

## 6. Weather Information

### 6.1 General

The prevailing winds are moderate to strong and predominantly from the southeast. Calmer conditions occur during the winter months

A Tropical Cyclone Watch message is issued when a cyclone or potential cyclone is expected to affect conditions in the area within the next 48 hours and is reviewed every three hours. A Tropical Cyclone Warning message is issued when a cyclone or potential cyclone is expected to affect conditions in the area within the next 24 hours and is reviewed every three hours.

Severe weather can occur at any time of the year and an official cyclone season is defined between 1 November and the 30 April.

Weather charts, satellite images, warnings and reports may be polled by fax from 1800 630 100 and/or from the [Bureau of Meteorology](#).

[Coastwatch](#) is a website with useful nautical information links.

#### 6.1.1 Extreme Weather Event Contingency Plans (Cyclone Procedures)

The Mackay region is particularly exposed to risks posed by tropical cyclones. It is imperative all mariners prepare for the possibility of one of these cyclones crossing the coast in their region during this period. The Mackay region is also exposed to severe local storms which can form with minimal warning and cause major damage to the local maritime industry. (For example, the devastating storm at Airlie Beach in February 2008).

In addition, the major commercial shipping ports of Mackay and Hay Point are particularly exposed to the prevailing weather and sea conditions with limited protection from a tropical cyclone and other extreme weather events.

[Extreme weather event contingency plans \(Cyclone Procedures\)](#) have been developed for the Mackay Region and are on the MSQ Website.

The prime intent of this plan is for masters to be aware of an approaching weather event and be prepared to take the necessary action to avoid the damaging impact to ships and the environment.

## 6.2 Cyclone Procedures for Mackay Marina

Please refer to the [Mackay Marina Village](#) website for the link to their latest cyclone procedures.

## 6.3 Tidal Information

The mean spring tide range is 4.56 metres and the mean neap range 2.12 metres. The flood tide sets to the south and the ebb tide to the north across the harbour entrance. The maximum strength of the tidal flow is 2.5 knots at spring tides, tidal flows inside the harbour are negligible.

**Table 10 Tidal Information**

Tidal Information			
HAT	6.58m	LAT	0.00m
MHWS	5.29m	MLWS	0.74m
MHWN	4.07m	MLWN	1.96m
For tidal stream data refer to Australian Pilot and hydrographic chart			

### 6.3.1 Tide Boards/Gauges

Mackay is a standard port in the Queensland Tide Tables.

The tidal times and heights for standard Queensland ports are available in the Queensland official tide tables and boating guide and may be accessed at the [Bureau of Meteorology](#) website.

Tidal stream predictions for standard Queensland ports are available upon request through the RHM's office.

### 6.3.2 Tidal Information — Tsunami Effects

The north-west and east coasts of Australia are bordered by active tectonic plates which are capable of generating a tsunami that could reach the coastline within two to four hours. The resultant change in swell height could have an adverse effect on a vessel with a minimum under keel clearance navigating within or close to port areas.

The [Joint Australian Tsunami Warning Centre](#) (JATWC) has been established to monitor earthquake activity that may lead to a tsunami forming. Warnings are currently issued for the Pacific Ocean region by the Pacific Tsunami Warning Centre (PTWC) in Hawaii and for the Indian Ocean region by the Japan Meteorological Agency (JMA).

Mariners are advised to take heed of such warnings, plan their bar crossings, and tend their mooring or anchorages accordingly.

## **6.4 Water Density**

Sea water is usually 1025 kg/m<sup>3</sup> but will vary during the summer months after periods of heavy rain.