

5. Weather & other potential hazards

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It's very important to know about likely weather and sea conditions before you start a boating trip. Keep an eye and ear on the weather and if in doubt, don't go out.

Once on the water, always keep watch for signs of approaching bad weather ahead—strong wind, cloud build-up, storms or squalls. The wind can quickly stir up high waves, making conditions even more challenging. This chapter outlines how to keep informed about weather and other changing conditions at all times.

Before you go out

When assessing weather conditions for a boat trip, be aware of your and the boat's safe operating limits. For example, if you have a small vessel you should consider postponing the trip if the forecast is for wind speeds of 15 knots or higher and seas of more than a metre.

Learn how to read a weather map and always check the latest forecast. Don't rely on maps published in morning newspapers for the latest information as they are produced many hours before you will see them, and conditions may have changed since. As well, keep an eye on your local conditions, which may be different from the general forecast.

The Bureau of Meteorology (BOM) offers a range of up-to-date weather information services, through its website, by phone or fax, or by radio broadcasts ([refer chapter 13](#)).

Weather reports via HF radio

BOM's HF radio network includes transmitters at Charleville in Queensland (call sign VMC) and Wiluna in Western Australia (call sign VMW). Both stations cover central and southern Australia and issue forecasts and warnings around the clock.

Weather reports via VHF radio

The Australian Volunteer Coast Guard broadcasts daily weather forecasts for South Australian waters. Contact your nearest base on the emergency channel (Channel 16) and they will advise you what channel their weather updates are broadcast on.

On the water

Avoid the potential for dangerous situations by:

- keeping your eye on the sky and the water—wind shifts, increases in swell, or cloud build-up may indicate bad weather
- listening to weather reports on public or marine radio
- knowing the local influences on water conditions
- knowing where to reach shelter quickly
- being prepared to change your plans if necessary—but tell someone if you do change plans.

Ocean bars

Coastal bars can occur anywhere and form quickly in areas that were previously free of bars.

Bars are dangerous because:

- the conditions can cause steep and often breaking seas
- the conditions change quickly and without warning, preventing a safe return
- once started, you are committed to crossing—trying to turn is too risky
- all sand bars are different.

Before deciding to cross, consider:

- your vessel type
- your experience
- your knowledge of the specific bar
- the weather and sea conditions
- your vessel's suitability to conditions outside the bar
- the tide—a run-out tide and low water are more dangerous
- the time of day—night crossings are more hazardous.

In preparing to cross:

- stay at a safe distance from the bar
- obtain up-to-date tide and weather information

- contact the local authority for an update on bar conditions
- securely batten down or close all deck openings, hatches and doors
- secure all loose gear to maintain vessel stability
- ensure that everyone is wearing an approved PFD
- ensure all lifesaving equipment is accessible and ready for immediate use
- if possible, trim the vessel slightly by the stern.

Take the following steps when you are ready to cross.

- Ask all passengers to stay still and clear of exposed spaces on deck.
- While approaching, keep a close lookout for depth of water, the smallest waves and where the breakers are.
- Monitor the prevailing wind direction and force.
- Check where other vessels are crossing the bar to identify the best course.
- Ensure other vessels are clear before crossing.
- Approach at moderate speed.
- Avoid 'punching' through the waves, which can cause severe structural damage.
- When heading out to sea:
 - motor slowly toward the breaking waves, looking for those that break lowest
 - wait for a flatter stretch of water and motor through
 - if there is no break in the waves, slowly and carefully power through each oncoming wave
 - cross with the waves slightly on the bow as close to head-on as possible so the vessel gently rolls over the crest of each wave.
- When heading back to port:
 - if approaching from the sea, increase power as necessary to catch the bigger wave set

- position the vessel on the back of the wave—don't surf down the face of the wave
- match your speed with the wave speed—don't try to overtake the waves.

Squalls

Sudden squalls are not easy to predict, so regularly check the horizon for rapidly darkening and lowering clouds or whitecap waves. Squalls don't usually last long and often precede a change in wind direction.

If you get caught in a sudden squall:

- head for the shore or the protected side of an island, if you are close
- if not, head into the wind and waves at a steady speed
- don't let the vessel drift side on to the wind and waves (it may take on water and capsize)
- without power or anchor in use, drag a sea anchor from the bow to keep the boat pointing towards the waves (for example, a sturdy bucket or oar on a rope).



Thunderstorms

Thunderstorms are a serious hazard for boats. They are indicated by heavy tall masses of clouds called cumulonimbus that produce strong, gusty winds blowing out from the storm front.

Watch which direction the cumulonimbus cloud is moving (clouds often move in different directions from surface wind) and head for shore if it is going to pass over or within a few kilometres of you.

Waves

Waves are a major cause of accidents and drownings, on both inland and coastal waters. The stronger the wind and the longer the 'fetch'—length of water over which the wind blows—the bigger the waves. Waves also are influenced by local conditions, such as tides and currents.

A forecast of 'seas to 2 metres' refers to the average wave height of the highest one third of waves: the largest waves may be up to twice that size. The larger forecast waves will only occur where the fetch is long.

Wind warnings

The table shows the wind speed of the various warnings issued by the BOM.

Average wind speed (knots)

Strong wind warning	25–33
Gale warning	34–47
Storm warning	48 and more Wind gusts up to 40% above the mean speed



South Australian Forecast Areas Map

Chapter 5. Self-check questions

1) Before you go boating, which is the best weather forecast to take note of, and why?

- A. The Bureau of Meteorology, either online or by phone, because they will have the most up-to-date information.
- B. Last night's TV news, because the maps show how the weather patterns are expected to move during the next day.
- C. The morning newspaper, because it is printed and you can take it with you.

2) Which of the following may be a sign of bad weather?

- A. Cumulonimbus cloud build up.
- B. Increased height of swell and sea waves.
- C. Sudden increases in wind gusts.
- D. All of the above.