



Try to go through the unbroken "saddle" section of waves.

PREPARATION

- After gaining a working knowledge of the bar, check the weather forecast and most importantly the state of the tide at the time you want to leave port.
- NSW Maritime has web-cameras streaming live footage of the coastal bars at many popular locations along the coast. Visit www.maritime.nsw.gov.au to check conditions where you plan to go boating.
- An incoming tide is always safer. If possible, time your day at sea to coincide with a rising tide both leaving and entering the port.
- Check that your boat is operating correctly and make sure throttle and steering systems are in perfect working order. Check that the battery is secured in place.
- Ensure your safety gear is in good shape and accessible.

ON THE WATER PROCEDURE:

- Warm up the engine and check that everything is running smoothly. Do not attempt the crossing if the motor is misfiring or not responding quickly.
- Check the steering and bilge pump.
- Close all hatches.
- Secure the anchor. Do not leave it sitting in a forward well where it could become a missile or be catapulted overboard.
- Arrange passengers so the boat is balanced and secure all gear.
- Each person must wear a Type 1 lifejacket when crossing the bar.
- Each person must also wear a lifejacket at all times on open waters in a vessel under 4.8 metres.
- It is recommended that all remain outside the cabin, except the master if it is necessary to drive the boat from inside the cabin.
- With the bar in sight, idle around and check the conditions. Decide whether or not to proceed.



Returning over the bar on the back of a swell is always the safest choice.

GOING OUT

When heading out, remember you will experience a clash of forces. The outgoing boat must meet the energy of the breaking sea. Minimising these clashes makes things safer for you and the boat.

The main technique is:

- Idle towards the breaking waves, watching carefully for any lulls. If a flat period occurs, apply the throttle and run through.
- If the waves just keep rolling in, motor to the surf zone and gently accelerate over the first piece of water, then apply more power and run to the next wave. Time this carefully, don't go too fast or you may get airborne on the next wave and lose control of your vessel.
- Back off the power just before contact with swell. As you come through or over the breaker, accelerate again and repeat the process until clear.
- Head for the lowest part of the wave (the saddle). This is the last part of the wave to break.

DON'T:

- Hit a wave face with the power on; the boat can become airborne or throw the crew into the windscreen, dashboard or floor.
- Lose your nerve. Once committed, keep going forward. You may be swamped if you try to turn around at the last moment.
- Go through the waves at an angle. Either continue straight or up to 10 degrees either side of the dead straight.

COMING IN

Coming in over the bar is usually easier. However, once you are mixed up in the white water the noise and boisterous seas can be a challenge.

When entering the bar, it is best to choose a run-in tide. Move towards the breaking area and pick the line of least activity. Stay with the leads or channel markers if the breakers obscure your vision.

Watch for breakers that may form seaward of you.

Once you have the general direction, wait for a big set to roll in and position the boat on the back of a wave and stay there. Don't run down the wave. Very little can happen if you hold your position.

As you approach the actual entrance, an outgoing tide may affect the boat's speed. Maintain power and trim the nose of the boat up a little, adding power as needed.

An outgoing tide may also create pressure waves near the mouth of the system.

These steep peaks should be handled carefully as they can destabilise the craft, causing it to yaw or broach. Handle pressure waves by accelerating gently as you come over each wave.

If your vessel is not capable of keeping up with the incoming swells then you will need to let the swells run under your vessel. It may be necessary to slow your vessel or use a sea anchor in order to maintain steerage.

GENERAL INFORMATION

- Don't go if your boat is not appropriate for the conditions.
- Don't go regardless of the conditions just because you have planned the day in advance.
- Avoid crossing bars on an ebb or run-out tide.
- Always wear a type 1 lifejacket when crossing a bar, and at all times afloat, if you are a poor swimmer or when conditions deteriorate.



Once committed, keep going forward and don't lose your nerve. Photo sequence of Evans Head bar crossing by Halden Boyd / Pandanus Media.

BARS 'N' BOATS

A SAFETY GUIDE



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FURTHER INFORMATION

Info Line on **13 12 56**
(open 7 days a week 8.30 am to 4.30 pm)
Your local NSW Maritime Operations Centre

www.maritime.nsw.gov.au





Typical river bar.

BOATING OFFSHORE

The open sea demands respect and that means you have to take extra care. Before you head offshore, always follow these guidelines:

- Check the weather before you leave home – don't go out if the weather is not suitable.
- Ensure your vessel is in good order before setting out. The major causes of breakdown at sea are fuel shortage or contamination, mechanical failure and battery failure.
- Can your boat handle the rough seas you might encounter offshore? The design of some boats cannot meet the challenge.
- Make sure you have the necessary equipment, including a lifejacket type 1 (also known as Level 150 or Level 100) for each person on board.
- A marine band radio is one of the best insurance policies you can have when going offshore. These radios are compulsory for all vessels operating more than 2 nautical miles out to sea but are recommended for all vessels any distance offshore.
- Tell someone where you are going, how many people are on board, when you are expected back and who to contact if you are not back at the nominated time. Leave a photograph a description of your boat behind, in case a search and rescue effort is required.
- It is most important that you have both experience and temperament to handle the situation. If you are new to boating, go offshore with an experienced crew and gain your experience gradually.
- Be aware of alternative ports or safe anchorage before heading out. If you are crossing a bar to go offshore it might become impossible to cross when you return, so always have enough fuel to reach an alternative location.
- Combining alcohol and boating is dangerous. Always keep within the law and stay under 0.05 if you are 18 or more years old, and under 0.02 if you are a commercial operator, and nil for recreational operators under 18 years.



Note the clear channel through the bar. Unbroken water provides the safest course.

MARINE RADIO

Marine radio base stations are located along the coast of NSW and many are strategically located to cover bars or bar areas on the 27MHz band, usually on frequency 27.88 or 27.86. These base stations can provide information about the bar and sea conditions, weather forecasts, tidal data and they also broadcast weather warnings.

Use your marine radio to log on with one of the Marine Rescue NSW radio bases when you are heading offshore, and log off when you return to port. In that way someone knows where you are and can organise assistance if required.

BOATING SAFETY

Checking the weather is a crucial part of boating; to make a weather check: read the paper, listen to AM/FM radio, telephone a weather service, get a weather fax, check with your local Marine Rescue NSW unit or consult the Internet.

NSW Maritime provides a 24 hour boating weather service, which can be accessed by telephoning 12 12 36 or visiting the Maritime Alert online service which sends email weather alerts to subscribers, who can choose their area of interest along the coast. Visit www.maritime.nsw.gov.au to set up a free, customised subscription.

Always remember, weather forecasts are subject to change and information such as swell/wave heights are averages.

Carrying safety equipment on a boat is mandatory and is your last line of defence if something goes wrong. Even if it is just a minor breakdown, safety items like a radio, Emergency Position Indicating Radio Beacon (EPIRB) and flares mean you can get help quickly.



Preparation should be completed in calm water. Take time to observe the bar.

EPIRB and maritime radio are relatively inexpensive and can be used to provide search and rescue authorities with valuable location information should you get into difficulties.

As a guide, the list of safety gear required for a 5-8 metre family fishing boat is as follows:

- Type 1 lifejacket for each person on board the vessel.
- Bucket with lanyard (minimum capacity 9 litres).
- Fire extinguisher.
- Anchor with chain/line attached.
- Sound signal (e.g air horn, whistle).
- Marine radio (compulsory when 2 nautical miles or more offshore, recommended for all vessels offshore).
- 406 MHz EPIRB (compulsory when 2 nautical miles or more offshore, recommended for all vessels offshore).
- Distress flares (red x 2, orange x 2).
- Orange V sheet.
- Fresh drinking water (2 litres per person).
- Map or chart of the area.
- Compass.
- Waterproof torch.

For a full list of safety equipment to be carried on all class of vessels please refer to the NSW Boating Handbook, telephone the Info Line: 13 12 56, or visit www.maritime.nsw.gov.au

BOMBORAS

Bomboras are areas of dangerous waters which are created by wave action, current and/or tide working on a submerged reef. Bomboras can create waves high enough to swamp your boat. These waves will often come from an unexpected direction, so you need to be very observant and keep a good lookout when boating near a bombora.

Some bomboras are marked with navigation aids where practical and are usually noted on the relevant boating map or chart.



Watch how other vessels handle the bar.



Moving through a lull. Clear the break zone quickly.

A GUIDE TO CROSSING BARS

Crossing surf bars is a common but dangerous part of boating. Each year boats are damaged and people killed or injured when attempts to navigate bar crossings go wrong.

BAR BASICS

The movement of sand along the coast and sediment from catchments creates bars at the entrances to rivers and lakes. The dynamic forces of wave action and water movement constantly change the shape, depth and channels on the bar.

A strong outflowing tide provides more drag on an incoming swell and forces it to be steep faced, higher and more inclined to close out or dump. The tide and wind direction can also be a factor in setting up both waves on the bar and angling the swell at different directions onto the bar.

LOCAL KNOWLEDGE

Local knowledge is an essential part of crossing any bar. Every bar is different and all bars can change quickly, depending on the conditions.

Consider the following:

- If you are new to an area, observe the bar for at least 10 minutes from land first. Use polaroid type sunglasses to pick visible channels indicated by darker coloured water and lack of breaking waves;
- Talk to locals or check with a Boating Safety Officer, volunteer rescue organisation or marina operator about the bar concerned;
- Watch how other vessels handle the bar. Take note of the line they follow in and out, where they wait and watch, where they move off to cross the bar. If you can, cross the bar with other experienced boaters before trying it yourself; and
- Take careful note of any navigation aids that may help, particularly leads that mark the channel.