



Weather guide for marine outdoor adventure activities



Weather is essential for the safety, comfort, and enjoyment of marine-based activities. Organisers should know where to get weather information and understand what it means to safely plan and manage their activity. This guide provides tips on getting weather information and a quick guide to weather hazards and warnings relevant to marine outdoor adventure activities (such as sea kayaking, fishing, and boating).

Getting weather information for your activity

1. Pick your date

Find out about the climate of coastal locations. While weather can vary significantly from one year to the next, consider which months are typically hot, cold, windy, have larger waves, or are stormy. Visit www.bom.gov.au/marine/averages-trends.shtml

Note that sea surface temperatures are generally warmest in early autumn and coldest in early spring, but plan for all types of conditions year-round.

2. Know where to get weather information *before* your activity

- Familiarise yourself with the Bureau of Meteorology's marine services: www.bom.gov.au/marine.
- Know where to find weather warnings (www.bom.gov.au/australia/warnings) and understand the type and severity of weather phenomena covered by these warnings (www.bom.gov.au/marine/knowledge-centre).
- Learn how to use MetEye (www.bom.gov.au/meteye). MetEye provides map-based wind, wave, and weather forecasts for all of Australia and its coastal waters. Pan and zoom the map to visualise the weather for your location.

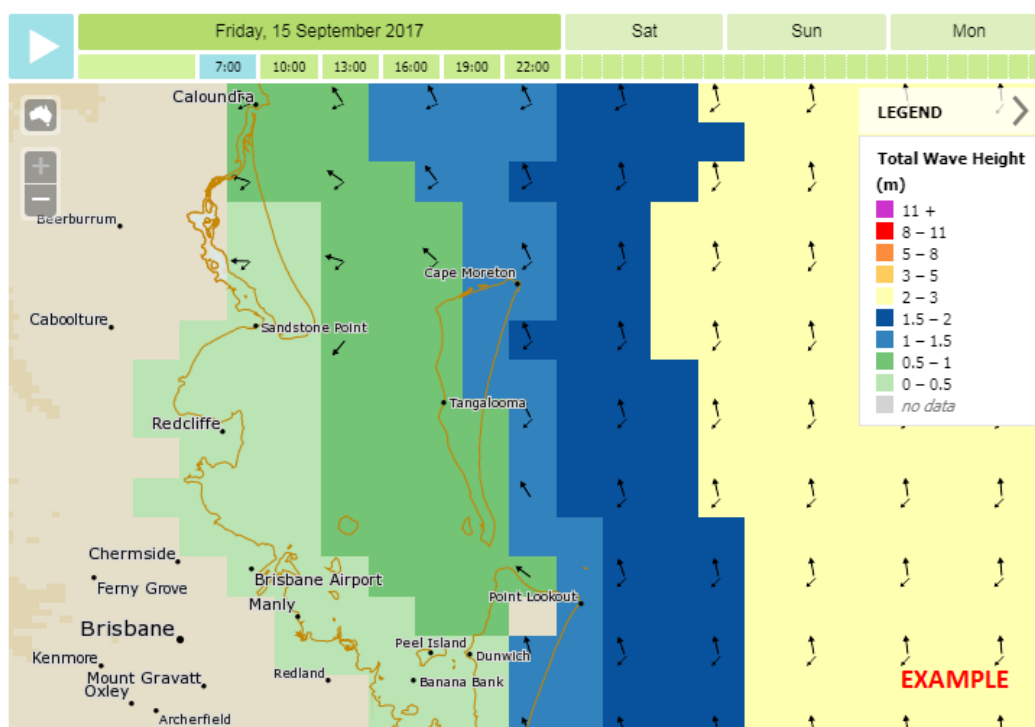


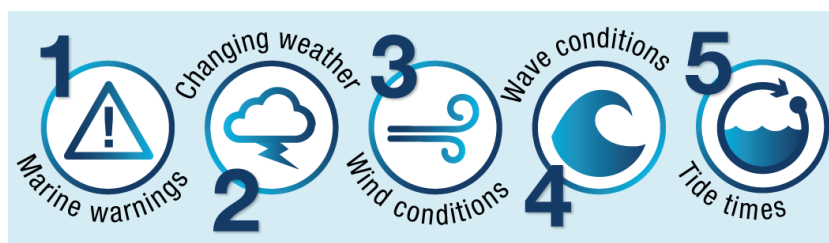
Image: Three-hourly wave forecast from MetEye

- Marine text forecasts include information on wind, weather, sea and swell, and describe average conditions over specified areas. Understand the difference between:
 - *Local waters forecasts*: for areas such as bays and harbours where frequent boating activity occurs.
 - *Coastal waters forecasts*: for areas within 60 nautical miles of the coast.
 - *High seas forecasts*: for the broader ocean areas surrounding Australia.
- Identify the right forecast for your area and the name of your forecast area. If relevant, you can also identify your closest coastal weather station and/or rain radar. These services are available by selecting your relevant state or territory at www.bom.gov.au/marine. Remember that most coastal weather stations are on land so wind speeds may be unrepresentative of conditions out at sea.
- The BOM Weather app can also be used to check forecast and observed conditions for nearby land locations, and to check for any warnings (www.bom.gov.au/app).

3. Check forecasts and warnings

Check your weather forecast and review it regularly as your activity approaches. Forecasts are updated at least twice per day, becoming more accurate as the date approaches. While forecasts are available up to seven days before, warnings can be issued days or hours ahead when there is greater certainty about the areas impacted.

Remember the five vital marine weather safety checks



One week before

- Check forecast maps (e.g. wind speed and direction) on MetEye: www.bom.gov.au/meteye.
- If relevant to your activity, check forecast maps for sea temperatures and currents: www.bom.gov.au/oceanography/forecasts.
- You can determine when high and low tide will be for the next seven days. Visit the Tidal Portal for predicted tide heights and times: www.bom.gov.au/australia/tides.

Three days before

- Check marine text forecasts for wind, wave, and weather conditions: www.bom.gov.au/marine.
- Check the UV Index and sun protection times.
- The weather conditions that you can safely operate in depend on the activity, and the type of boat or watercraft involved. Watch for mentions of weather hazards in the forecast. See the *Quick Guide to Marine Weather Hazards* below.

Forecast for Thursday until midnight

Strong Wind Warning for Thursday for Central Gippsland Coast	
Winds	Westerly 25 to 30 knots. Stronger squalls with showers or thunderstorms.
Seas	3 metres.
Swell	Westerly around 1 metre inshore, increasing to 1.5 to 2.5 metres offshore.
Weather	Cloudy. 80% chance of showers. The chance of a thunderstorm. EXAMPLE

Image: Coastal waters forecast, including reference to a Strong Wind Warning and chance of thunderstorms

Today and tomorrow

- Watch for marine warnings, issued up to 42 hours ahead. Some land-based weather warnings (e.g. Severe Thunderstorm Warnings) may also be relevant. See the *Quick Guide to Marine Weather Warnings* below.
- Re-check your weather forecast before you go out. Be aware that wind gusts can be 40% stronger than the averages forecast, and maximum waves may be up to twice the height.
- Be flexible—change your plans for safer conditions if necessary.

Updated Marine Wind Warning Summary for New South Wales
Issued at 4:10 am EST on Friday 15 September 2017
for the period until midnight EST Saturday 16 September 2017.

Wind Warnings for Friday 15 September

Gale Warning for the following area:
Eden Coast

Strong Wind Warning for the following areas:
Hunter Coast, Illawarra Coast and Batemans Coast

Cancellation for the following areas:
Macquarie Coast and Sydney Coast **EXAMPLE**

Image: Summary of marine wind warnings

4. Watch the weather during your activity

- Check forecasts, warnings, and observations. Depending on how far you are offshore, you might:
 - Use MarineLite (www.bom.gov.au/marine/lite) for text-only marine forecasts and warnings, or check the Bureau's full website (www.bom.gov.au).
 - Listen to VHF voice radio for inshore areas with broadcasts at scheduled times.
 - Listen to HF voice radio for off-shore areas with continuous broadcast.
- Keep an eye out for approaching weather. For example, rapidly darkening and lowering cloud may indicate squalls or thunderstorms may be imminent. An increase in wind strength may indicate an approaching weather system.
- If in doubt, return home!

Quick guide: Marine weather hazards

Hazard	Potential impacts
Gusty winds	Watercraft become hard to control, or may capsize. Damage to equipment and infrastructure.
Heavy rain	Reduced visibility, making navigation difficult and increasing risk of collision. Slippery surfaces increase accident risk. Flooding of boats and watercraft.
Hot or cold temperatures	Extreme effects on the body and its ability to function—for example, heat exhaustion and dehydration (high temperatures) or hypothermia (cold temperatures).
Large waves	Higher, steeper and more chaotic waves than usual, making conditions dangerous and uncomfortable.
Long period swells	Surging waves on rock platforms. Waves break powerfully as they approach shallow water resulting in increased risk of rip currents.
Sea fog	Reduces visibility, making navigation difficult and increasing risk of collision.
Squalls	Damage to equipment and other disruption from an abrupt increase in wind speed.
Strong offshore winds	Non-powered watercraft (e.g. kayakers and sailing craft) may drift further out to sea, and face additional resistance trying to return to shore.
Thunderstorms	Damage, injury, or death from strong squally winds, heavy rain, hail, waterspouts and lightning.
Tidal currents	Vessels will face additional resistance to travel against the current, or will be taken off course. Strongest currents occur during mid tides.
Tides	Changing water levels can cover or uncover rocks, reefs, and change wave behaviour. An outgoing tidal flow or low tide can cause waves to become steeper than usual.
Tsunami	Rapid changes in water level and unpredictable dangerous currents that are magnified in ports and harbours. Large-scale damage and disruption.
UV radiation	Sunburn, and longer-term eye damage, premature ageing, and skin cancers.
Waterspouts	Spinning columns of air and water, waterspouts can be very dangerous, much like the hazardous tornadoes seen over land.

Quick guide: Marine weather warnings

Warning type	Issued for ...
Marine Wind Warning	Coastal waters, when winds 26 knots and above are expected: <ul style="list-style-type: none"> • <i>Strong Wind Warning</i>: Winds averaging from 26 knots and up to 33 knots. • <i>Gale Warning</i>: Winds averaging from 34 knots and up to 47 knots. • <i>Storm Force Wind Warning</i>: Winds averaging from 48 knots and up to 63 knots. • <i>Hurricane Force Wind Warning</i>: Winds averaging 64 knots or more.
Ocean Wind Warning	High seas, when gale, storm force or hurricane force winds are expected.
Hazardous Surf Warning	Surf conditions that are hazardous for boaters crossing bars, fishing or activities on rock platforms, and swimming (NSW and QLD only).
Severe Thunderstorm Warning	Severe thunderstorms that produce: large hail (2cm in diameter or larger), damaging wind gusts (generally wind gusts exceeding 48 knots (90 km/h)), heavy rainfall, and/or tornadoes.
Severe Weather Warning	Unusually large surf waves that may cause dangerous conditions on the coast, and/or abnormally high tides (or storm tides) expected to exceed highest astronomical tide.
Tsunami Watch / Warning	Coastal areas, when there is a potential tsunami threat (Watch) and confirmed tsunami threat (Warning).

Note: Warnings and alerts, and how they are broadcast, vary by state and territory.

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