



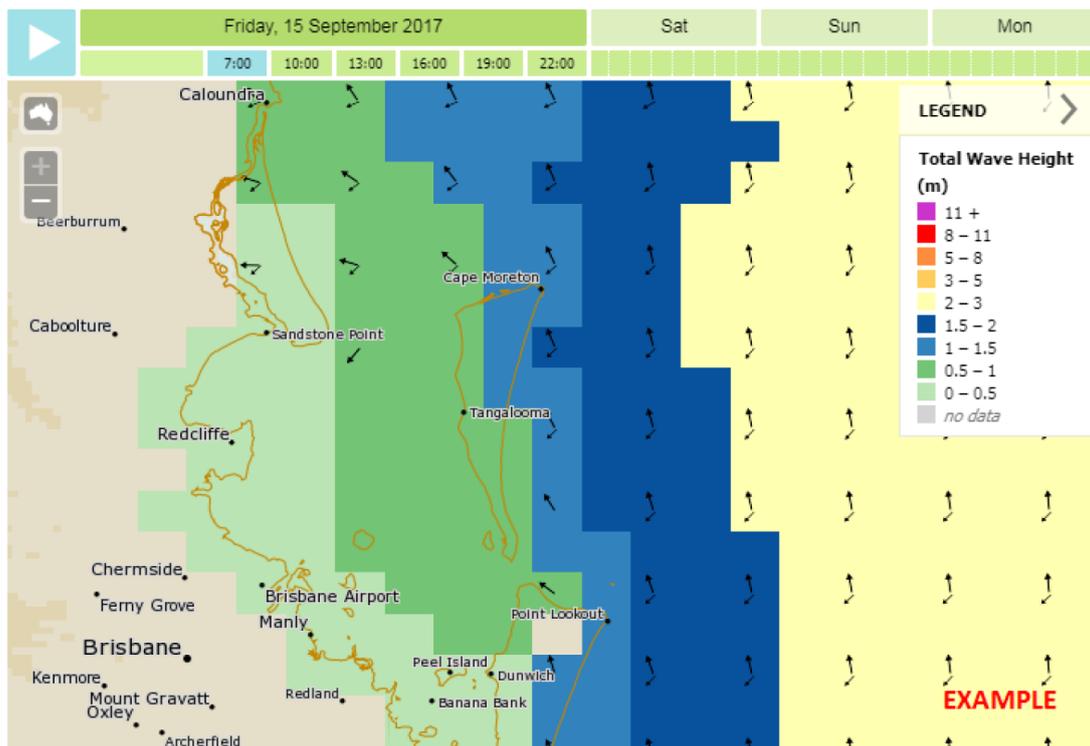
Weather guide for marine outdoor adventure activities

Weather information is essential for the safety 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).

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, which 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. www.bom.gov.au/meteye



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 type of forecast and your forecast area name. 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.
- Check the BOM Weather app for forecasts, warnings and observed conditions for nearby land locations www.bom.gov.au/app.

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.

One week before

- Start checking forecast maps on MetEye www.bom.gov.au/meteye and check back regularly.

- 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: Marine weather hazards** in this document.

Remember the five vital marine weather safety checks



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

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: Weather warnings for marine activities** in this document.
- Re-check your weather forecast before you go out. Be aware that wind and wave forecasts are averages. Wind gusts can be 40 per cent stronger than the forecast, and stronger still in squalls and thunderstorms. Maximum waves can be twice the forecast 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

Summary of marine wind warnings from the Bureau's website

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 offshore areas with continuous broadcast.

- Keep an eye out for approaching weather. For example, rapidly darkening and lowering cloud may indicate squalls or thunderstorms are imminent. An increase in wind strength may indicate an approaching weather system.
- If in doubt, return home!



www.bom.gov.au/marine

The Bureau of Meteorology is not in any way liable for losses, damages, costs, expenses and liability of any kind that you or any other person may suffer or incur directly or indirectly from you using this information or material available from it.

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 makes navigation difficult and increases 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	Dangerous and uncomfortable conditions. Higher, steeper and more chaotic waves than usual.
Long period swells	Surging waves on rock platforms may wash people off. Waves break powerfully as they approach shallow water resulting in increased risk of rip currents.
Sea fog	Reduced visibility makes navigation difficult and increases 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. kayaks 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 could 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 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: Weather warnings for marine activities

Warning type	Issued for ...
Marine Wind Warning	Coastal waters, when winds 26 knots and above are expected: <ul style="list-style-type: none"> • Strong Wind Warning: Winds averaging from 26 knots and up to 33 knots. • Gale Warning: Winds averaging from 34 knots and up to 47 knots. • Storm Force Wind Warning: Winds averaging from 48 knots and up to 63 knots. • Hurricane Force Wind Warning: 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 southern QLD only).
Severe Thunderstorm Warning	Severe thunderstorms that produce: large hail (2 cm in diameter or larger), damaging wind gusts (generally wind gusts exceeding 48 knots (90 km/h)), heavy rainfall, and/or tornadoes.
Coastal Hazard Warning	Unusually large surf waves that may cause dangerous conditions on the coast, and/or abnormally high tides (or storm tides) expected to exceed the highest astronomical tide.
Tropical Cyclone Watch/Warning	A tropical cyclone affecting or expected to affect communities within 48 hours (Watch) or 24 hours (Warning).
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.