

6. Weather information

6.1 General

The prevailing winds tend to be easterly to south easterly. Although calmer conditions occur during the winter months, they may become very difficult during the summer months when the sea breeze augments the prevailing south easterlies.

As a general rule, high windage vessels will not be moved when the wind speed exceeds 25 knots especially when coupled with a following tide.

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.

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

Alternatively the following telephone numbers offer the listed information service.

1300 659 210.....tropical cyclone information

1300 659 210.....coastal marine warning

1300 878 6264.....current tsunami threat

All ships at berth and anchorage must maintain listening watch on Channel 12 for weather warnings from Townsville VTS. All ships must acknowledge receipt and compliance.

6.2 Cyclone procedures

The Queensland Extreme Weather Event Contingency Plan follows the signs, warning levels and calls to action consistent with the Australian Warning System. For your information the figure below details the Australian Warning System in general, and while it does not detail the maritime specific calls to action, it does provide the icons at all levels for cyclones, severe weather and flooding.

Under the Australian Warning System, the warning signs are consistent in colour for each hazard and the symbol refers to the hazard that the warning relates to. Below are examples of each symbol that may be referred to in the Maritime Safety Queensland Extreme Weather Event Contingency Plan.



The maritime specific calls to action are detailed further on in the document and apply to all ships.

The Port of Townsville Limited (POTL) landside operations emergency procedures define four colour-coded cyclone conditions. Refer to the Port of Townsville website.

6.2.1 Severe weather event

The Townsville region severe weather contingency plan is located on the MSQ website ([Preparing for extreme weather](#))

The ports of Townsville adheres to the Australian Warning System for extreme weather events incorporating a tier alert system of five distinct phases

[Appendix 10 - Townsville Extreme Weather Event Contingency Plan](#) In the event of an extreme weather event threat the Regional Harbour Master will take the following action:

- Restrict the movement of vessels if necessary.
- Direct and oversee the evacuation of the port or specific areas of the port or other affected areas if applicable.
- Close and reopen the port if necessary.

The Regional Harbour Master will also:

- Advise mariners of relevant warnings and response requirements
- Seek compliance with the response requirements.

These actions will be enacted over five distinct phases that allows for the development of appropriate responses to the threats faced.

Yellow – Advice

Destructive Winds, Swell, Rain or Riverine Flooding Forecast Within 24-48 Hours

Orange – Watch and Act

Destructive Winds, Swell, Rain or Riverine Flooding Forecast Within 12-24 Hours

Red – Emergency Warning

Destructive Winds, Swell or Riverine Flooding Forecast Within 6 Hours

Yellow – Advice

After The Event Has Passed, Recovery Underway

White – All clear

Port Open To All Traffic, Business As Usual

Reopening of the port

The pilotage area will not be re-opened until the Regional Harbour Master is satisfied that all danger has passed, and the pilotage area is safe for vessels to re-enter and following inspections and surveys to critical maritime infrastructure (for example navigational aids, wharfs) as well as clearance of navigational hazards.

The vessel traffic services centre will coordinate the safe movement of vessels following the opening of the pilotage area in accordance with normal practice. Berths will be re-opened and operations resumed when wind and sea conditions are within operational limits.

Communication

The successful implementation of this plan relies on high quality communication of information and directions.

The vessel traffic services centre will implement the extreme weather event contingency plan on behalf of the Regional Harbour Master by acting as the central communications point for the duration and aftermath of the extreme weather event.

The vessel maritime control centre call sign is Townsville VTS.

VHF channels 16, and 12, will be continuously monitored before and during the extreme weather event. Extreme weather watches, warnings and any directions will be issued on these channels.

If the plan requires for actions such as port evacuation or closure, it will be coordinated by the Townsville VTS

Key contacts

Regional Harbour Master (Townsville): (07) 44218 800

Townsville VTS (24 hours): 1300 721 263

Reef VTS 1300 721 293

Townsville Water Police: (07) 4760 7812

Port of Townsville: (07) 4781 1500

Vessels calling at the Port of Townsville are also reminded to familiarise themselves with the Port of Townsville "Emergency Procedures" located on the website : www.townsville-port.com.au/

6.3 Tidal information

The flood tide fills Cleveland Bay from the north east which results in a tidal current flowing to the west across the entrance of the harbour at speeds of up to 0.5 knots. To safely make the harbour or depart often necessitates substantial allowance for set drift. The ebb tide is less noticeable but it does set to the east across the channel. Its effect may not be felt when easterlies are blowing.

Pilots have access to real time tidal and tidal current data collected at Beacon P14.

6.3.1 Tide boards/gauges

Townsville is a standard port in the Queensland Tide Tables. Predictions are available on the MSQ website and also available on the [Bureau of Meteorology](http://www.bom.gov.au/) website.

The Port of Townsville Limited has tide boards in the following locations:

- End of berth 8/9.

The board refer to LAT and give the actual tide above LAT.

Automatic tide gauges are positioned on the seaward end of berth 2.

Townsville VTS has a direct link to weather stations providing data on tide height and wind direction and speed.

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/m³ but will vary during the summer months after periods of heavy rain.