

Extreme Weather Event Contingency Plan Cairns - 2017/2018

Introduction

Maritime Safety Queensland (MSQ) is an agency of the Dept. of Transport and Main Roads (DTMR) which works closely and cooperatively with the disaster management agencies, the industry and community on both a State wide and local basis. The recent extreme weather events throughout Queensland have highlighted the need for awareness and vigilance to the risks such events present to the maritime community. MSQ's core focus is on the preservation of life and property on the State's waters and in the prevention/response to ship based pollution.

MSQ has built on these recent experiences and is reissuing its contingency plans as one way of ensuring stronger resilience within the maritime community. Timely awareness and adequate preparation will reduce the impact of such events.

This extreme weather event contingency plan for Cairns sets out the broad framework that will apply for this region. MSQ takes advice on developing weather situations from the Bureau of Meteorology (BOM) which is the government's primary source of weather intelligence.

Cairns is particularly exposed to risks posed by extreme weather, principally tropical cyclones.

The frightening intensity of cyclones can cause widespread destruction and devastation. The commencement of the cyclone season on 1 November means it is imperative all North Queenslanders prepare for the possibility of cyclones affecting the local area.

The local topography of the port offers limited protection from extreme weather and hence the prime intent of the plan is to organise the orderly removal of vessels from their normal moorings to more sheltered locations or, in the case of large vessels to sea. The creeks and waterways off Trinity Inlet, within the mangrove areas, offer the best shelter/protection for smaller vessels.

It is the responsibility of owners and Masters of vessels to take the necessary action within the context of the official weather warnings to protect their passengers, crew and craft and abide by any direction provided by the Regional Harbour Master.

It may be necessary for the Regional Harbour Master to give directions in relation to the operation and movement of vessels when entering, leaving or operating in a pilotage area. This may include, but is not limited to the orderly removal of vessels from their normal moorings, to more sheltered locations or in the case of large commercial vessels, the orderly evacuation of these vessels to sea. The closure of the pilotage area effectively means that marine activities cease, including the operation of ferries to/from all island resorts and pontoons. Changes are being proposed in relation to those vessels specifically nominated as being used to transport passengers and staff from island resorts and pontoons as a direct result of the weather warnings in place.

Even if you are an experienced mariner, we encourage you to read this plan and familiarise yourself with its requirements. The contingency plan requires you to think about your own planning in this context and to be prepared to enact this plan if required.

Remember, the best protection against extreme weather events is to plan for such eventualities and respond accordingly.

Patrick Quirk
General Manager
Maritime Safety Queensland

Captain Michael Barnett
Regional Harbour Master
Cairns

Objective of this plan

The overall objective of this plan is to provide for the safety of vessels and their operation during extreme weather events. Personal safety is of prime importance at all times.

An extreme weather event may require the evacuation of a pilotage area, a harbour or boat harbour. In such instances, the Regional Harbour Master's primary objective is to have the relevant area secure and for all vessels to have enacted their own safety plans between 48 and 6 hours before the event impacts.

The plan is to organise the orderly removal of vessels from their normal moorings to more sheltered locations or, in the case of large vessels to sea. The creeks and waterways of Trinity Inlet, within the mangrove areas, offer the best shelter/protection for small vessels.

All vessels, other than those being used for emergency purposes are to evacuate and clear the port area. Owners should be aware that, should they leave their vessel in the port area, they may be liable to prosecution and, additionally, be held accountable for any damage that their vessel may cause or incur to other infrastructure.

Masters should be aware of the sudden onslaught of cyclones during the wet season and should take adequate precautions to have their vessels ready to depart at short notice. When the meteorological office advises that a strong tropical depression or cyclone is likely to form, Masters will put their vessels on standby to sail.

The Regional Harbour Master's requirements for clearing the port of large vessels will generally be:

- Wind speeds must not have reached 30 knots.
- Ships must be able to sail, for example, machinery working and crew on board.
- The ship must be in a suitable trim to sail.
- The ship's deepest draft must give suitable under keel clearance when sailing.

Master's and owner's responsibility in regard to this plan

Masters and owners of vessels have an obligation under the *Transport Operations Marine Safety Act 1994* at all times to take appropriate precautions for the safety of their vessels, passengers and crew.

In extreme weather conditions, the Regional Harbour Master may give directions in relation to the operation and movement of vessels within their jurisdiction. Masters and owners are required to follow such directions.

Masters and owners need to familiarise themselves with this plan, determine the most appropriate safety plan for their vessel and respond in accordance with any directions. Masters and owners are also required to monitor developments to ensure that they have the most up-to-date information on weather conditions and any directions in place.

Masters and owners are required to notify MSQ of any changes to the following:

- vessel ownership
- residential address
- contact telephone numbers

This up-to-date contact information is vital for an immediate response to any port emergency. Failure to provide correct details of vessel ownership is an offence under the *Transport Operations (Marine Safety) Act 1994*.

Unless absolutely unavoidable, all owners of vessels on the water should ensure their vessel is capable of moving without assistance, particularly during recognised extreme weather event peak seasons (e.g. cyclone seasons). Failure to do so may present an unacceptable hazard to the vessel, as well as other vessels and infrastructure. This may cause an owner to incur towage expenses.

If owners are unable to attend to their vessels for any significant duration, particularly during the tropical cyclone season, owners are to make arrangements with a person that can act on their behalf in the event of an extreme weather event. That person will be responsible to implement the owner's safety plan. However, the owners are still responsible for the safety of their own vessel. A local contact person must attend to the vessel no later than when a Yellow Alert has been declared for the Port of Cairns and make appropriate preparations.

Extreme weather procedures in detail

In the event of an extreme weather event threat the Regional Harbour Master will take the following action:

- ensure that vessels are advised of relevant warnings and response requirements;
- ensure that shipping complies with the response requirements;
- restrict the movement of vessels within a pilotage area if necessary;
- direct, monitor or oversee the evacuation of vessels from a pilotage area, or other affected areas within their jurisdiction if applicable;
- provide directions which restrict and/or allow the entering or leaving of a pilotage area, in effect closing and reopening the port.

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

Phase 1: Extreme weather event watch - Prevention

An extreme weather event watch will be issued when an extreme weather event or developing event is likely to affect the area **within 48 hours**, but not expected to impact the area within 24 hours. This phase is a critical time for masters and owners to plan and prepare for the impact of the event.

During this period, masters and owners (or their representatives) should review their safety plans and address any matters outstanding (e.g. fuel).

Phase 2: Extreme weather event warning – Preparedness

An extreme weather event warning will be issued when an extreme weather event or developing event is likely to affect the area **within 24 hours**. This phase is critical for masters and owners to complete all preparations in an orderly manner prior to the event occurring.

When deemed necessary, the Regional Harbour Master (Cairns) will direct the evacuation of the port with the assistance and cooperation of personnel from MSQ, Ports North, the Water Police, Coast

Guard and Queensland Boating and Fisheries Patrol to regulate and control the safe movements of vessels.

Acting under the direction of the Regional Harbour Master, vessels must proceed as far as possible upstream into the designated shelter areas so as not to impede the progress of others.

The accompanying chartlet and key (see appendix A) shows the cyclone mooring areas of vessels in the Port of Cairns, which has been divided into alphabetically marked sections. Also shown are the various creeks and waterways to which vessels from each sector will be directed for shelter in the event of a cyclone.

The port has established a three tier alert status.

Yellow Alert

Destructive winds forecast within 24 hours.

- Suspend all cargo or trading operations and obtain a situation report on state of operations including draft.
- Inform ships' masters of situation and place a short notice to sail.
- Obtain information on length of time to bring ships to a readiness to sail.
- Inform Regional Harbour Master (Cairns) of situation and ascertain suitable sailing times and draft requirements.
- If time permits, resume cargo, trading operations or ballast operations. Bring ship to satisfactory handling trim and safe transit draft.
- Small vessels move to designated cyclone mooring areas.
- Owners of recreational vessels are to follow the directions given in the chartlet in Appendix A

Note: When conditions are deteriorating, every endeavour will be made to accommodate the working of cargo in the available time, allowing for tidal constraints.

Blue Alert

Destructive winds forecast within 12 hours.

- Sail all ships (note: It may already have been necessary to have sailed some ships due to tidal conditions).
- Naval vessels will be directed by the Base Commander
- In the event that a ship cannot sail, arrange linesmen, instruct master to take standard cyclone precautions.
- On water authorities prepare to depart.
- All small vessels should be moored in their designated area and final preparations and tying off completed.
- Owners of recreational vessels should be moored in the designated areas with final preparations and tying off complete

Note: The anchoring of large vessels upstream is not recommended due to tidal surges that could inundate the area, which, with high winds, may well strand vessels inland of the river system, making any salvage extremely difficult

Red Alert

Destructive winds forecast within 6 hours.

Port Closed

Vessels are not to leave their cyclone moorings until the official all clear is given by the Regional Harbour Master (Cairns). Only movements of an emergency nature will be permitted during a Red Alert.

Phase 3: Actual extreme weather event - Response

By this phase, all vessels are expected to have enacted their vessel safety plans noting that the port is closed and/or vessel movements restricted commensurate with the threat to safety of vessel movements or the environment.

Mariners should maintain a listening watch on VHF frequencies 16 and 12.

It is also important to be alert during the 'eye' of the cyclone as a period of calm may be experienced before the winds resume from the opposite direction.

Phase 4: After the extreme weather event has passed - Recovery

The Regional Harbour Master will assess residual risks and determine which actions need to be addressed. Do not assume that as the extreme weather event has passed it is safe to move your vessel.

Vessels, commercial and recreational, are not to leave their cyclone moorings until the official all clear is given by the Regional Harbour Master.

Mariners should maintain a listening watch on VHF frequencies 16 and 12 and follow advice/directions given by Cairns VTS.

Movements will be at the RHM's discretion and can be in stages including limited Internal Port movements until the Channel or areas within the Port are deemed safe.

Mariners are to consult the latest Notices to Mariners for updated information on Port depths and conditions.

Port Closure

The Regional Harbour Master may effectively close the port, wholly or in part, by giving general or particular direction to restrict the:

- entering or leaving of vessels in or out of a pilotage area; and/or

- movement of vessels in the Pilotage area.

Such direction will be appropriate with the threat to the safety of shipping or the environment and may occur at any time prior to the extreme weather event but it is most likely to occur 6 hours prior.

The closure of the port or restriction on vessel movements will, as far as practical, be implemented in consultation with key authorities and in a timely manner in order to minimise risks.

Reopening of the port

A Pilotage area may be effectively re-opened by the Regional Harbour Master following direction to allow the entering or leaving of ships in and out of a pilotage area, or movement of vessels within a pilotage area. Such direction will be provided when satisfied that all danger has passed, and the Pilotage area is safe for vessels to re-enter or exit.

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 structural assessments have been completed and 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 and will be designated as the Maritime Control Centre for the duration and aftermath of the extreme weather event.

The Maritime Control Centre call sign will be '**Cairns VTS**'.

VHF channels **16** and **12** will be continuously monitored before and during the extreme weather event, unless the centre is evacuated. Extreme weather watches, warnings and any directions will be issued on these channels frequently as directed by the Regional Harbour Master. If the plan requires for the Regional Harbour Master to give directions in relation to the operation and movement of vessels within their jurisdiction (such as port evacuation, closure and/or the movement of vessels to safer moorings), these actions will be coordinated by the Maritime Control Centre. In such instances, all vessels must contact the Maritime Control Centre before moving to their area of shelter, either by:

- telephoning 4052 7470, 1300 551 899;
- or calling on VHF channel 16 or VHF channel 12.

Key Contacts

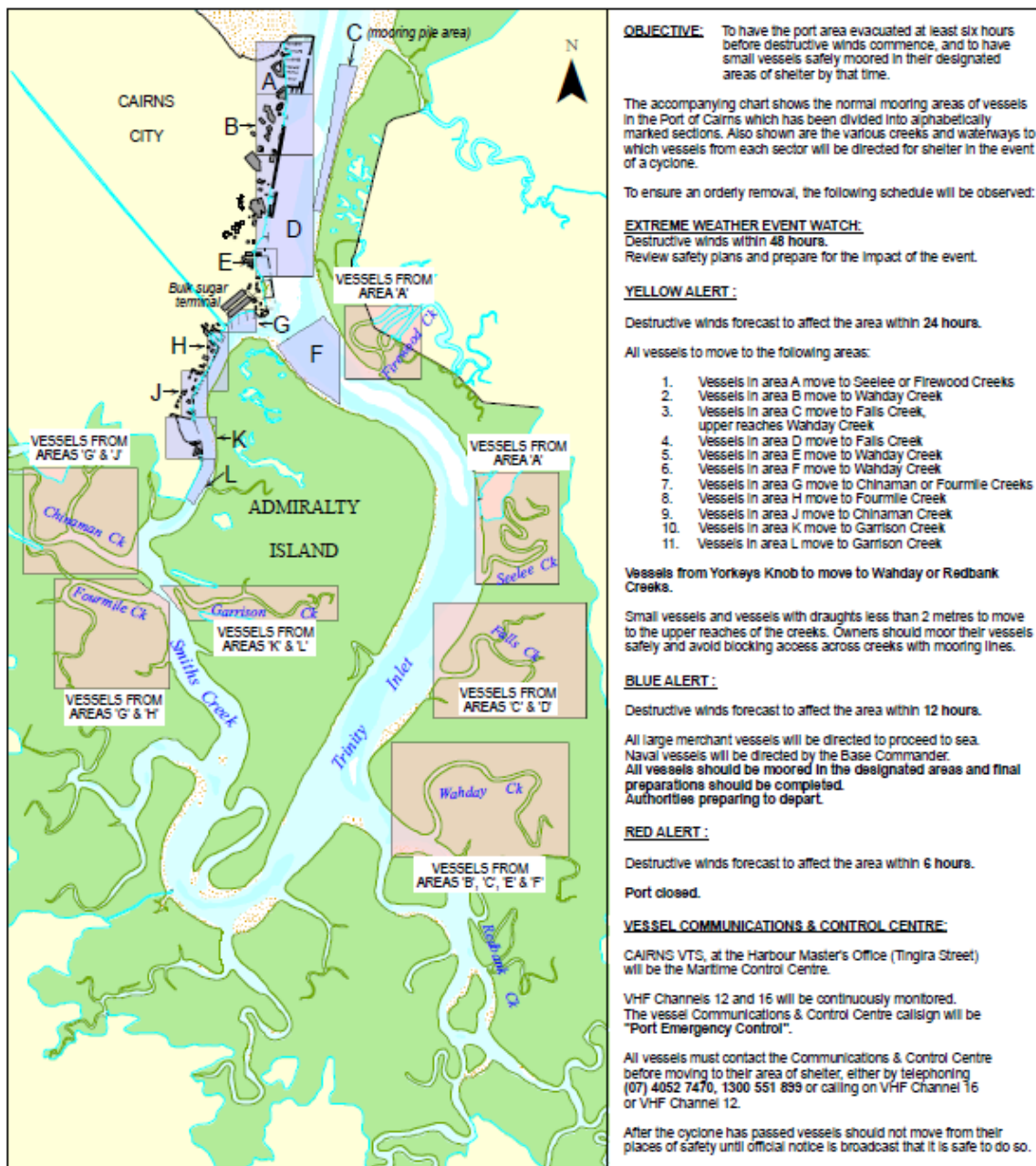
Name	Contact Number
Regional Harbour Master	07 4052 7412
Cairns Vessel Traffic Service	07 4052 7470 & 1300 551 899
Marlin Marina	07 4052 3866
Ports North	07 4051 2558
Water Police	07 4057 3577
Boating & Fisheries Patrol	07 4035 0700

Key Websites

Detailed weather updates: www.bom.gov.au
MSQ Website www.msq.qld.gov.au

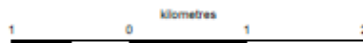
Appendix A

MARITIME EXTREME WEATHER EVENT PLAN (CYCLONE) PORT OF CAIRNS



Map S10c-1-9

Map Datum: GDA84 (WGS84 compatible)
Map projection: UTM MGA Zone 55
Prepared 05 December 2016
Maritime Safety Queensland - Spatial Services



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Appendix B

Your safety plan

The master and owner's responsibility is at all times to take appropriate precautions for the safety of their vessels, passengers and crew.

All masters and owners should have developed a vessel safety plan in response to extreme weather events. The plan should take into account the most likely risks arising from the hazards presented for your region.

You should trial your plan to ensure that it can be enacted competently and rapidly. Do not wait until the last minute to plan and prepare your response to extreme weather risks.

General considerations

A well prepared vessel with fully functional equipment is a key element to a successful safety plan.

Ensure that your vessel is in a seaworthy state

Maintain your vessel to ensure that deferred maintenance does not compromise the seaworthiness of your vessel at critical times. Check that all bilge pumps are operational and that all self-draining openings are clear and will remain so. Make sure all safety equipment is available, in working order and up-to-date where applicable (for example flares). Check all cleats and associated fittings for integrity. Generally, mooring lines are stronger than these. Keep storm anchors, spare warps and spare fenders ready at hand but well secured to prevent them creating a potential hazard in the event you must move the vessel. Securely stow all loose items. Secure all hatches and vents. Provision your vessel with fresh water, food and fuel and ensure that the batteries are charged.

Ensure your mooring arrangements are up for the job at hand

Check all mooring lines and warps for chafing and deterioration and replace if necessary. Man-made synthetic fibres such as polyethylene, polypropylene and polyester deteriorate in the sunlight and may show little signs of deterioration prior to failure. You should have a schedule worked out to replace mooring lines in accordance with manufacturer's recommendations. Allow for a sufficient number of mooring lines so that you can double up your mooring arrangements. Have sufficient fenders for the anticipated mooring arrangements. Check anchor chains, shackles and anchor warps for wear and replace if necessary. If you intend to utilise a swing mooring, ensure that the mooring chain has been recently inspected. You should also be aware that flooding events resulting from extreme weather events may result in build-up of debris around the mooring chain, compromising the integrity of the mooring arrangement.

Reduce wind loadings

Remove all deck gear including lifebuoys, dodgers, bimini covers, clears and so on and store below. Remove sails, self-furling sails and covers. If this is not possible, double wrap or tie these components in such a way that the wind cannot tease any ends out and allow flapping of gear to commence.

Secure your tender

Ideally, tenders should be stored in dinghy lockers, garaged or deflated and stowed if applicable. If stored with the vessel, tenders should be securely lashed inverted on deck to prevent filling with water – do not contemplate towing tenders. If left on purpose-built davits, tenders should be cleaned out and securely lashed and bungs removed.

Marina-based safety plans

Marina-based plans may be appropriate for your region. You should note that the design and construction of marinas requires the consideration of the likely range of weather conditions that might be experienced so that the overall structures would withstand the expected loads including storm surge while vessels are moored in the berths.

Notwithstanding the care which was taken in establishing design and construction criteria that were considered to be appropriate, no guarantee can be given that the structures are capable of maintaining their integrity in the complete range of extreme weather conditions. Remember vessels are moored at owners' risk and it is the owner's prerogative to move their vessel if they feel insecure in the marina, noting that any vessel movement should occur in line with the extreme weather contingency plan for the port.

In addition to the general points made above, marina-based safety plans need to consider the following issues. It is important that you discuss this with your marina management to understand their requirements so that your plan is consistent with marina operations:

The loadings on marina berths

Some marinas allow for berths to remain occupied provided the berth has a pontoon equivalent to the overall length (LOA) of the vessel occupying it. Vessels may also be allowed to bear against the fingers/pontoons noting that suitable or additional fendering is likely to be required.

Mooring considerations

Double up mooring lines, by running duplicated ropes to alternative bollards. Do not run duplicates to the same bollards – a single bollard failure should not release the craft from a safe mooring arrangement. The duplicate lines should be in good condition and run slightly slack to ensure that they are only required to work in the event of the chafing through the primary mooring lines. Vessels should not be secured to piles as this prevents pontoons moving with tidal and surge movements. Take particular care to protect against chafing. Ensure lines are made fast to substantial boat parts, for example mast steps, winches and so on, bearing in mind cleats are known to have been torn out of decks. Do not use chain to secure your boat to pontoon bollards. Chains have no ability to stretch, where ropes have a certain amount of give. Some marinas allow for anchors to be lowered in the marina berth to the sea bottom. Ensure there is enough slack to rise and fall of the vessel due to swell and storm surges. If the master or owner elects to stay on-board with the vessel, any mooring lines should be adjustable from on-board and sufficiently taut to ensure the vessel and pontoon move as one.

Other factors

You are likely to be required to disconnect all shore power leads and water hoses. Some marinas have particular arrangements for the stowage of vessel tenders. Marina management may determine the time when personnel are barred from the pontoons and/or hardstand areas. Ensure that you abide by any such direction.

Hardstand storage

Hard stand storage is a viable alternative for trailer vessels or vessels undergoing maintenance. Hardstand storage may have the additional considerations:

- Windage is considerably increased through hardstand storage. Take particular care to secure and stow all deck items. Place the vessel head to the wind if possible;
- Ensure wheels are chocked and trailer brakes applied;
- Attach the trailer to the nearest strong point(s);
- Flying debris, particularly in the hardstand areas, may be lethal.