

# Maritime Safety Queensland

## Extreme Weather Event Contingency Plan

2023 - 2024

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# Forward

Maritime Safety Queensland (MSQ) is an agency of the Department of Transport and Main Roads (DTMR) which works closely and cooperatively with disaster management agencies, industry and community on both a State-wide and local basis. Extreme weather events do happen throughout Queensland highlighting the need for awareness and vigilance to the risks such events present to the maritime community.

MSQ has built on previous experiences and issues in preparing its contingency plans as a 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 sets out the broad framework that will apply for Queensland. MSQ takes advice on developing weather situations from the Bureau of Meteorology (BOM) which is the government's primary source of weather intelligence.

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.

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.

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.

With Queensland adopting the Australian Warning System with respect to extreme weather events, MSQ has also aligned to the system in reference to maritime advice and response. This has resulted in some changes to terminology and the warning system. Even if you were familiar with the system in previous years, you should read this year's plan and familiarise yourself with the changes.

MSQ has also adopted the Guardian Incident Management System to manage extreme weather events. One advantage of the system is the ability of the public to access the MSQ Dashboard, where a summary of warnings, port closures and other information is available at all times throughout the State.

Remember, the best protection against extreme weather events is to plan for such eventualities and respond accordingly. I urge you to take the time to read this document and am confident that it will provide you with useful information to protect your property, prevent ship sourced pollution and most importantly, preserve life.

**Jim Huggett**  
A/General Manager  
Maritime Safety Queensland

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Printed versions of this document may not be up to date. The latest version of this document can be downloaded the Maritime Safety Queensland website at ([www.msq.qld.gov.au](http://www.msq.qld.gov.au)).

## Objective

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

An extreme weather event may require the evacuation of a pilotage area, part of a port, a harbour or boat harbour and may include the closure of sections of rivers/waterways. 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 six hours before the event is expected to impact. All preparations should be completed six hours before the event.

Local marina operators may have updated evacuation and emergency plans for times when extreme weather is forecast. You must ensure that you are familiar with your local marina's emergency plans.

The Extreme Weather Event plan utilises emergency management concepts such as, a comprehensive all agencies approach and principles to best manage emergent events.

For clarification regarding specific Extreme Weather Event Plans, please contact the local MSQ Regional Harbour Master's office. Details for the applicable office can be found at the end of the relevant port's Extreme Weather Event Plan.

## Document Structure

Outlined below is general information, including what actions should be taken if the vessel is to remain in-situ, relocated in the local area or proceed to sea. Following this is a series of appendices containing information for particular ports, waterways and areas where specific action is required due to the nature of the area.

## Background

The Queensland Government, acting through the DTMR, is committed to ensuring its emergency management and response procedures and processes are regularly tested and refined.

In Queensland, severe weather includes tropical cyclones, severe storms, east coast lows and flooding. Cyclones generally occur from November to April but have been known to extend before and after these months. Other severe weather event types can occur throughout the year. Vessel operators need to make all possible preparations for severe weather. Boat owners are responsible for maintaining their vessel and property to survive severe weather.

Marine forecasts are accurate when predicting major weather events, such as cyclones, but may be less accurate when predicting local severe weather, such as strong winds in storms. Be prepared for sudden unexpected weather changes.

The Extreme Weather Event (EWE) Contingency Plan for the relevant port outlines what you need to do if an extreme weather event warning is posted and how to respond to the different warning levels. Vessel owners have responsibilities under each level. Make sure you know these to take the best safety precautions for your vessel and surrounding infrastructure.

## What is an Extreme Weather Event?

For the purpose of this plan, an Extreme Weather Event is defined as a weather event that has the potential to affect safe operation of vessels and result in injuries, damage to vessels, damage to infrastructure or disrupt movement scheduling.

Different areas of Queensland will experience different extreme weather events. Southeast Queensland may experience severe thunderstorms, river flooding, east coast lows, the effects of a cyclone offshore or other natural weather hazards. In Central Queensland, the area is exposed to direct cyclone activity as well as low pressure systems that can have their

effects felt along the coast with gale force winds and heavy rain. Flooding of major and minor river systems and creeks often occurs following rain events, sometimes many days or weeks after the weather system has passed, due to the large catchments associated with the rivers. In North Queensland and Far North Queensland, the likely extreme weather event is tropical cyclones. The intensity of cyclones can cause widespread flooding, destruction and devastation.

## Master's and owner's responsibility regarding this plan

Masters and owners of vessels have an obligation under the *Transport Operations Marine Safety Act 1994* and *Marine Safety (Domestic Commercial Vessel) National Law Act 2012* 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 and develop 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 ensure their registration details are correctly displayed on their vessel, kept up-to-date and are to notify the appropriate registration authority (details of how to make contact are below).of any changes to the following:

- vessel ownership
- residential address
- contact telephone numbers

For buoy mooring authority holders, please contact your local MSQ office to update your details: [How to contact us \(Department of Transport and Main Roads\) \(msq.qld.gov.au\)](#)

Please contact the Department of Transport and Main Roads by calling 13 23 80, going to [www.tmr.qld.gov.au](http://www.tmr.qld.gov.au) or by visiting your local Customer Service Centre. This up-to-date contact information is vital for an immediate response to any maritime emergency. Failure to provide correct details of vessel ownership is an offence under the *Transport Operations (Marine Safety) Act 1994* and *Marine Safety (Domestic Commercial Vessel) National Law Act 2012*.

Unless unavoidable, all owners of vessels on the water should ensure their vessel is capable of moving without assistance or have alternative means of moving their vessel, particularly during extreme weather event peak 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 or salvage expenses.

If owners are unable to attend to their vessels at short notice for any significant duration, particularly during the period from November to April each year, owners must 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 vessel.

In the event of extreme weather, masters and owners of vessels should avoid entering waterways if there is no valid purpose to be there.

# General Considerations for YOUR safety plan

A well-prepared vessel with fully functional equipment is a key element to a successful safety plan and the following checklist will assist:

## **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 and EPIRB).

Check all cleats and associated fittings for integrity as 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.

Check all through hull and fuel shutoff valves are accessible and operational

Ensure batteries are charged

Provision your vessel with fresh water, food and fuel (where suitable).

## **EPIRB**

If the vessel is to be securely moored with no personnel on-board then the EPIRB should be removed. Past experience has shown that EPIRB's have been inadvertently activated during extreme weather costing rescue crews' valuable time searching for unoccupied vessels.

## **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 has been recently inspected as required under your Buoy Mooring Authority.

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.

## Vessels to remain in-situ

If your extreme weather plan is to keep your vessel at a marina or buoy mooring, please consider the following:

### 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 area.

Vessels that are in a marina must comply with the directions of the Regional Harbour Master and may be required to evacuate the marina and inner anchorages and proceed to nominated safe havens. Refer to your marina management for the local requirements and to the region-specific appendix for possible safe havens.

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:

#### Loadings on marina berths

Some marinas allow for berths to remain occupied provided the vessel meets the requirements of the Marina. Owners should establish Marina requirements well in advance of the onset of the extreme weather season.

#### 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 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.

Note: These considerations apply equally to vessels secured at private pontoons.



## Buoy Moorings

Is the buoy mooring constructed, maintained and certified to securely hold your vessel in the expected conditions?

Ensure the mooring lines are suitable, in good condition. Double up if deemed necessary.

If your plan calls for the deployment of an anchor, ensure the chain (or rope) is adjusted to share the load when fully stretched.

Reduce wind loadings (sails, self-furling sails and covers) where possible or double wrap or tie these components in such a way that the wind cannot tease any ends out and allow flapping of gear.

Secure all loose gear.

Check that all bilge pumps are operational and that all self-draining openings are clear and will remain so.

## Vessels remaining in the local area

For vessels that are to remain in the local area, act early and please consider the following:

### Trailer boats

Trailer boats that are able to be removed from the water and relocated to safe storage should be safely moved and secured as early as possible.

- Ensure boat is secured to trailer
- Secure trailer to strong point(s) above tide and flood level
- Remove bungs

### Hardstand storage

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

- Place the vessel head to the wind if possible
- Ensure wheels are chocked and trailer brakes applied
- Attach the trailer or cradle to the nearest strong point/s
- Consider additional straps tying down the boat to the trailer or strong points.

Note that flying debris, particularly in the hardstand areas, can cause injury or may be lethal during a severe weather event. Please exercise all due care when operating in these areas.

### Sheltered locations

For vessels that cannot be put on trailers or hard stand, there may be options that provide sheltered protection from an extreme weather event. Please be aware of these locations and incorporate them into your extreme weather event plan. This may include mangroves. If relocating to narrow waterways secure as near to the bank as possible so other vessels have access and keep out of the strongest current flow. Avoid running lines to both sides, thereby blocking access.

## Vessels proceeding to sea

For larger ships, visiting vessels and those without local arrangements, please consider the following:

### Operational Limitations

During weather events, there may be operational limitations imposed at short notice to ensure safety across the port. These can be associated with manoeuvring limitations, such as additional tugs or berth direction. They may also be associated with environmental limits such as light conditions, current and additional UKC requirements. These will be advised through VTS and as the event transitions.

## The Australian Warning System

The Australian Warning System is a national approach to information and warnings during emergencies like flood, storm, extreme heat and severe weather. The system uses a nationally consistent set of icons, like those below and aims to deliver a consistent approach to severe weather events no matter where you are.

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. The maritime specific calls to action are detailed further on in the document.

## Warning Levels

Under the Australian Warning System there are three warning levels. The levels are Advice (Yellow), Watch and Act (Orange) and Emergency Warning (Red). What to do at each warning level from a maritime perspective is outlined below. Two more levels have been included (Advice – await instruction from the Regional Harbour Master and All Clear – the port is open).

**Advice (Yellow):** An event is expected. Monitor conditions and check your vessel safety plan. Assess whether or not you need to move your vessel (if able). Stay up to date in case the situation changes.

**Watch and Act (Orange):** Conditions are worsening. Relocate your vessel if able. The Regional Harbour Master may issue directions. Continue to monitor conditions.

**Emergency Warning (Red):** The port area is closed. No movements can occur without approval from the Regional Harbour Masters. Continue to monitor conditions and maintain a listening watch on VHF channels <insert>

**Advice (Yellow):** the weather event has passed. Continue to maintain a listening watch on VHF channels <insert>. Await directions from the Regional Harbour Master/Vessel Tracking Service.

**All Clear (White):** Port area open to all traffic.

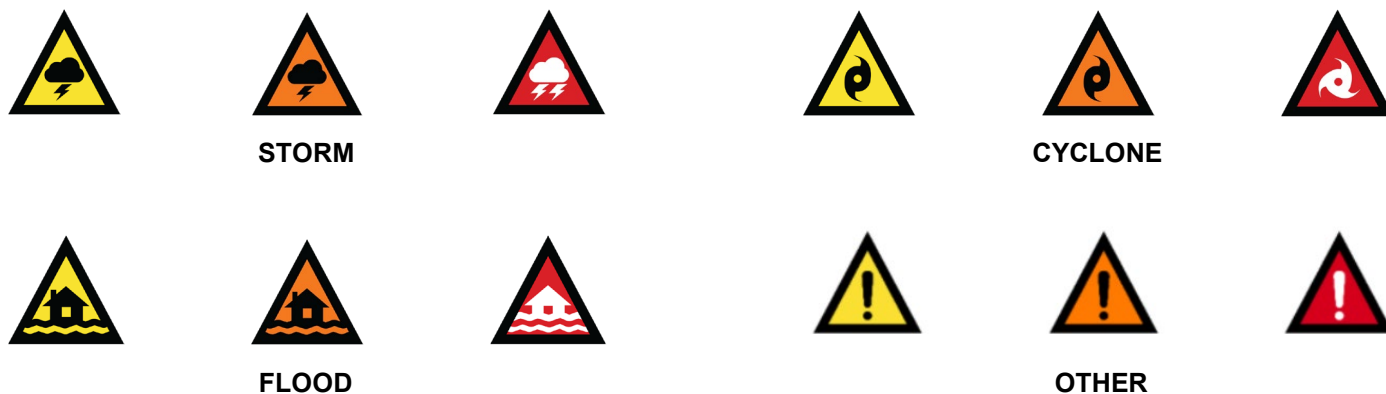
During an extreme weather event, the warning levels may apply both in the lead up to an event, or immediately after an event. These will be indicated by the colour used along with the relevant calls to action (below).

## Calls to Action

Each warning level has a set of action statements to give the community clear advice about what to do. Calls to action can be used flexibly across all three warning levels depending on the event and the phase of the event. High level calls to action are listed below under 'warning levels'. More detailed calls to action can be found in the template.

## Signs

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.



Visit the Queensland Fire and Emergency Services Australian Warning System webpage for more information on the Australian Warning System <https://www.qfes.qld.gov.au/aws>

## Extreme weather procedures in detail

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

- Restrict the movement of vessels within a pilotage area if necessary
- Direct and oversee the movement of vessels from a pilotage area and/or the evacuation of persons from specific waters of a pilotage area or other affected areas within their jurisdiction if applicable
- Provide directions which restrict and/or allow the entering or leaving a pilotage area, in effect closing and reopening the port
- Advise mariners of relevant warnings and response requirements, and
- Seek compliance within the response requirements.

These actions will be enacted over five distinct phases (outlined in the table below) that allows for the development of appropriate responses to the threats faced. Maritime Safety Queensland has enacted event warning levels in line with the Australian Warning System across the state.

The tier alert system may be enacted for the whole of a port or area covered by an Extreme Weather Event plan, or part thereof. The Regional Harbour Master or their representative will advise the activation of this plan, the alert status and the area to which it applies.

	<p><b><u>Advice (YELLOW)</u></b></p> <p>Prepare to move, monitor conditions, consult vessel safety plans.</p>	<p><b>24-48 hours before the event</b></p>
	<p><b><u>Watch and Act (ORANGE)</u></b></p> <p>Mariners to relocate vessels to safety, as per vessel safety plans.</p> <p>Continue to monitor conditions and maintain a listening watch on VHF channels.</p> <p>Adhere to Regional Harbour Master directions.</p>	<p><b>12-24 hours before the event</b></p>
	<p><b><u>Emergency Warning (RED)</u></b></p> <p>Port closed. Movements not permitted without approval from Regional Harbour Master.</p> <p>Maintain a listening watch on VHF channels.</p>	<p><b>Extreme event within 6 hours</b></p>
	<p><b><u>Advice (YELLOW)</u></b></p> <p>Maintain a listening watch on VHF frequencies.</p> <p>Movements will be at the instruction of the Regional Harbour Master / Vessel Tracking Service.</p>	<p><b>After event has passed, recovery underway</b></p>
	<p><b><u>All Clear (WHITE)</u></b></p> <p>Wait for the Regional Harbour Master's all clear and VTS instructions for movements.</p> <p><i>*Please note, in MSQ's Dashboard, this aligns with the green port open status</i></p>	<p><b>Port open to all traffic, business as usual</b></p>

# Appendices – Port Specific Extreme Weather Event (EWE) Contingency Plans

*The appendices are separate documents available on the MSQ website. You can find them on the following webpage: <https://www.msq.qld.gov.au/safety/preparing-for-severe-weather>*

*The appendices are organised in order of the Ports/Areas as they occur along the Queensland coast, starting from the Northern Territory border and moving towards the New South Wales border.*

## MSQ Cairns Region

- Appendix 1 – Karumba
- Appendix 2 – Weipa and Amrun
- Appendix 3 – Skardon River
- Appendix 4 – Port Kennedy
- Appendix 5 – Cape Flattery and Cooktown
- Appendix 6 – Port Douglas
- Appendix 7 – Cairns and Half Moon Bay
- Appendix 8 – Mourilyan, Clump Point, Innisfail and South Johnstone

## MSQ Townsville Region

- Appendix 9 – Lucinda
- Appendix 10 – Townsville
- Appendix 11 – Abbot Point and Bowen

## MSQ Mackay Region

- Appendix 12 – Whitsundays
- Appendix 13 – Mackay
- Appendix 14 – Hay Point

## MSQ Gladstone Region

- Appendix 15 – Rosslyn Bay
- Appendix 16 – Fitzroy River
- Appendix 17 – Port Alma
- Appendix 18 – Gladstone
- Appendix 19 – Bundaberg
- Appendix 20 – Hervey Bay Regions (Tin Can Bay, Hervey Bay and Mary River)

## MSQ Brisbane Region

- Appendix 21 – Brisbane
- Appendix 22 – Southport