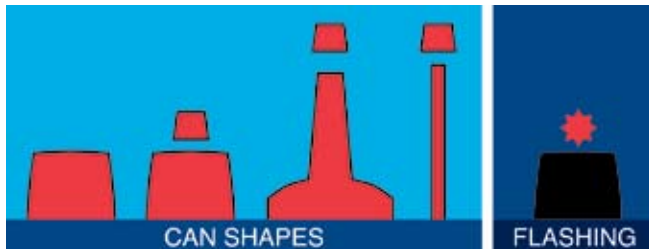
A system of buoys, poles and lights is used to assist safe navigation. Each type of mark has a unique combination of colour, shape, topmark and light. You must be able to identify these marks and pass them safely on the correct side.

Lateral Marks

Port and starboard marks are referred to as lateral marks.

Port Hand Markers

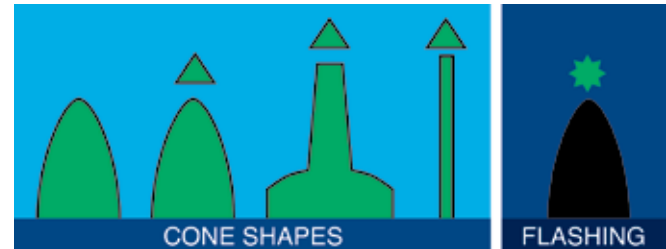
These are red and have a can shaped topmark or buoy. If lit, a port hand mark shows a flashing red light.



May be any of the shapes shown above.

Starboard Hand Markers

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



May be any of the shapes shown above.

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



Single Lateral Marks

Often lateral marks are not placed in pairs, so you will need to decide on the safe side to pass. The safe side to pass a lateral navigation marker is determined by your direction of travel to or from the sea.

Note:

Heading upstream means in a direction away from the sea

Heading downstream means in a direction towards the sea.



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



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



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



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

Boating Industry Association
www.bia.org.au

A division of the Boating Industry Association of NSW Ltd

Channels & Rivers

Extreme caution should be exercised when driving a boat because not all shallow areas and navigation hazards may be marked. This is important on rivers and estuaries where shallow areas may shift. **Be careful at bends.** **Keep a good lookout for boats coming the opposite way. Do not cut corners.**



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

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

Note: All regulations for avoiding collision still apply in channels.



Leads

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

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

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

Cardinal Marks

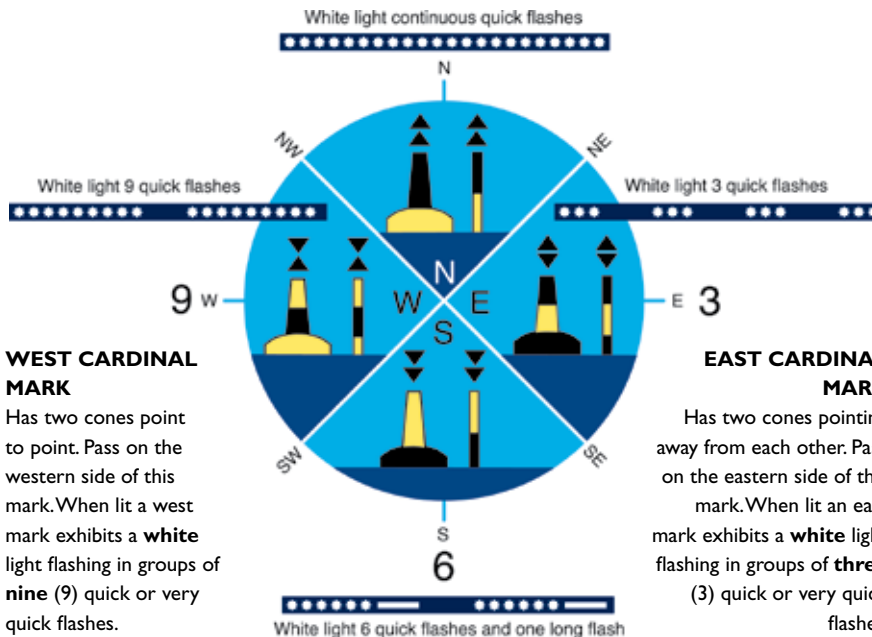
Cardinal marks are used to indicate that deeper water lies in a compass direction away from a danger such as a reef, shallow areas etc. They are painted in combinations of yellow and black as shown.

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

Three flashes is east, six flashes is south and nine flashes is west.

NORTH CARDINAL MARK

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



WEST CARDINAL MARK

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

EAST CARDINAL MARK

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

SOUTH CARDINAL MARK

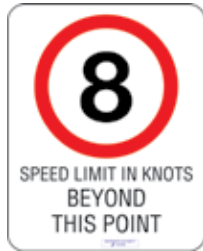
Has two cones both pointing down. Pass on the southern side of this mark. When lit a **south** mark exhibits a **white** light flashing in groups of **six (6)** quick or very quick flashes followed by a long flash.

Speed Signs

In some areas, speed restriction signs are used for safety reasons. Two types of speed signs are used in NSW.



4 knots
(about 7 kph or a fast walking speed)



8 knots
(about 15 kph or a fast jog)



8 knots
(eg. older sign being replaced)



Wash

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

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

Note: Penalties apply

No Wash Signs

“Wash” is the wave effect created by a vessel moving through the water. No Wash signs are placed in some areas where the wash from a vessel is likely to cause damage to the foreshore or vessels, or injury or annoyance to people. Travel at a speed which creates minimal wash when you see this sign and when near moored or anchored vessels. Look behind you to check that you are not creating wash and note the effect of your wash on other boats and the shore. Adjust your speed if necessary. Regardless of signs, you should not navigate your vessel in such a way as to produce excessive wash that endangers other vessels or causes nuisance, as this is an offence.

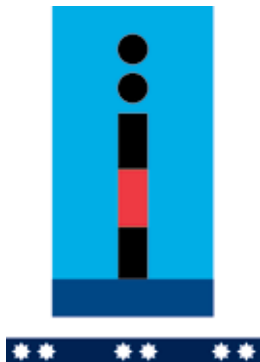
Note: Travelling at the speed shown on a speed restriction sign does not guarantee you are not creating wash.



Other Buoys and Signs

Isolated Danger

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



Special Marks

Indicates special features or areas such as:

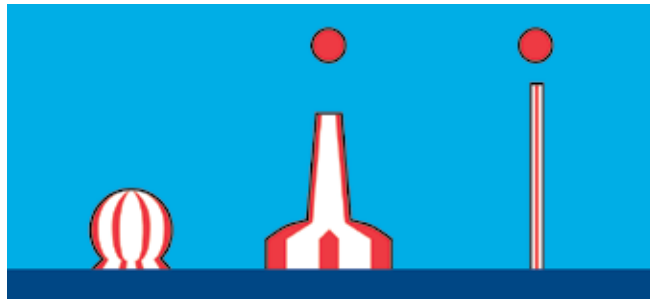
- tide poles
- spoil grounds or
- underwater pipes.

They can be utilised as lateral marks by using can or conical shaped buoys. If so they must be passed as lateral marks: can (eg Port Hand going upstream) conical (Starboard Hand). These marks, if lit, show a yellow light which may flash in any rhythm.



Safe Water Marks

These are not common in NSW, however they may be used to mark the division of large shipping channels. They show a white light at night and can be passed on any side.



Aquamark Minibuoy

Used in some areas as alternatives to conventional buoyage. They often have advisory messages on them.





Submarine Cables

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

Overhead Power Lines

A clearance height can vary according to water levels, it is most important that masters know

the heights of their masts and understand the height level given on any sign.

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



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

To assist boaters to interpret the new signs NSW Maritime has prepared a sticker which you can use to help you remember the height of your vessel above the water line. You are encouraged to place the sticker close to the steering position of your vessel. Extra caution is required during the changeover period from the old to the new system and when launching/retrieving vessels with a mast on shore. Always keep a lookout for overhead power lines.