Weather and Tides

Observing the Weather

Only launch your boat once you have a clear understanding of the most up-to-date weather forecast.

Start with television and newspaper weather map reports; they contain useful general information. On marine radio, Limited Coast Radio Stations broadcast Navigation Warnings on 8176 kHz at scheduled times throughout the day. The Bureau of Meteorology also has a Weather by Fax service (dial 1800 630 100).

Radio-equipped craft at sea can listen to the Bureau of Meteorology's broadcasts of marine weather information, warnings and coastal reports on the following channels:

Charleville broadcasts (VMC) :
2201 kHz, 4426 kHz, 6507 kHz, 8176 kHz, 12365 kHz, 16546 kHz

Wiluna broadcasts (VMW):
2056 kHz, 4149 kHz, 6230 kHz, 8113 kHz, 16528 kHz

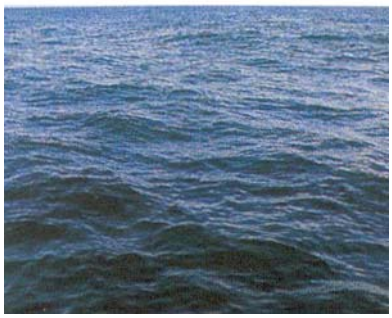
to get the best possible idea of the weather, put your trust in a combination of the latest professional advice, your own local knowledge, and a constant, critical observation of the sea and sky.

Forecasts and Warnings

The Bureau of Meteorology's regular forecasts for small boats operating in coastal waters include essential information on the expected wind direction and strength, the state of the sea and swell, visibility, and changes expected during the forecast period.

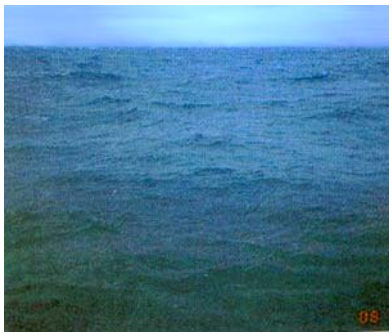
Forecasts are issued in the early morning for the remainder of the day until midnight; at about midday for the rest of the day and the following day, and in the late afternoon for that night and the following day. Check well ahead of your planned trip – you can get an idea of the changes in the weather pattern from the forecasts issued 24 hours or longer before you leave shore.

Strong wind warnings are issued whenever winds of 25 knots or more are expected. The direction and strength of the wind, sea and swell information and an indication of expected developments are also given. Gale or storm warnings are issued when the wind is expected to reach Beaufort Scale Force 8 (34 knots) or Force 10 (48 knots).



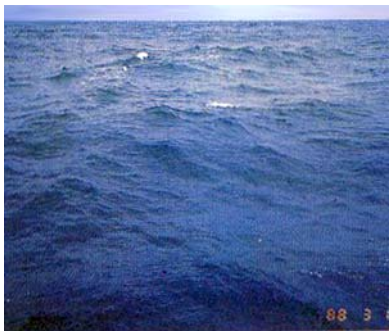
Light breeze – Force 2

Wind speed about 4 – 6 knots; small wavelets with crest of a glossy appearance which do not break. No cause for concern, but a weather eye is needed to detect a darkening horizon or build-up of large anvil-shaped (cumulo-nimbus) storm cloud.



Gentle breeze – Force 3

Wind about 7 – 10 knots; waves about 600 to 900mm in height, the crests are beginning to break with some foam. Still no cause for concern, provided shelter for a small boat is not far distant and up wind. The added motion of the boat with the more noticeable persistence of the breeze should put skippers on the alert.

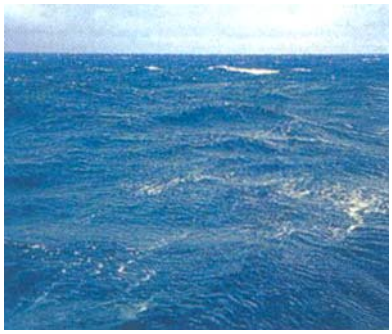


Moderate breeze – Force 4

Wind 11 – 16 knots; small waves becoming longer. Numerous whitecaps are now present. Small open boats should be heading for shelter.

Fresh breeze – Force 5

Wind about 17 – 21 knots. Waves are moderate in size (about 2m) and taking a more pronounced long form. 'White horses' are formed on the crests and there is a chance of spray. Skippers of small open boats, especially boats with little or no inbuilt buoyancy and small-capacity engines, should decide to shelter without delay and with extreme caution. All on board should be wearing PFDs. Small sailing craft in open waters should have returned to shelter.



Strong breeze – Force 6

Wind about 22 – 27 knots. Large waves about 2.75m high are forming; white foam crests are extensive everywhere; spray is flying. Imperative now that small boats run for cover. If the wind is onshore, conditions at river bar entrances and boat launching ramps will more than likely be hazardous. Alternative shelter should be sought. Aboard yachts, all should wear PFDs. Safety harnesses should be worn and clipped on by crew working on deck reducing sail. On board, gear stowages should be checked for security.

Near gale – Force 7

Wind about 28 – 33 knots. Waves about 4 – 6m high with sea heaping up. White foam being blown in streaks along the direction of the wind. Ocean cruising yachts and deep-sea powered cruisers should be secured and rigged for heavy weather. Consideration of successful weathering of these conditions should now be of equal importance as attempt to reach shelter. Crew in the cockpit of yachts or on deck should be wearing PFDs and safety harnesses clipped on at all times. Galley crew should guard against scalds from spillage.

Gale force and stronger – Force 8

Wind above 33 knots. Waves are now over 8m high. Crests are breaking into spindrift, which is blown in well-marked streaks along the direction of the wind. All smaller craft should have been inshelter long ago. Cruising craft should be snugged down to storm sails and getting ready to heave-to if the force of the gale increases significantly. Unless sheltered waters are

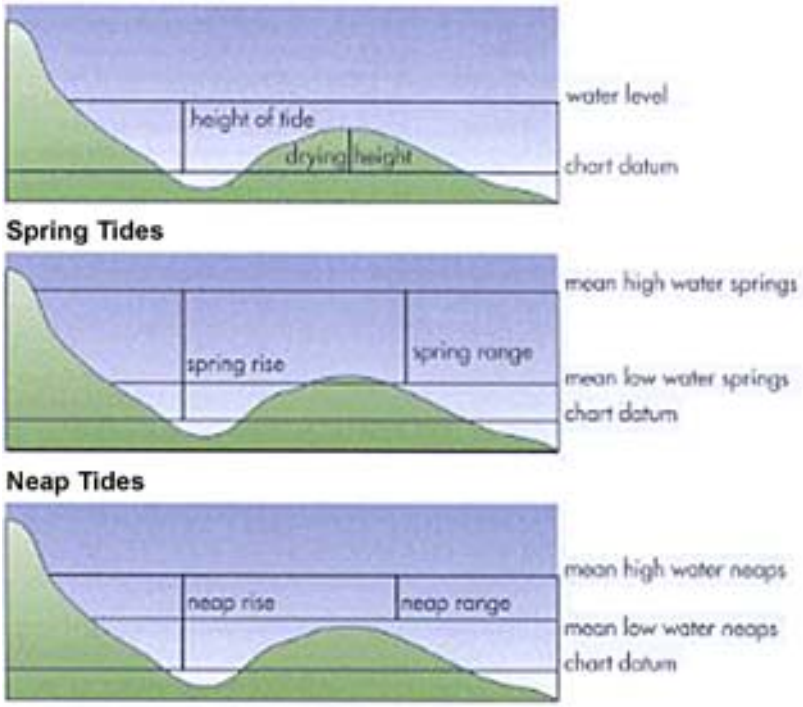
within reach with ample daylight remaining, skippers should seriously consider moving further out to sea.

Some terms relating to tides

Tides are rises and falls in water levels caused by the gravitational effects of the sun and moon on the earth's ocean waters. When sun and moon pull in the same or opposite direction, their effect is greatest and spring tides result. When they pull at right angles their effect is reduced and neap tides occur.

Tidal range varies accordingly and is generally defined as the height difference between mean levels of high and low water, spring and neap. Charts are prepared using a calculated chart datum on which charted depths or drying heights are based.

There are usually two high waters and two low waters in each day. The time interval between high waters is about 12 hours 25 minutes. Theoretically, low waters occurs 6 hours 13 minutes after high water. IN coastal areas, tides are accompanied by changing horizontal movements of water or tidal streams. Although there is interaction between the two phenomena, tidal streams are distinct from ocean currents.



Watching the Tides

Tidal ranges in some locations can be extreme – your launching spot on the morning could be high and dry when you return in the afternoon. Local tidal effects such as wind against tide or tidal races in narrow channels can create hazardous sea conditions. Learn to read tide tables, and check the daily press for information on the tides in your area.

Pushing hard against an unfavourable tide slows speed and increases fuel consumption – **take tides into consideration when planning your fuel needs.**

Tidal rips, overfalls, and the speed and direction of tidal streams and offshore currents are indicated on charts – **take them into account when you're planning your course.**

The Rule of Twelfths

If you know the times of high and low water, you can use the Rule of Twelfths as a rough guide to the effect of the tide at any time in between. Tides do not rise and fall with equal speed during their 6-hour range. The greatest change is during the middle of the period, as the rule indicates:

Interval Rise or Fall

1st hour 1/12
2nd hour2/12
3rd hour 3/12
4th hour 4/12
5th hour 5/12
6th hour 6/12

Charts show the speed and direction of tidal streams, as well as tide rips and overfalls.