

Tsunami Sub Plan

Burdekin Local Disaster Management Group

Prepared By

Local Disaster Coordinator

Authorised By

Local Disaster Management Group

Date Prepared

August

2023

Document Control

Amendment Control

The Tsunami Sub Plan is a controlled document. The controller of the document is the Burdekin Shire Local Disaster Coordinator (LDC). Any proposed amendments to this plan should be forwarded in writing to:

Local Disaster Coordinator
 Burdekin Shire Local Disaster Management Group
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The LDC may approve minor amendments to this document. The LDC will ensure that any changes to the document's content will be submitted to the Burdekin Local Disaster Management Group (LDMG) for approval and be endorsed by the Burdekin Shire Council.

Amendment Register

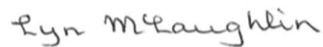
All versions are archived, and this sub plan only references the last two versions.

Amendment		Plan Updated		
No / Ref	Issue Date	Inserted by	Summary of Changes	Date
12	August 2022	Eileen Devescovi	Yearly Review	August 2022
13	August 2023	Eileen Devescovi	Yearly Review	August 2023

Endorsement

This Tsunami Sub Plan has been developed for the Burdekin Shire Local Government Area (LGA) and subsequently approved by the Burdekin LDMG. This Plan is a Sub Plan of the *Burdekin Local Disaster Management Plan (LDMP)* and is to be read in conjunction.

The Plan is recommended for distribution by the LDMG and is considered live once approved by the LDMG.

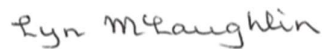


Mayor Lyn McLaughlin
 Chair Burdekin LDMG



Eileen Devescovi
 Burdekin Local Disaster Coordinator

The functions of the Local Government were advised in accordance with the Disaster Management Act (DM Act) (s80). This sub plan was formally adopted by the Burdekin Shire Council at the Council meeting held on Tuesday 14 November 2023, through resolution.



Mayor Lyn McLaughlin

Abbreviations List

Abbreviation	Full Title
AHD	Australian Height Datum
ATWC	Australian Tsunami Warning Centre
AWS	Australian Warning System
BOM	Bureau of Meteorology
BSC	Burdekin Shire Council
DAF	Department of Agriculture and Fisheries
DDC	District Disaster Coordinator
DDCC	District Disaster Coordination Centre
DDMG	District Disaster Management Group
GA	Geoscience Australia
IOTWS	Indian Ocean Tsunami Warning & Mitigation System (IOTWS);
IOC	Intergovernmental Oceanographic Commission
JATWC	Joint Australian Tsunami Warning Centre
LDC	Local Disaster Coordinator
LDCC	Local Disaster Coordination Centre
LDMG	Local Disaster Management Group
LDMP	Local Disaster Management Plan
LGA	Local Government Area
OIC	Officer In Charge
PTWS	Pacific Tsunami Warning & Mitigation System
QAS	Queensland Ambulance Service
QFES	Queensland Fire and Emergency Services
QPS	Queensland Police Service
QTNP	Queensland Tsunami Notification Protocol
SDCC	State Disaster Coordination Centre
SES	State Emergency Service
SEWS	State Emergency Warning System
SOP	Standard Operating Procedure
VMR	Volunteer Marine Rescue
XO	Executive Officer

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1. Overview

The risk to the Burdekin community from a tsunami has not been assessed. However, past events have shown that, even if tsunamis occur infrequently, their impacts can be catastrophic.

Tsunamis are recorded in Australia about once every two years, and most are minor and present little threat of land inundation to our coastal communities. However, the abnormal waves, tides and currents caused by even relatively small tsunamis can be dangerous to swimmers and mariners.

Australia has a comprehensive, independent tsunami warning service (Joint Australian Tsunami Warning Centre) to advise the media, public and emergency authorities of any threat to Australia.

People living or working in areas, that may be affected by a tsunami need to know that they should move to safer areas if a tsunami warning is issued.

1.1 Purpose

This Tsunami Sub Plan aims to outline arrangements for tsunami-specific preparedness, prevention and response for the Burdekin Shire Local Disaster Management Group (LDMG) area of responsibility and residents of Burdekin Shire, who may be threatened by a tsunami.

The implementation of this plan will allow the LDMG to:

- make informed, timely decisions regarding tsunami warning and evacuation,
- ensure an orderly release of warnings to the community,
- facilitate the safe and managed movement of at-risk persons to a safer location, and
- facilitate a structured return of evacuated persons to their homes.

1.2 Objectives

The objectives of this sub plan are to:

- Define legal requirements and authority to evacuate;
- Define management structure with roles and responsibilities;
- Provide effective warning and information to the community;
- Provide managed temporary shelters with welfare provisions for displaced people;
- Maintain effective transport resources, routes, and procedures;
- Coordinate the return of displaced people; and,
- Prescribe arrangements for testing, evaluation and maintenance of this plan.

1.3 Scope

This sub plan applies to tsunami events potentially impacting the Burdekin Shire Council area, which are within the capability and resources of the Local Government, Emergency Services and other supporting agencies with a warning or evacuation function and/or responsibility.

1.4 Authority to Plan

The Burdekin LDMG has prepared this sub plan under the provisions of section 57 of the *Disaster Management Act 2003 (Qld)*. This sub plan will be managed in accordance with the administrative and governance processes outlined within the *Burdekin Local Disaster Management Plan* including approval, document control, distribution, review and renewal.

1.5 Plan Review and Testing Requirements

This sub plan is to be reviewed annually before the severe weather season or post event to include lessons learned. This sub plan is to be exercised to ensure the effectiveness and scalability of the plan and include involvement, communication, and collaboration with identified key local, district and state stakeholders.

2. Governance

2.1 Activation of Sub Plan

This plan will be activated by the LDC of the Burdekin LDMG in the event that a tsunami threatens (or potentially threatens) to impact the community and requires the movement of at-risk persons to a safer location. This sub plan is supported by the:

- Burdekin Local Disaster Management Plan;
- Burdekin LDMG Airport Emergency Sub Plan;
- Burdekin LDMG Communications Sub Plan;
- Burdekin LDMG Community Information & Warnings Sub Plan;
- Burdekin LDMG Evacuation Sub Plan;
- Burdekin LDMG Pandemic Influenza Sub Plan;
- Burdekin LDMG Public Health Sub Plan;
- Burdekin LDMG Resupply Sub Plan;
- Burdekin LDMG Transport Sub Plan;
- Burdekin LDMG Multi-Purpose Hall Place of Refuge Manual; and,
- Burdekin LDMG Local Disaster Coordination Centre Standard Operating Procedures (LDCC SOP).

The activation of these supporting plans should be considered concurrently with this plan.

2.2 Use of Sub Plan during Operations

While disaster management at the local level is clearly the responsibility of the local governments, the disaster management system in Queensland involves a whole of government management framework with responsibilities shared between the state government, local governments and the community. One of the very important roles for Local Government in disaster management processes is the evacuation of persons from a potentially unsafe location to a safer location and their eventual return home. Refer to the *Burdekin LDMG Evacuation Sub Plan* for detailed evacuation arrangements.

2.3 Functional Responsibility

The LDC is to ensure all agencies and members of the LDMG are aware of these procedures.

2.4 Roles and Responsibilities

Local governments, where appropriate, should ensure they are registered to receive tsunami warning messages from the Bureau of Meteorology (BOM) and the State Disaster Coordination Centre (SDCC). Local governments should identify vulnerable areas within their boundaries. In consultation with the SDCC

and District Disaster Management Group (DDMG), local governments should consider passing warning messages to:

- Local Government Community;
- Other Local Government outlets;
- Local Government managed facilities and campsites; and,
- Other vulnerable land and marine-based elements of the community.

Responsibility for the management of a tsunami event remains with the LDMG. The DDMG will support the LDMG in the management of a tsunami event. Table 1 (below) provides examples of roles and responsibilities.

Table 1 - Tsunami Response Roles and Responsibilities

Agency	Role	Responsibility	Watch	Warning – Marine Inundation	Warning – Land Inundation	
Burdekin Shire LDMG	Local Disaster Coordinator (LDC)/Core Group	Activation of process	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
		Preparing advice to the public regarding voluntary evacuations			<input checked="" type="checkbox"/>	
		Modelling and forecasting in conjunction with BoM		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
		Implementing Council's community messaging system			<input checked="" type="checkbox"/>	
		Arrange transport for those in the community who do not have vehicles			<input checked="" type="checkbox"/>	
	Chairperson	Process Coordination			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Public communications – local preparedness and response that compliments other warnings			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Request evacuation order from District Disaster Coordinator (DDC)				<input checked="" type="checkbox"/>
	Council		Prepare for critical asset protection in risk areas <ul style="list-style-type: none"> Continuity of services Post-impact resource needs 	<input checked="" type="checkbox"/>		
		Prepare to close/evacuate beaches	<input checked="" type="checkbox"/>			
		Beach Closures/Evacuations		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
		Commence critical asset protection in risk areas		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
		Public communications – local preparedness and response	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
		Issuing of public information that complements other warnings and targets local needs before, during and after disaster impact events	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
		Supporting the distribution of advice to the public regarding voluntary evacuations		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
		Supply of road signs			<input checked="" type="checkbox"/>	
Ergon		Prepare for critical asset protection in risk areas	<input checked="" type="checkbox"/>			
		Commence critical asset protection in risk areas		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Media		Distribution of tsunami information and warnings	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Agency	Role	Responsibility	Watch	Warning – Marine Inundation	Warning – Land Inundation
Queensland Ambulance Service		Prepare for critical asset protection in risk areas	<input checked="" type="checkbox"/>		
		Commence critical asset protection in risk areas		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Preparation for use of QAS Station sites outside of impact zone for community support		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Assistance with evacuations (persons with medical conditions)			<input checked="" type="checkbox"/>
		Provision of advice regarding medical special needs sectors of the community			<input checked="" type="checkbox"/>
Queensland Fire & Emergency Service		Prepare for critical asset protection in risk areas	<input checked="" type="checkbox"/>		
		Commence critical asset protection in risk areas			<input checked="" type="checkbox"/>
Queensland Health		Prepare for potential influx of injured people	<input checked="" type="checkbox"/>		
		Commence preparation for triage			<input checked="" type="checkbox"/>
Queensland Police Service		Coordination of evacuation arrangements		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Liaison with Australian Federal Police		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Prepare for critical asset protection in risk areas	<input checked="" type="checkbox"/>		
		Commence critical asset protection in risk areas			<input checked="" type="checkbox"/>
		Doorknock vulnerable communities tasked by LDMG			<input checked="" type="checkbox"/>
State Emergency Service	Local Controller/ Volunteers (as directed)	Assist staff at evacuation centres (if requested)			<input checked="" type="checkbox"/>
		Provide resources to QPS as required		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Doorknock vulnerable communities tasked by LDMG		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Telstra		Prepare for critical asset protection in risk areas	<input checked="" type="checkbox"/>		
		Commence critical asset protection in risk areas			<input checked="" type="checkbox"/>
VMR		Public communication of LDMG information on Marine radio		<input checked="" type="checkbox"/>	
Others		Responsibilities as required			

3. Levels of activation

3.1 Tsunami Watches and Warnings for Australia¹

The [Australian Tsunami Warning Centre \(ATWC\)](#) is a national collaboration between the Australian Bureau of Meteorology (Bureau), Geoscience Australia (GA) and the Department of Home Affairs (Home Affairs) which provides a comprehensive tsunami warning system delivering timely and effective tsunami warnings to the Australian population.

The Australian Government established an Australian Tsunami Warning System in 2009. This included:

- Establishment of the Joint Australian Tsunami Warning Centre (JATWC) with 24/7 monitoring and analysis capacity for Australia;
- The upgrade and expansion of sea-level and seismic monitoring networks around Australia and in the Indian and Southwest Pacific Oceans;
- Implementation of national education and training programmes about tsunamis;
- Assistance to the Intergovernmental Oceanographic Commission (IOC) in developing the existing Pacific Tsunami Warning & Mitigation System (PTWS) and establishing an Indian Ocean Tsunami Warning & Mitigation System (IOTWS); and
- Technical assistance to help build the capacity of scientists, technicians, and emergency managers in South-West Pacific and Indian Ocean countries.

Australia now has a world-class tsunami warning system providing 24/7 monitoring, detection and warning services for the Australian community.

The first stage of the tsunami warning process is a 'tsunami watch' phase, where seismologists have determined the potential for an identified undersea earthquake to cause a tsunami threat to Australia. The Bureau will issue a National Tsunami Watch if there is a threat. A National Tsunami No Threat Bulletin will be issued if there is no threat.

The National Tsunami Watch may be reissued if a tsunami remains unconfirmed by sea-level observations and any potential first point of impact on Australia is more than 90 minutes away (the minimum time criteria for warning).

If sea level observations and further data confirm the tsunami threat, or if any potential first point of impact is less than 90 minutes away, the Bureau, on behalf of the JATWC, will use its severe weather communication infrastructure to issue Tsunami Warnings for the States and Territories under threat. The Bureau's Regional Forecasting Centres (RFCs) in capital cities are the primary liaison points for emergency services during tsunami events.

Once separate tsunami watches or warnings are issued for individual States and Territories, a National Tsunami Warning Summary will also be issued listing all the watches, warnings and cancellations that are in effect for the current tsunami event. The JATWC website will provide a complementary coastal threat graphic showing the regions currently under threat.

3.2 Australian Tsunami Warning Authority

The Joint Australian Tsunami Warning Centre (JATWC), operated by the Bureau of Meteorology (BOM) and Geoscience Australia, is the issuing authority for tsunami warning products for Australia.

All warning information is publicly accessible through the BOM website (<http://www.bom.gov.au/tsunami/>).

Note: information and warnings released by other International Tsunami Warning Centres, such as the Pacific Tsunami Warning Centre and Japan Meteorological Agency, should not be relied upon or referenced as the information is not applicable to the Australian coastline.

¹ http://www.bom.gov.au/tsunami/about/tsunami_warnings.shtml

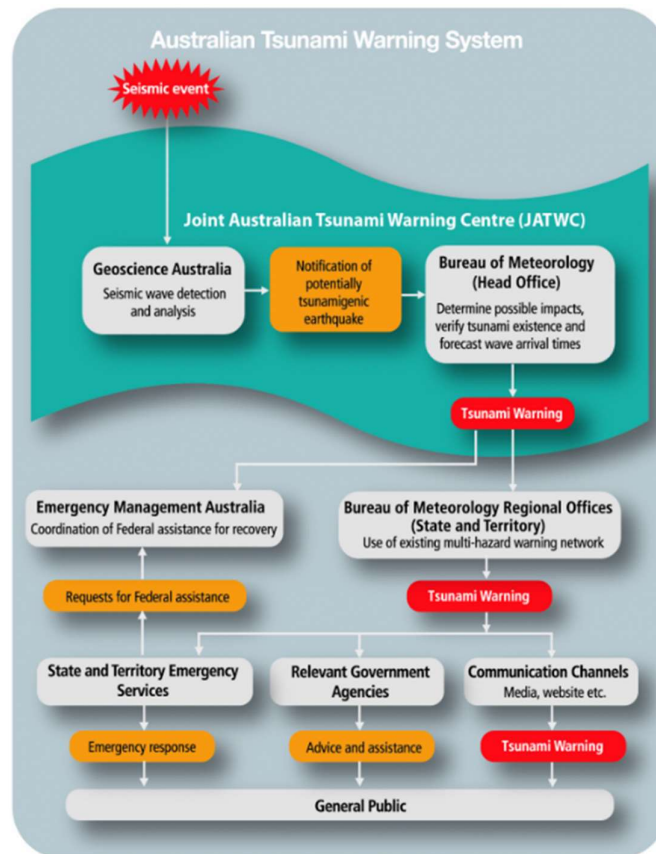


Figure 1 - The Australian Tsunami Warning System (Sourced from: <http://www.bom.gov.au/tsunami/about/atws.shtml>)

[The Queensland Tsunami Notification Manual – M.1.183](#) (last updated 10th August 2018) guides all persons and roles involved in the use of tsunami warning products at local, district and state government levels as a community warning messaging tool within Queensland and operates under the [Disaster Management Act 2003](#), [Fire and Emergency Services Act 1990](#) and the [Public Safety Preservation Act 1986](#).

The Queensland Government has also released a [Tsunami Guide for Queensland](#), which was released on the 19th of July 2019. The Tsunami Guide for Queensland was developed, with support from Geoscience Australia and the Department of Environment and Science's Coastal Impacts Unit (CIU), through a consultative process which also helped contextualise the findings of Geoscience Australia's Probabilistic Tsunami Hazard Assessment 2018 (PTHA18) for Queensland.

3.3 Tsunami Watch

The Chair and Local Disaster Coordinator (LDC) of the Burdekin Local Disaster Management Group (LDMG) will contact all core group members of the Burdekin LDMG to advise of the tsunami watch. The Burdekin LDMG will move to ALERT and continue monitoring the situation.

The Chair and LDC of the Burdekin LDMG will liaise with the District Disaster Management Group XO and District Disaster Coordinator throughout the watch and will continue to monitor the situation.

3.4 Tsunami Warning

Burdekin LDMG will take note of bulletins and warnings specific to the Tropical Waters Marine Forecast District 'from Cardwell to Bowen' by reference to Figure 1 and Table 2 below.

Marine Inundation – Activate LDMG. Marine Inundation warning operating procedures implemented (refer Table 2 – Queensland Marine Forecast Districts).

Land Inundation – Activate LDMG. Land Inundation warning operating procedures implemented (refer Table 2 – Queensland Marine Forecast Districts).

3.5 Tropical Waters Marine Forecast

Burdekin LDMG will take note of bulletins specific to the Tropical Waters Marine Forecast District 'from Cardwell to Bowen' in table 2 below.

Table 2 - Queensland Marine Forecast Districts

Marine Forecast Districts	Local Governments
South East Gulf	<ul style="list-style-type: none"> Burke Shire Council Carpentaria Shire Council Kowanyama Aboriginal Shire Council Mornington Shire Council
North East Gulf	<ul style="list-style-type: none"> Torres Shire Council Pormpuraaw Aboriginal Shire Council Aurukun Shire Council Mapoon Aboriginal Shire Council Napranum Aboriginal Shire Council
Peninsular Waters	<ul style="list-style-type: none"> Cook Shire Council Lockhart River Aboriginal Shire Council Hope Vale Aboriginal Shire Council
North Tropical Waters	<ul style="list-style-type: none"> Cook Shire Council Cairns Regional Council Cassowary Coast Regional Council Yarrabah Aboriginal Shire Council
<i>Tropical Waters</i>	<ul style="list-style-type: none"> Cassowary Coast Regional Council Hinchinbrook Shire Council Townsville City Council <i>Burdekin Shire Council</i> Whitsunday Regional Council
Central Coast	<ul style="list-style-type: none"> Mackay Regional Council Whitsunday Regional Council
Capricornia Waters	<ul style="list-style-type: none"> Rockhampton Regional Council Gladstone Regional Council Bundaberg Regional Council
Fraser Island Offshore Waters	<ul style="list-style-type: none"> Bundaberg Regional Council Fraser Coast Regional Council Gympie Regional Council
South East Coast Waters	<ul style="list-style-type: none"> Moreton Bay Regional Council Sunshine Coast Regional Council Brisbane City Council Redland City Council Gold Coast City Council



Figure 2 Queensland Forecast Areas Map²

3.6 Disaster declaration

A disaster declaration is expected to be signed for the affected area following the issue of a tsunami warning. The LDMG may request that the DDMG make an application to State for a declaration of a disaster situation, should it be considered that extra powers are required during the watch phase to ensure the movement of people away from the tsunami hazard, i.e. evacuations, road closures, authority to enter a place, etc.

3.7 Evacuation

Existing evacuation plans will provide the basis for tsunami response planning. However, the sudden onset nature of a tsunami presents some unique constraints for evacuation planning.

The Burdekin Shire LDMG expects people in the vulnerable zone to evacuate themselves based on the information given to them by the LDMG. The evacuation will be based on the Tsunami Risk and Evacuation Map using the routes marked on the map. The maps will be available on our website and at the Council Chambers, as needed.

² <http://www.bom.gov.au/qld/forecasts/map.shtml>

Where people cannot self-evacuate, they should seek the assistance of neighbours, support agencies, relatives, or friends. Emergency services (QPS, QFES, SES and QAS) will be asked to assist as a last resort.

Arrangements for evacuating persons with special needs have been identified in the Evacuation Sub-Plan.

3.7.1 Evacuation Centres

Evacuation Centre locations will be assessed with the latest information about the tsunami. Suitable facility/facilities will be opened as instructed by the Chairperson of the Burdekin LDMG.

Evacuation Centre locations will be provided at the time of the notification and will only be opened when fully staffed.

3.8 Distribution of Tsunami Bulletins and Warnings to the Media and Public³

Tsunami Bulletins, Watches, Warnings, Cancellations and Event Summaries are part of a suite of warnings for severe weather events and hazards issued by the Bureau of Meteorology. Media organisations across Australia work with the Bureau to also inform the public in the case of a tsunami event.

Tsunami Warning distribution lists are maintained at the Bureau's State and Territory RFCs. These distribution lists are used for both National JATWC Bulletins and Regional Warnings.

In addition to the media, key agencies such as the State and Territory emergency services, local councils, port authorities, and police are included on these dissemination lists. The bulletin and warning messages are automatically uploaded to the Bureau's website.

PPRR DM GUIDELINE – SUPPORT TOOLKIT
Last Updated: 10 August 2018

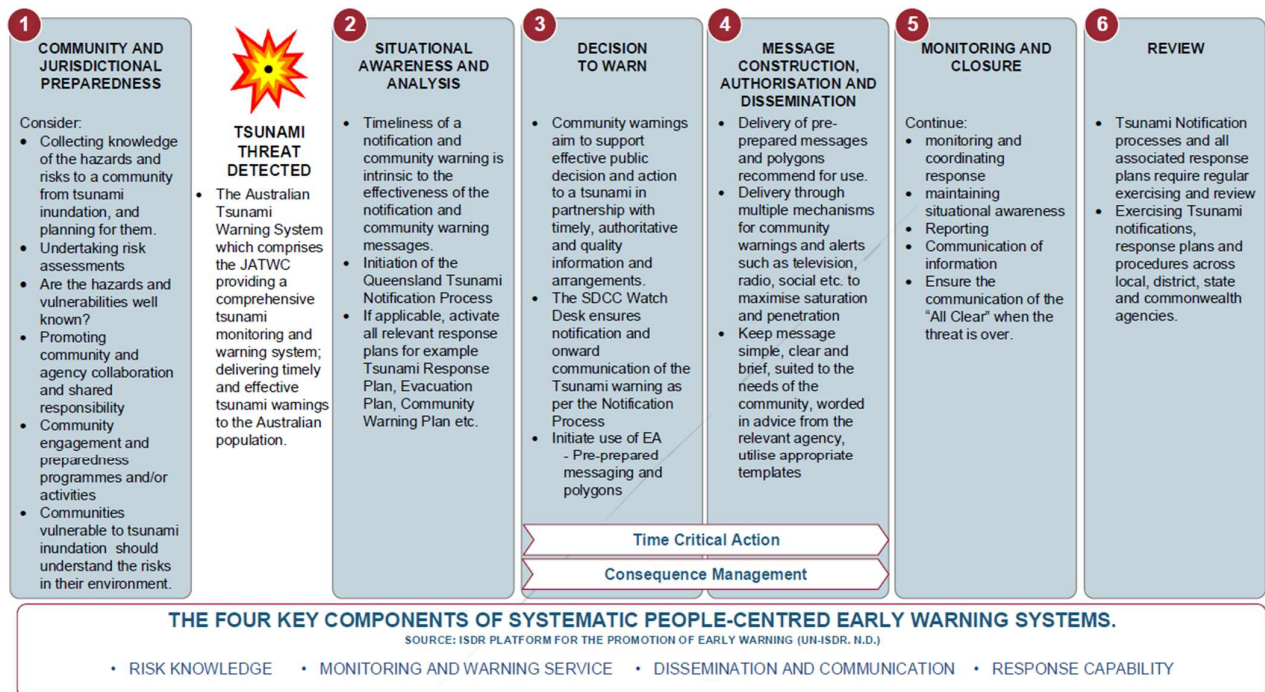


Figure 4 – Stages of Tsunami Notifications (Sourced from the Queensland Tsunami Notification Manual -M1.183 (Queensland Government)

³ http://www.bom.gov.au/tsunami/about/tsunami_warnings.shtml




Community warnings provide the community with appropriate advice on disaster and emergencies to enable the community to make informed decisions about preparedness and safety and the steps to be taken in responding to a disaster or emergency.

Alerts are a method of community warning and are defined as local and state agency-level notification methods, and arrangements that are applied concurrently with community warning systems such as tsunami notifications.

A transparent and consistent approach is required when determining the most appropriate community warning or alert delivery method to use, and then managing the consequences of the community warning and alert.

Community warnings should be timely and, to the greatest extent possible, be issued as soon as the appropriate recommendation for protective action can be made. Knowing when to use a community warning, alert, or information is important.

3.9 Tsunami Warning Messages Summary⁴

Messages: Types and Purpose	Messages: Layout & Content
<p> National No Threat Bulletin: To advise people that the earthquake has been assessed and that no tsunami threat exists</p>	<p>Product Identifier: Identify type product/auto notifier</p>
<p> National or State/Territory Watch: To advise people that a tsunami threat may exist and that they should look out for further updates</p>	<p>Media Instructions: How urgently message/s should be broadcast. Use of Standard Emergency Warning Signal (SEWS) or not</p>
<p> State/Territory Warning: To advise people that a tsunami threat does exist and to advise them of the level of threat and action they should take marine = blue, land = red</p>	<p>Message Title and Issue: Time Type, date/time and number sequence of message</p>
<p>National Warning Summary: To provide the public, media and emergency authorities with the status of tsunami warnings nationally</p>	<p>Headline Message: Key message; eg. No Threat, Potential Threat, Threat</p>
<p>Event Summary: To provide the public, media, emergency authorities and government with summary information that can be used in post-event analysis</p>	<p>Summary: What, where and when the threat is</p>
	<p>Threat Information: Level of threat , coastal areas affected, time of Arrival</p>
	<p>Community Response Advice: What action people should take</p>
	<p>Next Update Time: When the next update will be issued:</p>
	<p>Where the Public can get Further Information: Web and telephone details for further/latest information</p>

3.10 Categories of Threat Levels within Tsunami Warnings⁵

To assist the community, tsunami threat levels in Regional Tsunami warnings are categorised into three levels with required community responses; these have been determined in consultation with emergency management authorities. These Threat Levels will be specified for the same coastal areas used for routine Bureau Coastal Waters Forecasts, already known to marine users.

1. **No threat** - An undersea earthquake has been detected; however, it has not generated a tsunami, or the tsunami poses no threat to Australia and its offshore territories.
2. **Marine and immediate foreshore threat** - Warning of potentially dangerous rips, waves and strong ocean currents in the marine environment and the possibility of only some localised overflow onto the immediate foreshore.

⁴ http://www.bom.gov.au/tsunami/about/tsunami_warnings.shtml

⁵ http://www.bom.gov.au/tsunami/about/tsunami_warnings.shtml

- 3. **Land inundation threat** - Warning for low-lying coastal areas of major land inundation, flooding, dangerous rips, waves and strong ocean currents.

3.11 Decision to Warn

LDMGs considering issuing tsunami notifications should also continue to use a range of other community warnings, alerts and information to inform the community, such as social media, local disaster dashboards, radio, etc.

Broadcast media will carry messages distributed directly by the JATWC. The SEWS may precede radio and television broadcasts if authorised by the BOM. Local broadcast media may carry messages tailored by LDMGs to their local communities.

The telephone is the most appropriate alert, particularly at night. The use of local or agency mass phone dialling message systems for alerting, such as EA, should be used commensurate with the risk. Use of radio, public address systems, sirens, variable messaging signs, social media and door knocking should be used as appropriate.

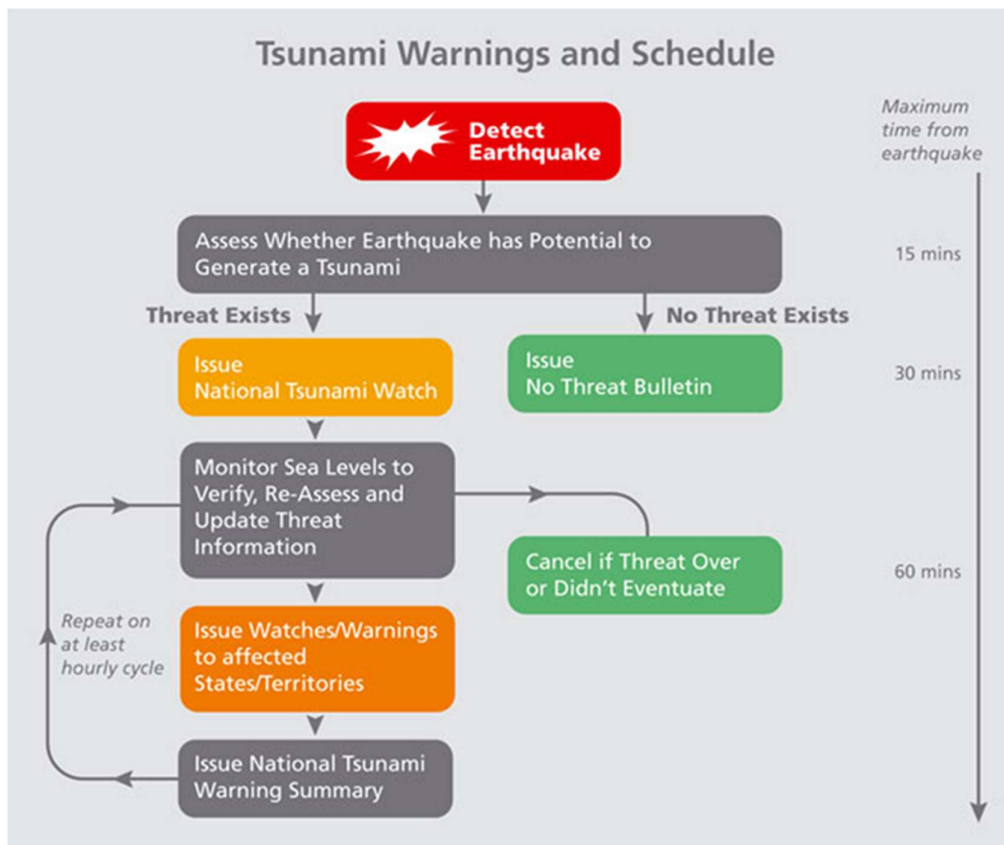


Figure 3 – Sequence of watches and warnings⁶

⁶ http://www.bom.gov.au/tsunami/about/tsunami_warnings.shtml

3.11.1 Tsunami Risk Considerations

The following table (Table 3) identifies those elements of the community vulnerable to tsunami based on the Burdekin Shire adopted height parameter, which is 6.0m AHD. Maps showing potential inundation areas are attached to this Sub-Plan.

Table 3 – Vulnerable Communities and Groups

Elements within the Community	Exposure in Vulnerable Area*
Population (estimate based on estimated resident population and an approximate total population impact of 8%)	Total – 893 persons, of which: <ul style="list-style-type: none"> • Over 65 – 323 persons (36%) • Under 15 – 112 persons (12%)
Residential Dwellings; Industrial; Commercial	Giru, Jerona, Alva, Groper Creek, Rita Island, Wunjunga
Caravan Parks; Camping Grounds	Cromarty Creek, Plantation Creek Boat Ramp, Groper Creek, Alva Beach, Funny Dunny Park
Public Schools; Private Schools; Childcare Centres	Giru, Jarvisfield
Public Hospitals; Private Hospitals; Aged Care; Nursing Home Facilities	Nil
Submarine Infrastructure, i.e. electricity, sewerage	Nil
Aquaculture Industries	Pacific Reef Fisheries - Prawn Farm
Island Communities	Nil

*Notes:

- Vulnerable Area defined by less than 6.0 metres Australian Height Datum (AHD).
- Exposure likely depends on nature of tsunami warning, i.e., marine or land inundation.
- This column identifies the number of people and names, or locations of assets exposed for each element in the location.
- Mitigation strategies are included in the main disaster management plan and the Awareness and Capacity Building section of this Sub Plan.
- 2021 census data – www.abs.gov.au

4. Awareness and Capacity Building

4.1 Community Education

The Burdekin Shire Council has produced a map showing the 6.0m AHD contour, with areas below 6.0m AHD highlighted.

The Burdekin Shire Council has an emergency management partnership with the local radio station 97.1FM Sweet FM as well as the ABC North Queensland (630am), Triple M 102.3FM (Townsville) and Triple T (103.9FM). Public information announcements will be made on these radio stations regarding tsunami awareness.

4.2 Training and exercises

The Burdekin LDMG has established area warden contacts within vulnerable communities. Area wardens will be given training regarding Tsunami warnings and their responsibilities. Area warden training will be reviewed and exercised every two years.

4.3 Community resilience measures

The Burdekin Shire Council has developed and placed warning signs at caravan parking and camping areas throughout the Shire. Maps showing vulnerable areas and evacuation routes are available on Council's Disaster Dashboard - disaster.burdekin.qld.gov.au

5. Response Strategy

The response phase of the Tsunami Response Sub-Plan commences with receiving a Tsunami Watch Bulletin or Tsunami Warning Bulletin. Evacuations will be initially voluntary, and following a declaration can be directed following a decision by the District Disaster Coordinator of the Townsville District Disaster Management Group.

Any evacuations will occur following consultation between the Local Disaster Management Group (LDMG) and the District Disaster Management Group (DDMG). If the two groups cannot be convened, a decision on evacuation strategies will be determined by the Chair of the Burdekin LDMG and the District Disaster Coordinator.

The concept of operations to manage tsunamis will predominantly be in accordance with the existing 'all hazard' arrangements. This section will focus on those aspects that have been modified to address the sudden onset nature of this hazard.

5.1 Warning notification and dissemination⁷

The Bureau issues advice and warnings on any identified tsunami threat to emergency agencies, relevant authorities, media and the general community using the same systems and infrastructure used for warnings of other hazardous events such as severe weather.

Media organisations across Australia work with the Bureau to inform the public in the case of a tsunami event. Tsunami bulletin and warning distribution lists are maintained at each of the Bureau's State and Territory Regional Forecasting Centres. These distribution lists are used for National and State/Territory based Bulletins. In addition to the media, key agencies such as the State and Territory emergency services, local councils, port authorities, and police are included on these dissemination lists. The bulletin and warning messages are also placed on the Bureau of Meteorology's website.

⁷ <http://www.bom.gov.au/tsunami/about/jatwc.shtml>

Burdekin LDMG will distribute information to the SES, Media Liaison Officer, and all Executive Officers of Council. Vulnerable communities will also be contacted by contacting the appointed Area Warden or Deputy if the Area Warden cannot be contacted.

Further information regarding Community information and messaging can be found by accessing Burdekin's Community Information and Warnings Sub plan which is also available on Council's website.

5.2 Media Outlets for Emergency Purposes

- ABC North Queensland 630 AM
- Sweet FM 97.1 FM
- Triple M 102.3 FM
- Triple T 103.9 FM

5.3 Warning Vulnerable Groups

The table below (Table 4) documents the agencies responsible for distributing tsunami warnings to vulnerable groups within the community. It results from collaboration between agencies to ensure effective coverage of all vulnerable community elements.

All vulnerable groups are expected to receive notice of watch bulletins, warning bulletins and cancellation bulletins.

Table 4 – Warning Vulnerable Groups

Vulnerable Groups to consider	Agency primarily responsible for dissemination of warning*
Land Based Elements	
Domestic and residents Industrial and Commercial buildings Shopping Centres Aged Care Facilities Hospitals Airports	Burdekin Local Disaster Management Group
Schools	Education Queensland
Coastal Parks and Reserves Users Ports, Harbours, Marinas Beach and Foreshore Users, i.e. swimmers, surfers, fishers, sunbathers, foreshore pedestrians	VMR (Weekend) Council Area Wardens
Resorts, Hotels Offshore Islands Caravan Parks and Camping Areas	OIC Police Giru Area Wardens Burdekin Shire Council
Motorists Critical Infrastructure	Qld Transport & Main Roads Traffic Management Centre (Burdekin Bridge Sign)
Marine Based Elements	

Boats and Crew Other Marine Users – Divers, snorkelers, etc Submarine Infrastructure, i.e. electricity, sewerage	VMR
Aquaculture Industries	DAF – Department of Agricultural and Fisheries

* Refer to Queensland Tsunami Notification Guidelines for guidance

5.4 Warning Methods

Community warnings, alerts and information can be issued or sourced by several methods depending on the type of disaster, emergency and agency. Queensland's primary community warning, alert and information methods are:

- Information through local government or agency websites, disaster information boards, and local events and activities.
- Opt-in alerts from local government may provide SMS, landline, email, and social media community messaging.
- Agency-specific warnings and, for example, Sunwater.
- Through the Local Area Warden program.
- Alerts and information from media outlet broadcasts.
- Bureau of Meteorology weather warnings for tropical cyclones, severe thunderstorms, severe weather, tsunami and bushfires.
- Emergency Alert (EA) (Warning, Watch and Act or Advice)
- Australian Warning System (AWS) -aims to deliver a more consistent approach to emergency warnings using a nationally consistent set of icons.

Warning messages will be distributed by the most effective means allowing for factors such as time of day, season, infrastructure limitations, etc. Methods that the Burdekin LDMG have chosen to use may include:

- Media – radio and television broadcasts
- Door knocking (QPS, wardens)
- Local Area Warden program
- Telephone, mobile, fax –
- public message alerting systems
- Councils Emergency Dashboard
- Electronic Message Boards
- Internet
- Social networking sites (Facebook and Twitter)
- Marine Radio and Distress Systems and Networks
- Mobile Public Address System
- Local / Community Area Warden System
- Fixed Variable Message Signs
- Emergency Warning Network
- Australian Warning System

5.5 Standard media messages to the community

Wherever possible, media messages regarding Tsunami Warnings should be communicated verbatim. Where this is not possible or practicable due to the delivery method or technological limitations, the following abbreviated message format should be used:

*The Bureau of Meteorology has issued a **<insert title of warning product>** for this part of Queensland. Please call 1300TSUNAMI, that is 1300 878 6264, or log onto www.bom.gov.au/tsunami for the full text of the message.*

Any other proposed variation should be cleared through the BoM before use.

References

- Joint Australian Tsunami Warning Centre, www.bom.gov.au/tsunami
- Queensland Fire and Emergency Services, www.qfes.qld.gov.au
- Geoscience Australia, www.ga.gov.au
- [Queensland Tsunami Notification Guidelines Manual – m.1.183](#)
- [Tsunami Guide for Queensland](#)
- [Queensland Tsunami Notification Manual](#)
- Joint Australian Tsunami Warning Centre (JATWC) - www.bom.gov.au/tsunami

Attachments

Attachments to this plan include the following:

- Area Warden Contact List (not for public dissemination)
- Inundation Maps (Burdekin Region and Ayr/Brandon inset)

Attachment 1 – Area Warden Contact List

This list is not for public dissemination. The Area Warden contact list is regularly updated and forms part of the Response Strategy for this sub plan.

Attachment 2 – Inundation Maps (Burdekin Region and Ayr/Brandon Inset)

