



# TOWNSVILLE EMERGENCY ACTION GUIDE







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# ABOUT THIS GUIDE

**This guide focuses on natural disasters. Do not wait for a disaster to happen before you think about how you and your family are going to survive.**

During disasters, emergency services may not be able to reach you because of high winds, fire, floodwater, fallen power lines or debris across the road.

Emergency services will be focused on assisting the most vulnerable in the community during an event. That is why you need to be prepared to stay in your home or evacuate for at least three days.

The best time to prepare for a disaster is well before one is even on its way. Planning well means nothing is left to chance and that everyone knows what they need to do and where things are.

Because cyclones and floods are a part of life in the North, it's easy to become complacent. Sadly, some people have perished in floods and cyclones because they were not prepared or did not follow the warnings.



## This Guide Will Help You:

- Prepare your Emergency Plan
- Prepare your Emergency Kit and Evacuation Kit
- Prepare your family, pets, home, yard and belongings - before, during and after a disaster
- Find information during a disaster
- Understand the risk and likelihood of disasters within your community

*DISCLAIMER: This brochure is for information only and is provided in good faith. The Queensland Government and Townsville City Council are under no liability to any person in respect of any loss or damage (including consequential loss) which may be suffered or incurred, or which may arise directly or indirectly, in respect of reliance by any person on the information contained in this brochure.*

LAST UPDATED: October 2023



## LOCAL DISASTER COORDINATION CENTRE

# WE ARE YOUR INFORMATION AUTHORITY

During a disaster, the Townsville Local Disaster Management Group (LDMG) is your number one source of information.

 [disaster.townsville.qld.gov.au](http://disaster.townsville.qld.gov.au)

 [Townsville Disaster Information](#)

The Disaster Management Act 2003 requires a Local Government organisation to appoint a Local Disaster Management Group (LDMG) and prepare comprehensive disaster management plans.

The Townsville LDMG comprises of Councillors, Executive Officers, emergency services and key agencies.

The Townsville LDMG makes decisions based on advice from the Bureau of Meteorology's (BOM) weather predictions, in combination with information from our Emergency Services such as Queensland Fire and Emergency Services, and the Queensland Police Service. The Townsville LDMG's area of responsibility covers all communities in the Townsville City Council Local Government Area.

The LDMG will also establish a Local Disaster Coordination Centre (LDCC) which will be staffed by trained Council staff, emergency services and key agencies to coordinate resources and information in response to a disaster event. The LDCC will be activated depending on the severity of the event.

You will find disaster information about when the centre is operational on the Townsville City Council Emergency Management and Disaster Dashboard, the Townsville Disaster Information Facebook page, public notices and local radio.

If your call is an emergency please dial 000. If you need assistance following an event you should contact the LDCC on 13 48 10 and provide details of assistance required to the telephone operator.



# PREPARE IN ADVANCE

Prior preparation is the best way to survive any natural disaster. While cyclones and flooding are most common in our area, we could also experience fire, tsunami, earthquake and landslide.

It is important to know what you will do in each scenario:

- Know your risk
- Decide in advance if you will evacuate or shelter at home or with family
- Know your evacuation route
- Have an emergency kit ready
- Take steps to limit damage to your property.

In October each year it's time to get organised:

- What might happen during a cyclone, flood, storm or bushfire?
- What will you do if an emergency happens and you are in different locations (school, work, home)?
- Where would you evacuate to?
- Know your emergency meeting places
- Know how and when to call 000.

Preparing in advance saves time and reduces the number of things you have to do when a disaster is about to strike.

To help prepare your Emergency Plan, Emergency Kit, Evacuation Plan and Evacuation Kit, visit

[getready.qld.gov.au/plan](http://getready.qld.gov.au/plan)



# DISASTERS HAPPEN. BE PREPARED.

Prepare your home, car, boat and pets for all disasters. Ahead of our usual disaster season, when you have plenty of time to prepare, go through the following checklists to make sure everything is ready.



## Home

- Check house insurance is current and the amount insured is adequate
- Clean up the yard
- Trim trees and over hanging branches
- Keep your roof in good condition and check it regularly
- Remove debris from gutters
- Check and fix loose fittings, such as railings
- Check windows and install shutters if possible
- Get to know your neighbours
- Hold a family meeting to prepare your household Emergency Plan so everyone knows what to do, where to meet and how to get out
- Identify how and where to turn off the mains supply for water, power and gas.



## Pets

- Secure animals before an emergency event or use a secure pet carrier/ cage/leash if you are transporting them. Boarding shelters may also be an option for your pet
- Ensure all vaccinations are current
- Make sure your pet can be identified - tag and microchip pets where possible
- If evacuating with your pet, make sure you have their medications, food, water, bedding, leash, toys and consider their sanitation needs
- Have a current photo of each of your pets.



## Boats

Maritime Safety Queensland recommends that mariners plan, prepare and follow advice when it comes to severe weather season.

- Get a copy of the Extreme Weather Event Contingency Plan for your area and read it
- Explore your suggested shelter area or inlet before cyclone season starts
- Update your contact details with the authorities
- Organise options to move your boat if you will be away during severe weather season
- Keep a record of emergency telephone numbers handy (for example, Regional Harbour Master, Volunteer Marine Rescue organisations, Queensland Police Service)
- Know when and where your vessel needs to be during an evacuation
- Use suitable lines to secure your boat. Double up on mooring lines and check they are in good condition and are the right size and length
- Secure loose articles below deck
- Secure all hatches
- Check your boat is watertight
- Reduce wind loading and remove furlled sails and covers, bimini tops and any clears
- Check all bilge pumps work and that all self-draining holes are clear.



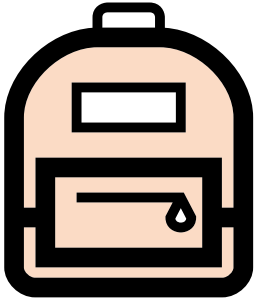
## Cars

- Ensure your car insurance is current and that it covers your asset adequately
- When severe weather warnings are issued, park vehicles under cover, away from trees, power lines and waterways
- Ensure your car is fully fuelled.

# EMERGENCY KIT

This kit should contain the provisions for your essential needs in the event of an emergency, whether you are sheltering in place or evacuating.

It is also handy to have a basic tool kit, extra supplies and a portable cooker.



☐ Fresh water for three days



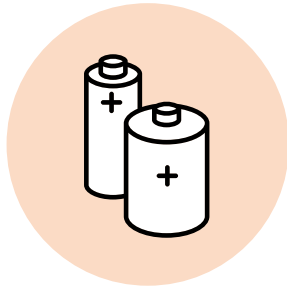
☐ Torch



☐ First aid kit



☐ Important documents and cash in sealed bags



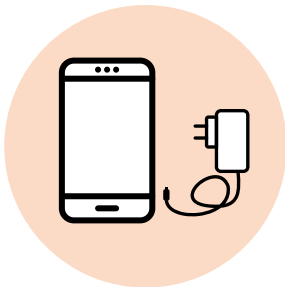
☐ Batteries



☐ Portable radio



☐ Sturdy gloves



☐ Mobile phone and charger/car adapter



☐ Toiletries



☐ Three days worth of non-perishable food and a can opener



☐ Essential medications

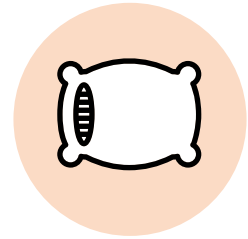


# EVACUATION KIT

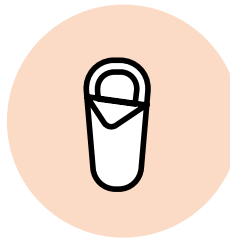
As well as those essential items in your Emergency Kit, if you are evacuating you will need to take additional items with you so you are equipped to live away from home for several days.



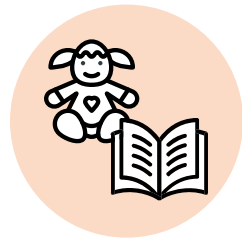
Valuables and mementos



Pillow and blanket



Sleeping bag



Kids toys and entertainment



Warm clothes



Queensland Ambulance Service recommends that families include the following in their first aid kit:

- 1 x packet of band aids
- 1 x roll non allergenic tape
- 2 x sterile eye pads
- 4 x triangular bandages
- 1 x conforming gauze bandage (10cm)
- 1 x conforming gauze bandage (7.5cm)
- 1 x conforming gauze bandage (5cm)
- 1 x hospital crepe bandage (10cm)
- 1 x sterile combine dressing (9x10cm)
- 1 x sterile combine dressing (20 x 20cm)
- 1 x medium wound dressing (#14)
- 2 x non-adhesive dressings (5 x 7.5cm)
- 1 x non-adhesive dressing (10 x 7.5cm)
- 1 pair stainless steel scissors
- 1 x square gauze swab
- 1 pair forceps
- 1 pack (10) latex gloves
- 1 resuscitation mask
- 2 x bottles eye irrigation (15ml)
- 1 bottle antiseptic cream (50g)
- 1 wound closure steri-strip
- 1 stainless steel splinter remover
- 1 bottle antiseptic solution
- 5 x alcohol swabs
- 1 x first aid hints booklet



# WHAT TO DO AND WHERE TO GET INFORMATION

During emergencies, the Townsville LDMG is your official source of information.

Visit Council's website for digital copies of local emergency management plans, action guides, mapping and evacuation information:

 [disaster.townsville.qld.gov.au](https://disaster.townsville.qld.gov.au)

 [townsville.qld.gov.au](https://townsville.qld.gov.au)

Like Townsville City Council's Townsville Disaster Information Facebook page for up to date information provided directly from the Townsville LDMG:

 [Townsville Disaster Information](#)

Log on to the Bureau of Meteorology website for weather updates, warnings and information:


 [bom.gov.au](https://bom.gov.au)


ABC TV and radio are the official emergency news channels. Watch and listen for emergency updates. Tune your radio to your local radio station.

ABC North QLD	630 AM
Triple M	102.3FM
Hit FM	103.1FM
Power100	100.7FM
Star	106.3 FM
Triple T	103.9FM
4K1G	107.1FM
Live FM	99.9FM

Further information on preparing, emergency alerts and information can be accessed at:

 [disaster.qld.gov.au](https://disaster.qld.gov.au)

 [getready.qld.gov.au](https://getready.qld.gov.au)



The Bureau of Meteorology (BOM) issues weather information and warnings. Townsville LDMG use this information to make decisions about what action people should take.

## WARNINGS ARE URGENT!

You need to act immediately on the information provided.



# TOWNSVILLE'S EMERGENCY MANAGEMENT AND DISASTER DASHBOARD

The Emergency Management and Disaster Dashboard provides you with the information you need to keep yourself and loved ones safe during a disaster.

This convenient tool is your one-stop shop for information during emergency and disaster situations.

During or after a disaster or emergency event the Emergency Management and Disaster Dashboard is the place to go for all disaster related updates.

Visit [disaster.townsville.qld.gov.au](https://disaster.townsville.qld.gov.au)

Find up-to-date details on:

- Emergency news
- Weather warnings
- Road conditions
- Power outages
- Emergency contacts
- School closures
- Weather radars
- Plus more!

## LISTEN OUT

The Standard Emergency Warning Signal (SEWS) is used at the beginning of serious warnings. The SEWS is a wailing siren sound used throughout Australia for serious emergency events.

To listen to the SEWS go to:

<https://www.abc.net.au/news/2022-12-20/standard-emergency-warning-signal-sews/101792264>

Also listen out for:

- Emergency Alert voice messages to your landline and text messages to your mobile
- Local updates and community safety announcements on radio and television
- Emergency services personnel who may door-knock your area to pass on warnings.

Once emergency advice is given, act immediately, ensure all people in your house are aware of the warning and advice provided, check on neighbours and friends who may need assistance and activate your household Emergency Plan.



# CYCLONES

A cyclone is a violent tropical storm with very strong winds and heavy rain that can cause extensive property damage and injuries to people.

The eye or the centre of the cyclone is an area made up of light winds and often clear skies. This is NOT the end of the cyclone as very destructive winds from the other direction will follow. Stay inside.

Cyclones are part of living in the North. Most cyclones occur between November and April but cyclones have occurred outside these months.

## BEFORE CYCLONE SEASON

Before a cyclone, become familiar with the information available at:

 [disaster.townsville.qld.gov.au](https://disaster.townsville.qld.gov.au)

 [townsville.qld.gov.au](https://townsville.qld.gov.au)

 [Townsville Disaster Information](#)

- Hold a family meeting to prepare your household Emergency Plan so everyone knows what to do, where to meet and how to get out
- Prepare your Emergency and Evacuation Kits
- Clean up the yard. Clear away all loose material as it could blow about and possibly cause injury or damage
- Trim trees and overhanging branches
- Identify how and where to turn off the mains supply for water, power and gas
- Keep your roof in good condition and check it regularly
- Remove debris from gutters
- Check and fix loose fittings, such as railings
- Check windows and install shutters if possible
- Tie down sheds or other small structures not permanently fixed. Secure caravans, boats and vehicles or tie them together or to strong structures
- Check to see if your home has been built to cyclone standards (generally houses constructed after 1982)
- Know your Evacuation Zone (storm tide) and evacuation routes
- Check neighbours, especially if elderly or recent arrivals
- Monitor cyclone potential throughout the season at [bom.gov.au](https://bom.gov.au).



## CYCLONE ADVICE

A Cyclone Advice is a “warning” that advises the location of a cyclone, its movement and intensity, and identifies areas that could be affected. This information comes from the Bureau of Meteorology.

When a Cyclone Advice is given, you should:

- ✓ Finalise packing your Emergency Kit
- ✓ Hold a family meeting to make sure everyone knows your cyclone plan and whether you are staying to shelter in your home or evacuating.

## CYCLONE WATCH

A Cyclone Watch is issued 48 hours before the cyclone is predicted to cross the coast and is updated every six hours, providing information on location, movement and intensity, and areas that could be affected.

When a Cyclone Watch is issued you should:

- ✓ Decide if your family needs to evacuate, and where you will evacuate to. It is usually best to shelter in place, or evacuate to family and friends out of the cyclone watch area
- ✓ If sheltering in place, decide which room to shelter in. The best option is an internal room with few or small windows, such as the bathroom. Use mattresses and other bedding to protect yourself
- ✓ Re-check your property for any loose material and tie down (or fill with water as a last resort) all large, relatively light items such as boats and rubbish bins
- ✓ Check your Emergency Kit and fill water containers and bathtub with clean drinking water
- ✓ Ensure household members know where the strongest part of the house is and what to do in the event of a cyclone or an evacuation
- ✓ Tune to your local radio, TV, or the internet for further information and warnings
- ✓ Check that neighbours are aware of the situation and are preparing
- ✓ Ensure your car and jerry cans are fully fuelled. Cyclones nearly always involve power failure which means petrol stations are unable to pump fuel unless they have an alternative power supply.

## CYCLONE WARNINGS

A Cyclone Warning is issued if winds are expected to affect coastal or island areas within 24 hours.

The warning is updated every 3 hours and then every hour if the cyclone poses a major threat. The warning includes information on location, movement and intensity of the cyclone, areas that are threatened and anticipated rainfall, flooding and storm surge. If you have not done so already, a Cyclone Warning should be the trigger to activate your household Emergency Plan.

Depending on official advice provided by the Townsville LDMG as the event develops, the following actions may be warranted for a Cyclone Warning:

- ✓ Put wooden or plastic outdoor furniture in your pool or inside with other loose items
- ✓ Close shutters, board up or heavily tape all windows (tape does not strengthen windows, but minimises the glass shatter if broken), draw curtains and lock doors
- ✓ Pack an Evacuation Kit to take with your Emergency Kit
- ✓ Depending on your location, emergency services may advise or direct you to leave.

## CYCLONE SHELTER AND EVACUATION CENTRE

In the Townsville City Council Local Government Area, there's one Public Cyclone Shelter and an Evacuation Centre.

A Public Cyclone Shelter is a building where people can be temporarily housed if a category 3 or greater cyclone is to come near, or cross the coastline with local areas threatened by a storm surge, or major flooding. The shelter will only remain in use until the severe tropical cyclone has passed. The Public Cyclone Shelter is located at:

**Heatley Secondary College School Hall**  
321 Fulham Rd, Heatley

An Evacuation Centre is a building where people may be temporarily housed before (non-cyclonic) or after an event. The Evacuation Centre will only be opened as needed at the direction of the Townsville LDMG.

If you decide to enter either of these centres you will need to register and be self-sufficient with your own food, water, medical supplies and toiletries.

In most cases, the safest thing to do in a cyclone is to shelter in place – that is to stay at home and ride it out within your household.

# WHEN TO EVACUATE

You can evacuate the area at risk with your pets well ahead of time and stay outside threatened areas with family, friends or at a hotel/motel.

If you live in a storm tide inundation area you may be advised to evacuate. Evacuation is based on predicted storm tide and level of possible inundation (red, orange, yellow and blue) not wind.

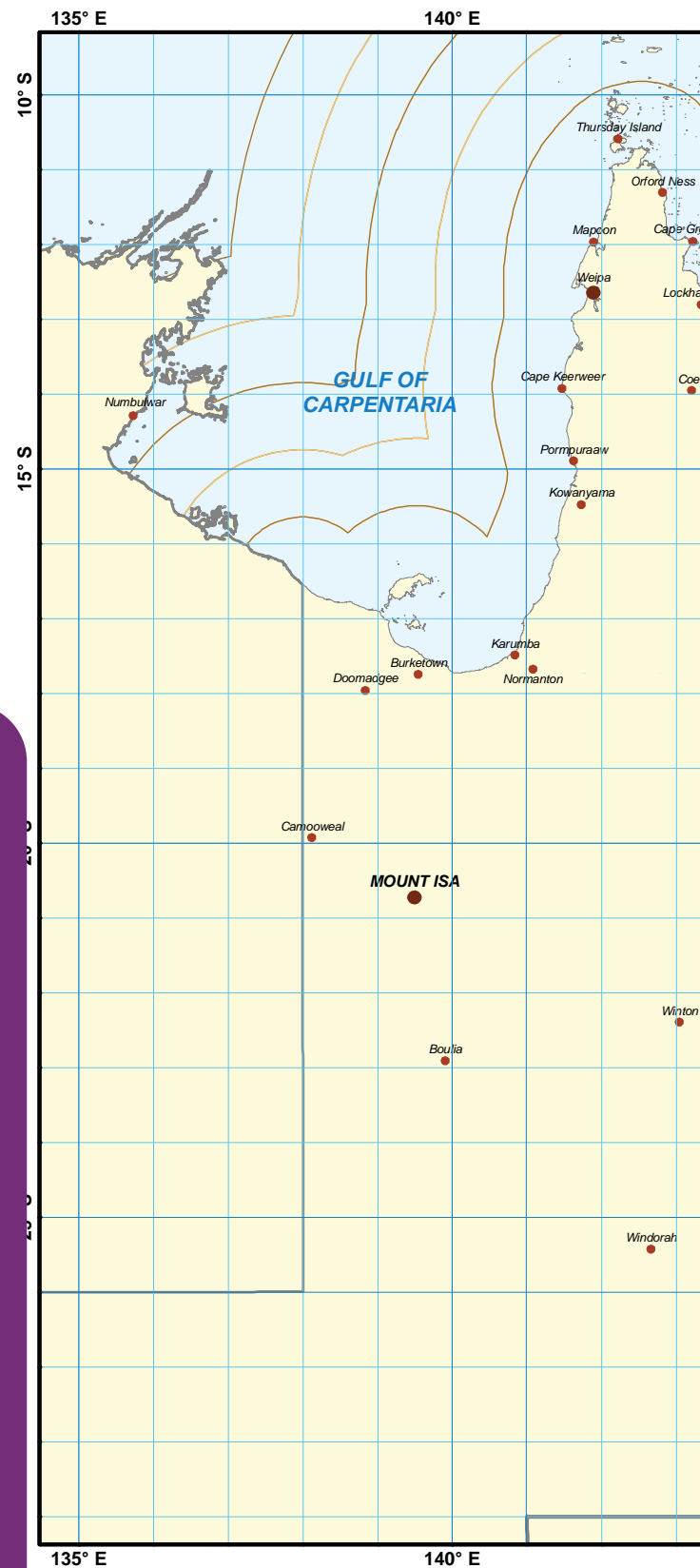
You should also consider evacuating if you live in a pre-1982 home or feel concerned for your safety.

If you need to or decide to evacuate the best option is always go to family, friends or colleagues outside threatened areas. Plan this now and include the information in your Emergency Plan.

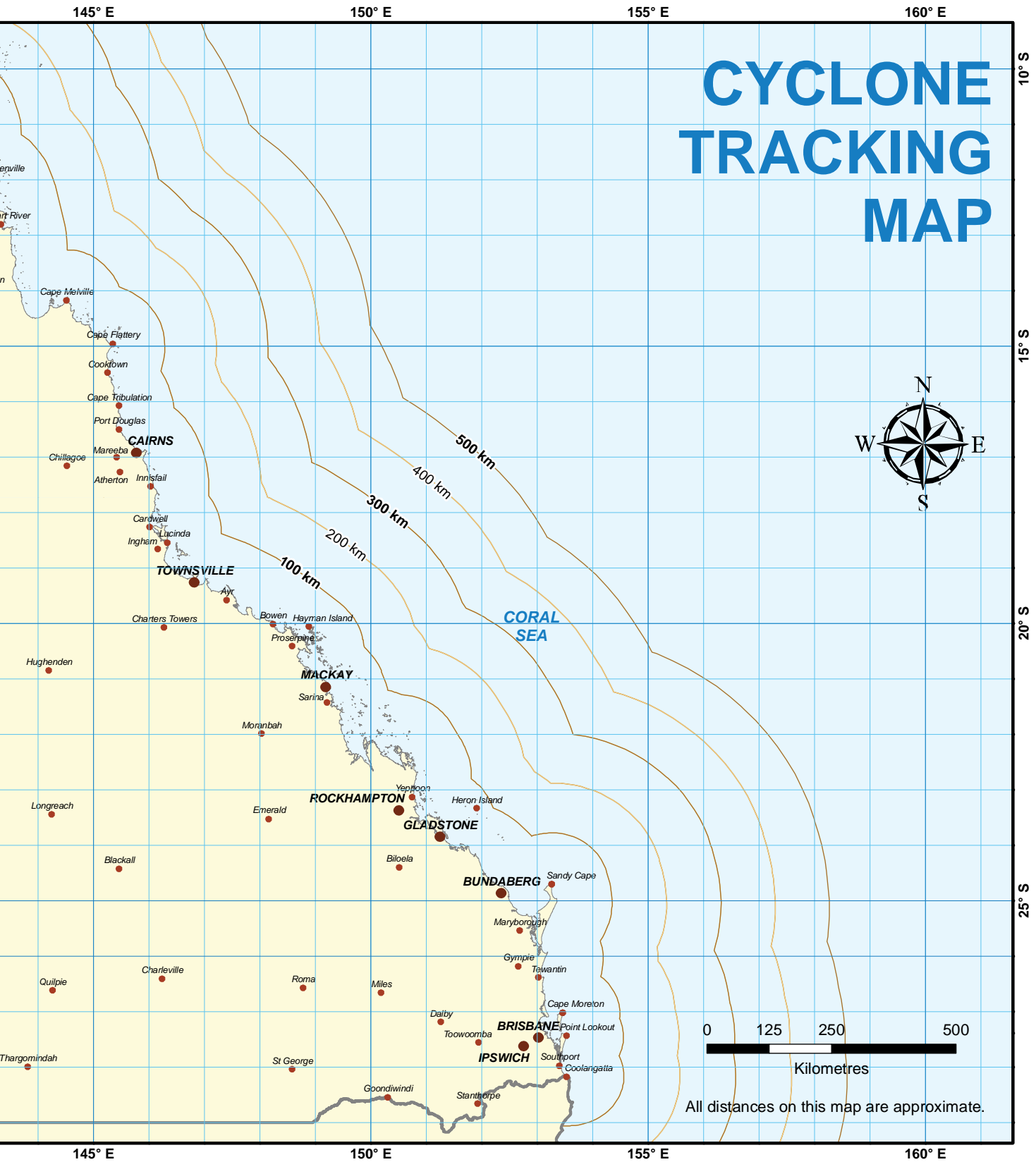
The Evacuation Centre and the Public Cyclone Shelter should be a last resort, and the LDMG open them only when absolutely necessary. Only vulnerable residents (such as the elderly without family in the region, the disabled, or those in storm tide areas that cannot evacuate to family and friends) should consider these as a last resort.

## HOW TO USE THE CYCLONE TRACKING MAP

1. Obtain the latest cyclone advice issued by the Bureau of Meteorology Tropical Cyclone Warning Centre.
2. On a table, record the coordinates (the latitude and longitude in degrees and tenths of degrees) of the position of the cyclone. Note also the advice number, the date and time, the category number, speed and direction of movement of the cyclone and the maximum wind gust.
3. On this map, locate the position of the cyclone centre using the numbered lines of latitude and longitude. Using a white board pen, mark this position and label it with the advice number.
4. As advice continues, join the marks together and track the cyclone's path. The map's scale may be used to measure the distance of the cyclone from your locality.







# DURING A CYCLONE

- ✓ Have a battery operated radio and tune into your local radio station and heed warnings and advice (list of radio stations available on page 10)
- ✓ Remain indoors (with your pets)
- ✓ Keep Emergency and Evacuation Kits with you
- ✓ Disconnect all electrical appliances
- ✓ Keep refrigerator and freezer doors closed, so food will stay cool without power for several hours
- ✓ Stay inside and shelter in the strongest part of the building, keeping well clear of windows e.g. shelter in the internal hallway or bathroom
- ✓ If the building starts to break up, protect yourself with mattresses, rugs or blankets, under a strong table or bench or hold onto a solid fixture
- ✓ Beware of the “eye” of the cyclone. If the wind stops do not assume the cyclone is over; violent winds will soon resume from another direction. Wait for the official “all clear”
- ✓ If driving, stop (handbrake on and in gear) – but well away from the sea and clear of trees and powerlines. Stay in the vehicle.

## RECENT CYCLONES NEAR US

### Cyclone Debbie

Category 4 Cyclone Debbie crossed between Bowen and Airlie Beach in March 2017, causing major damage to the Whitsunday region. As the cyclone made landfall, extensive flooding occurred south of the cyclone from Mackay in Queensland through to northern New South Wales.

### Cyclone Yasi

Whilst Severe Tropical Cyclone Yasi is recorded as a Category 5 cyclone, it is worth remembering that it crossed the coast nearly 300km north of Townsville around Innisfail. The wind speeds recorded in Townsville were Category 1-2 levels, not Category 5 levels.

A Severe Tropical Cyclone (Category 3 or above) should be treated with extreme caution. It is crucial to plan what you and your family will do in the event of a cyclone before cyclone season begins.

### Cyclone Larry

A tropical low developed over the eastern Coral Sea and reached cyclone intensity during the early hours of 18 March 2006 it proceeded on a general westerly course towards the Queensland coast. Severe Tropical Cyclone Larry rapidly intensified in the following 48 hours reaching hurricane-force intensity. Larry crossed the tropical North Queensland coast near Innisfail during the morning of 20 March 2006 as a Category 3 cyclone.

### Cyclone Althea

The last recorded Severe Tropical Cyclone in the Townsville region was Althea, which crossed the coast 24 December 1971. BOM states that “Severe Tropical Cyclone Althea was at the time considered to be one of the strongest cyclones to affect the Queensland coast, and remains arguably the most intense cyclone to ever affect Townsville.” There were three deaths in Townsville and damage costs in the Townsville region reached \$50 million (1971 dollars). Many houses were damaged or destroyed (including 200 housing commission homes) by the winds. On Magnetic Island 90 per cent of the houses were damaged or destroyed.



# AFTER A CYCLONE

- ✓ Have a battery operated radio and tune into your local radio station and heed warnings and advice (list of radio stations available on page 10)
- ✓ Do not go outside until officially advised it is safe
- ✓ Check for gas leaks and fallen power lines
- ✓ Do not use electric appliances if wet
- ✓ If you evacuated, do not return until advised safe. Use a recommended route and do not panic
- ✓ Be aware of damage to power lines, bridges, buildings and trees
- ✓ Do not enter floodwaters: *If it's flooded, forget it.*
- ✓ Heed all warnings and do not go sightseeing. Instead, check and offer help to neighbours, friends and family
- ✓ Do not make unnecessary telephone calls
- ✓ Follow any instructions for treating drinking water and discard any food exposed to floodwater.





# CYCLONE CATEGORIES

Category	Classification	Strongest Gust(km/h)	Typical Effects
1	Tropical Cyclone	Less than 125 km/h Gales	Minimal house damage. Damage to some crops, trees and caravans. Boats may drag moorings.
2	Tropical Cyclone	125-164 km/h Destructive winds	Minor house damage. Significant damage to signs, trees and caravans. Heavy damage to some crops. Risk of power failure. Small boats may break moorings.
3	Severe Tropical Cyclone	165-224 km/h Very destructive winds	Some roof and structural damage. Some caravans and boats destroyed. Power failure likely.
4	Severe Tropical Cyclone	225-279 km/h Very destructive winds	Significant roofing and structural damage. Many caravans and boats destroyed and blown away. Dangerous airborne debris. Widespread power failures.
5	Severe Tropical Cyclone	More than 280 km/h Extremely destructive winds	Extremely dangerous with widespread destruction.





# STORM TIDES

The combination of storm surge and normal (astronomical) tide is known as a 'storm tide'.

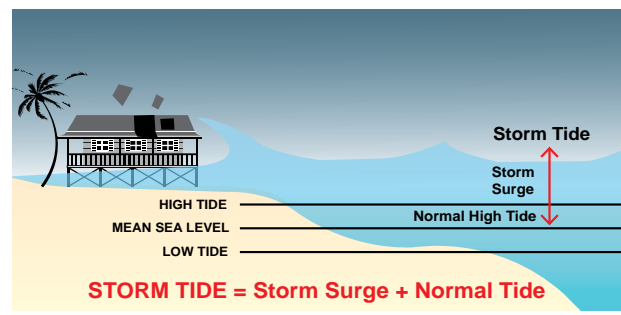
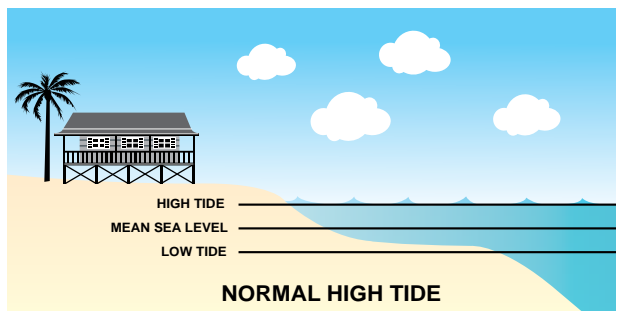
A storm surge is a rise above the normal water level along a shore resulting from strong onshore winds and/or reduced atmospheric pressure.

The worst impacts occur when the storm surge arrives on top of a high tide and when this happens, the storm tide can reach areas that might otherwise have been safe. Additionally there are pounding waves generated by the powerful winds.

The combined effects of the storm tide and waves can destroy buildings, wash away roads and run ships aground.

## WHAT IS A STORM TIDE?

The paths of cyclones are often unpredictable, which makes it hard to forecast exactly when and where a cyclone will cross the coast. This makes it difficult to predict how high the astronomical tide will be when the storm surge impacts, since the time difference between high and low tide is only a few hours. BOM issues warnings to the public that are based on the 'worst case' assumption that the cyclone will cross the coast at high tide.



# THE DIFFERENCE BETWEEN STORM SURGES AND TSUNAMIS

Storm surges and tsunamis are generated by quite different phenomena. While both can cause inundation and significant damage in coastal regions, they have quite different characteristics.

A storm surge is generated by weather systems forcing water onshore over a generally limited stretch of coastline. It will normally build up over a few hours, as the cyclone or similar weather system

approaches the coast. Normally wind waves on top of the surge will contribute to its impact.

A tsunami is generated by earthquakes, undersea landslides, volcanic eruptions, explosions or meteorites. These travel great distances, sometimes across entire oceans affecting vast lengths of coastal land.

## BEFORE A STORM TIDE

Become familiar with Townsville City Council's Emergency Management and Disaster Dashboard, the Disaster Management page on Townsville City Council's website, Townsville City Council's Townsville Disaster Information Facebook page and the BOM website:

 [disaster.townsville.qld.gov.au](https://disaster.townsville.qld.gov.au)

 [townsville.qld.gov.au](https://townsville.qld.gov.au)

 [Townsville Disaster Information](#)

 [bom.gov.au](https://bom.gov.au)

- Hold a family meeting to prepare your household Emergency Plan so everyone knows what to do, where to meet and how to get out
- Prepare your Emergency and Evacuation Kits
- Clean up the yard. Clear away all loose material
- Check and fix loose fittings, such as railings
- Check windows and install shutters if possible
- Tie down sheds or other small structures not permanently fixed. Secure caravans, boats and vehicles or tie them together or to strong structures
- Sandbag areas at risk from flooding, such as doors and windows where possible
- Close all doors
- Store potable water
- Put important documents such as photo albums in plastic bags up high in cupboards
- Identify how and where to turn off the mains supply for water, power and gas
- Disconnect electrical items
- Keep refrigerator and freezer doors closed so food will stay cool without power for several hours
- Move livestock, pets, machinery and animal feed to higher ground
- Move outdoor equipment, garbage, chemicals and poisons to a higher location
- Know your Storm Tide Evacuation Zone and evacuation routes. These maps can be seen on pages 25-34.





## AFTER A STORM TIDE

- ✓ Have a battery operated radio and tune into your local radio station and heed warnings and advice (list of radio stations available on page 10)
- ✓ Do not go outside until officially advised it is safe
- ✓ If you have evacuated, do not return home until officially advised it is safe and do not panic. Wait until water has fallen below floor level to enter a house
- ✓ Do not use electric appliances if wet
- ✓ Beware of damaged power lines, bridges and trees
- ✓ Do not enter flood waters:  
*If it's flooded, forget it.*
- ✓ Heed all warnings and do not go sightseeing. Instead, check and offer help to neighbours, friends and family
- ✓ Do not make unnecessary telephone calls
- ✓ Check whether electricity, gas or water supplies have been affected
- ✓ Wear rubber boots or rubber-soled shoes and rubber or leather gloves
- ✓ Watch for damaged flooring, walls and ceilings as well as unexpected visitors such as snakes
- ✓ Treat all items exposed to floodwater as contaminated. Dispose of rubbish, wash mud, dirt and debris as soon as you can
- ✓ Wash hands thoroughly after handling anything that has been in contact with floodwater
- ✓ Follow any instructions for treating drinking water and discard any food exposed to floodwater.

# IF EVACUATING

Evacuation advice is based on the level of potential inundation from storm tide. This falls into four zones - red, orange, yellow and blue. See the Storm Tide Evacuation Map definition.

## DO NOT WAIT - EVACUATE WHEN ADVISED

There are four evacuation zones which are determined based on modelling and previous experiences of inundation above the 'Average Height Datum' (AHD). For these purposes you can consider AHD to be sea level.

- ✓ Look at the Storm Tide Evacuation Maps to determine your risk
- ✓ Lock doors; turn off power, gas, and water; take your Evacuation and Emergency Kits

- ✓ If evacuating, leave early to avoid heavy traffic, flooding and wind hazards
- ✓ Follow Queensland Police and State Emergency Services directions
- ✓ Enact Emergency Plan for your pet or house them in a safe location where they are protected and have access to food and water.

Whether you are evacuating to family, friends, an evacuation centre or another location, register where you are going so that family can find you and know you are safe.

Register. Find. Reunite:  
[register.redcross.org.au](https://register.redcross.org.au)

## KNOW YOUR STORM TIDE EVACUATION ZONE

### How to use storm tide evacuation maps:

1. Identify where your residence is on the map
2. If you are in one of the coloured zones, you may be at risk from storm tide flooding during cyclones
3. Identify your evacuation route to your pre-determined safer location. For further information on evacuation, visit the Disaster Management page on Council's website: [townsville.qld.gov.au](https://townsville.qld.gov.au)
4. During a cyclone event tune into warnings
5. Authorities will advise which zones need to evacuate.



**Did you know?**

Around the world, drowning by storm surge accounts for a high proportion of the deaths in tropical cyclones.

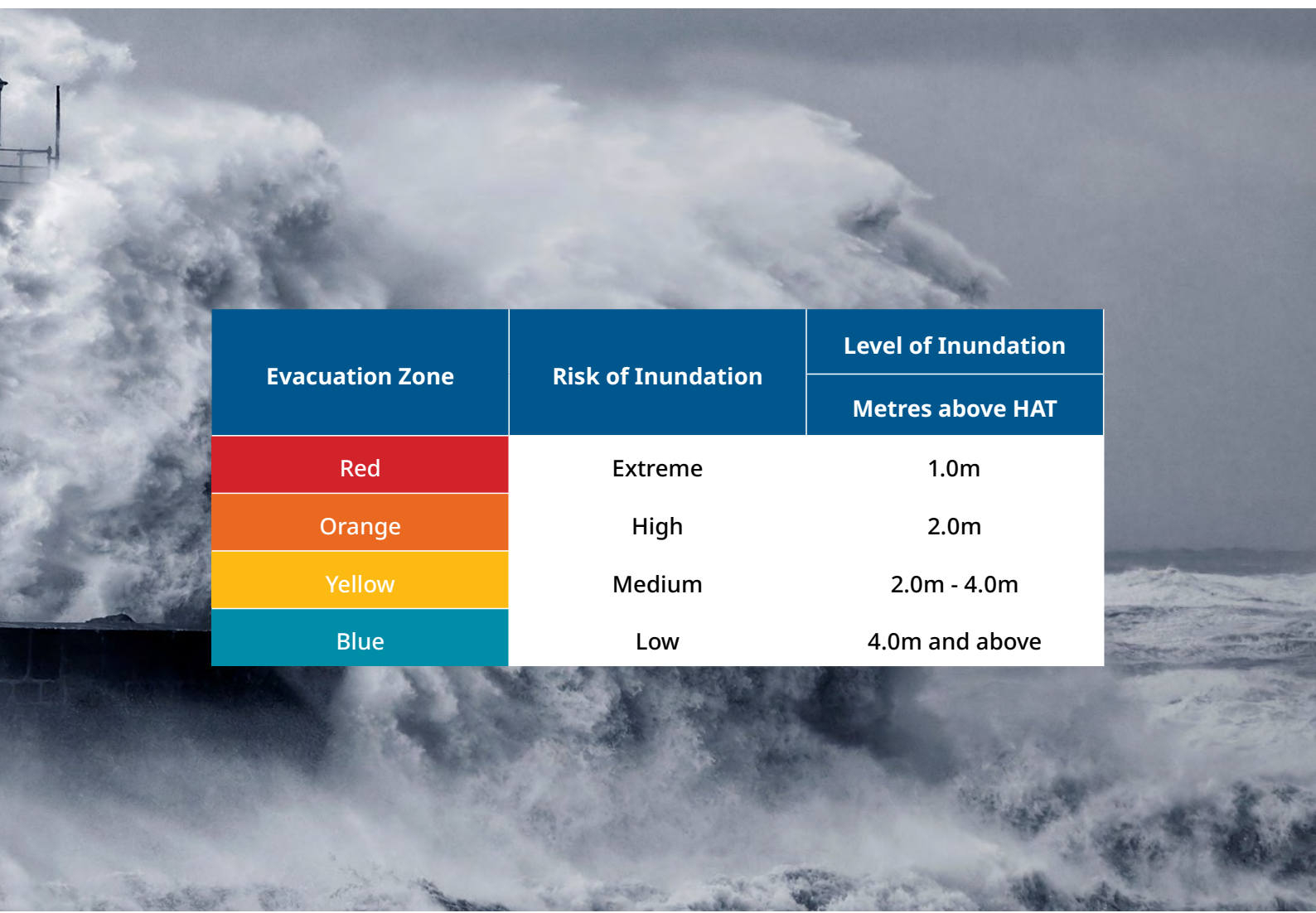
**STORM SURGE HISTORY**

Severe Tropical Cyclone Althea

Although the worst of the cyclone struck near low tide, the combination of a large storm surge and high waves caused widespread damage along the coast. Storm surge values reached 2.9m (9.5ft) in Townsville Harbour and the Ross River experienced a 2.7m (9ft) water level rise that submerged streets in the city. An estimated peak storm surge of 3.66m (12.0ft) occurred at Toolakea. In addition to the surge, wave action was highly destructive. Seawalls and coastal roadways along The Strand and Cape Pallarenda were crushed by damaging waves and onshore flow generated severe beach erosion from Townsville to Toolakea.

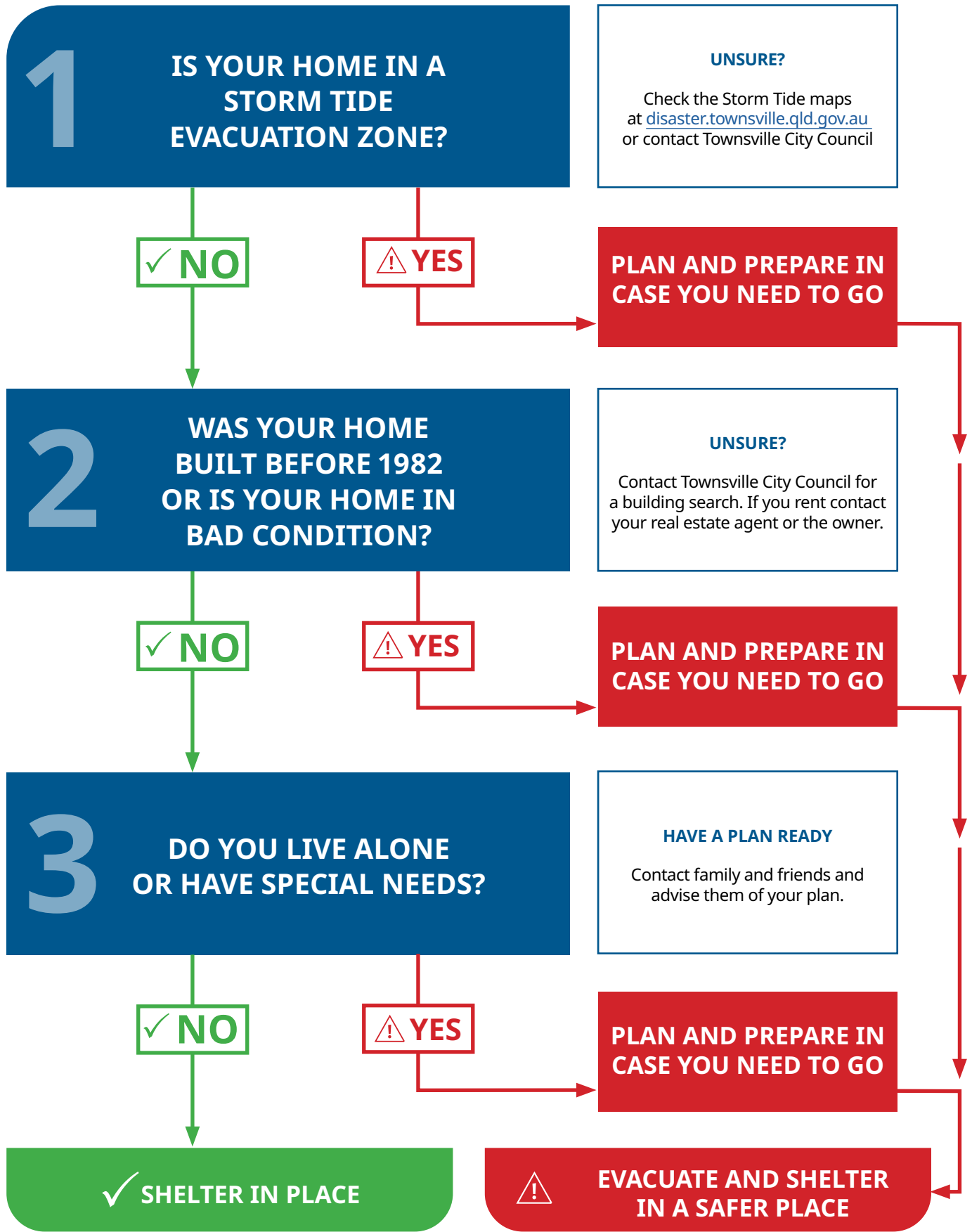
**What is HAT?**

HAT stands for Highest Astronomical Tide, which is comparable to a king tide. It is the highest level of water which can be predicted to occur under any combination of astronomical conditions. BOM advices regarding storm tide will refer to a height (in metres) above HAT, which informs which zones may be affected.

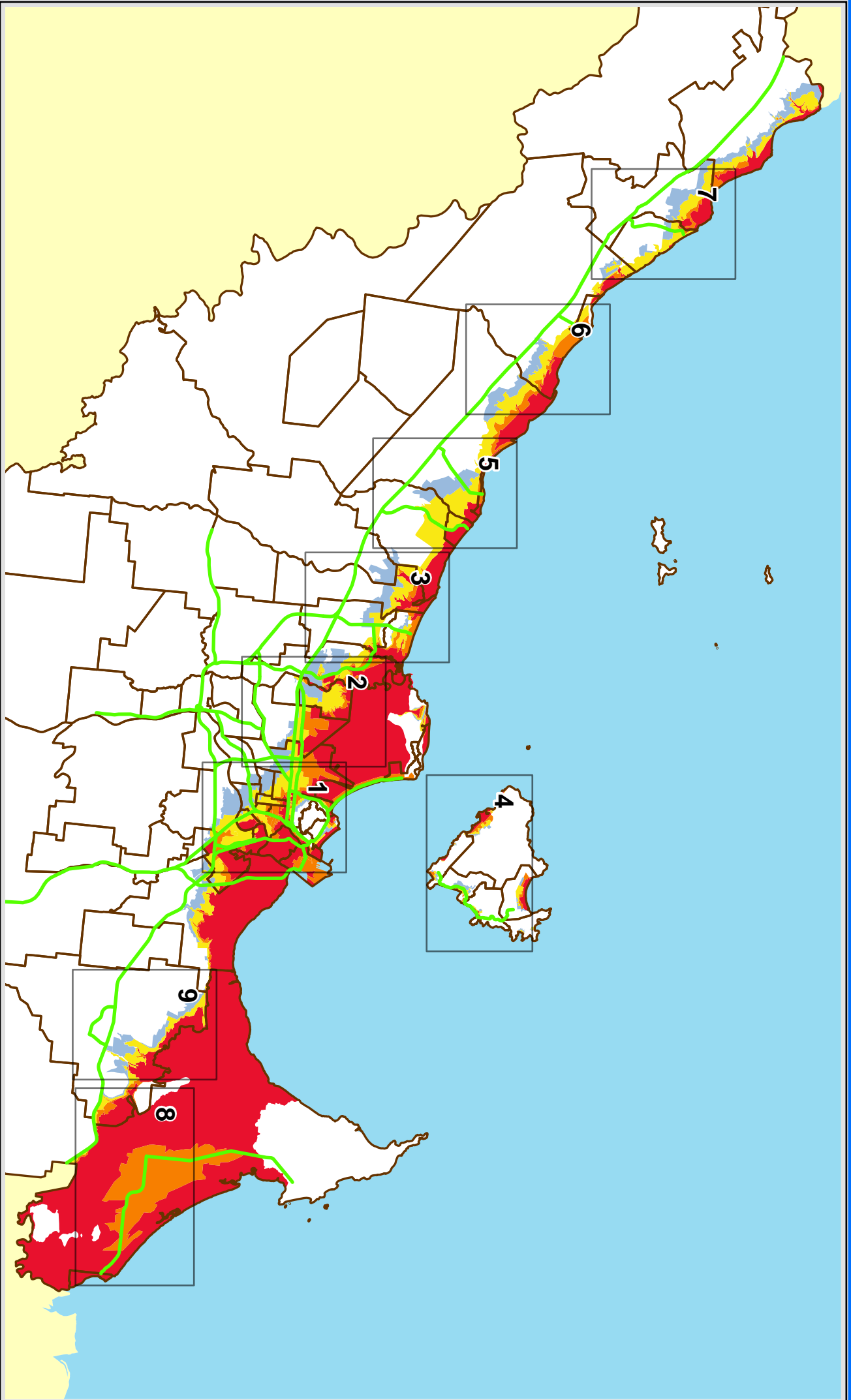


Evacuation Zone	Risk of Inundation	Level of Inundation
		Metres above HAT
Red	Extreme	1.0m
Orange	High	2.0m
Yellow	Medium	2.0m - 4.0m
Blue	Low	4.0m and above

# TO EVACUATE OR NOT







**Evacuation Zones**

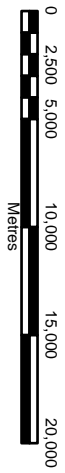
Height above Highest Astronomical Tide (HAT)

- RED <1m
- ORANGE 1 - 2m
- YELLOW 2 - 4m
- BLUE 4 - 6m

Evacuation Routes

- Detail Maps
- Suburbs

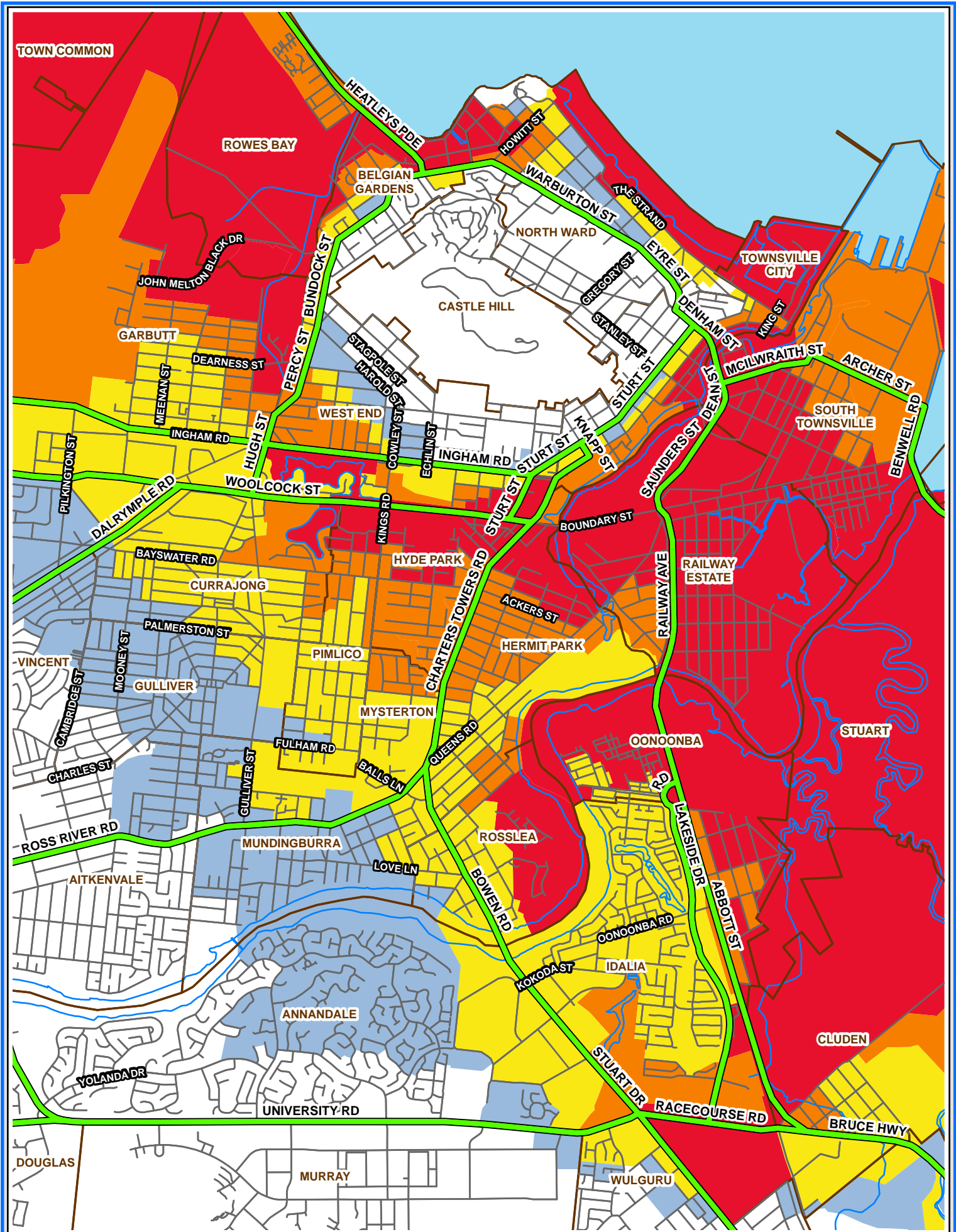
# TOWNSVILLE STORM TIDE EVACUATION ZONES



**DISCLAIMER**

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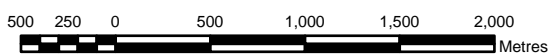




**Evacuation Zones**

- Evacuation Routes
- Height above Highest Astronomical Tide (HAT)**
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# TOWNSVILLE STORM TIDE EVACUATION ZONES

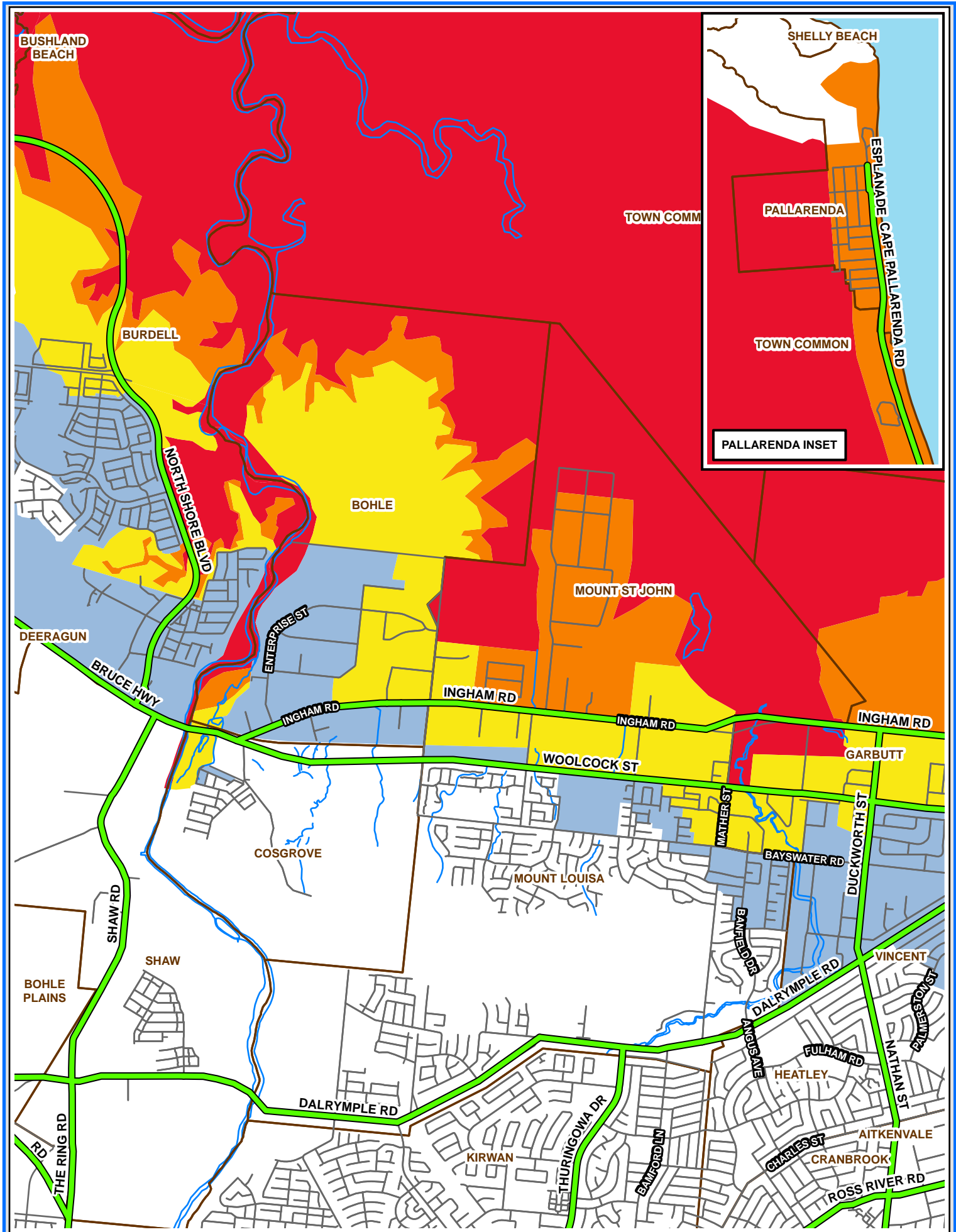


**1**



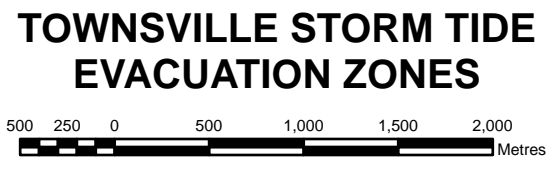
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**Evacuation Zones**

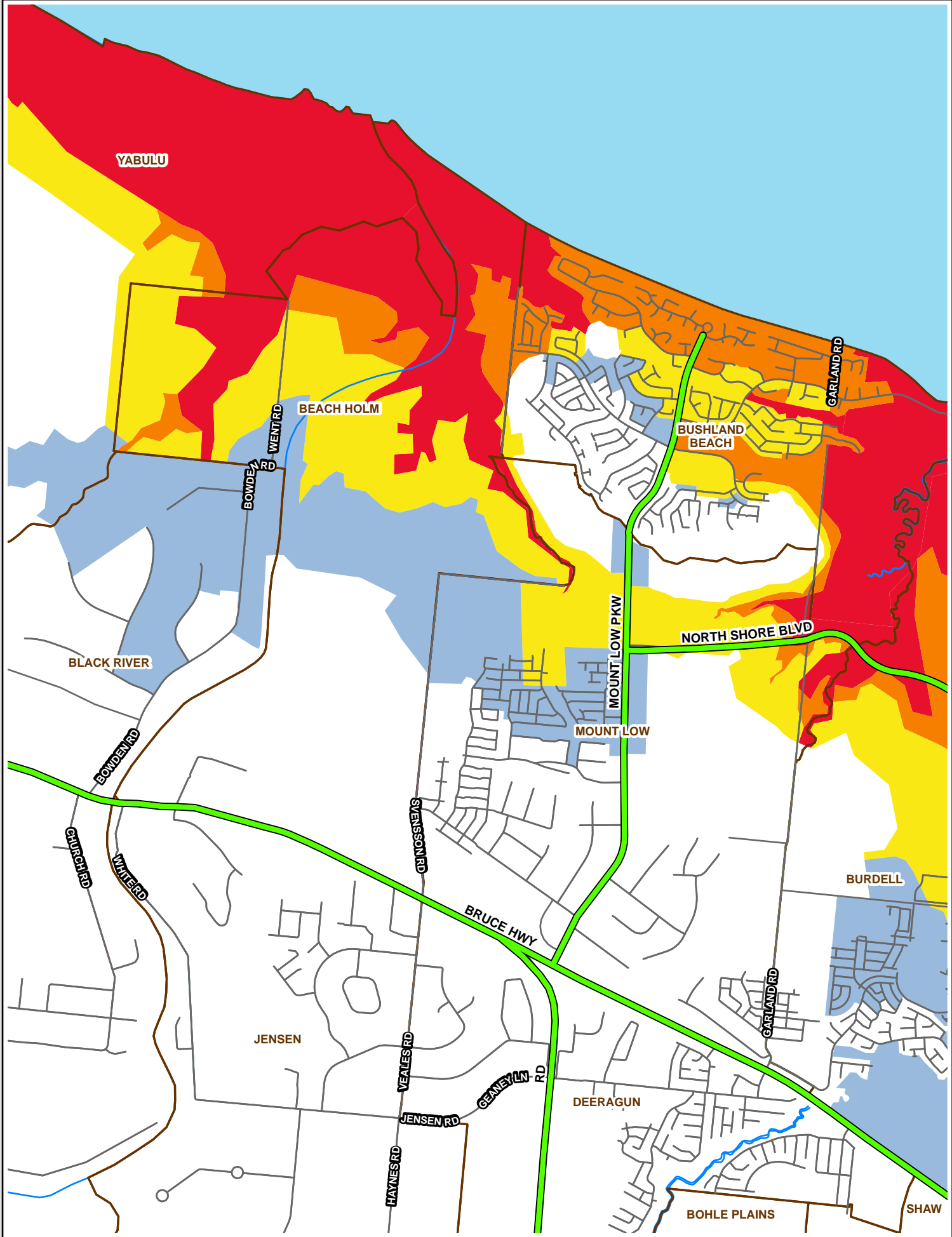
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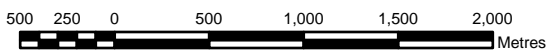




**Evacuation Zones**

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## TOWNSVILLE STORM TIDE EVACUATION ZONES



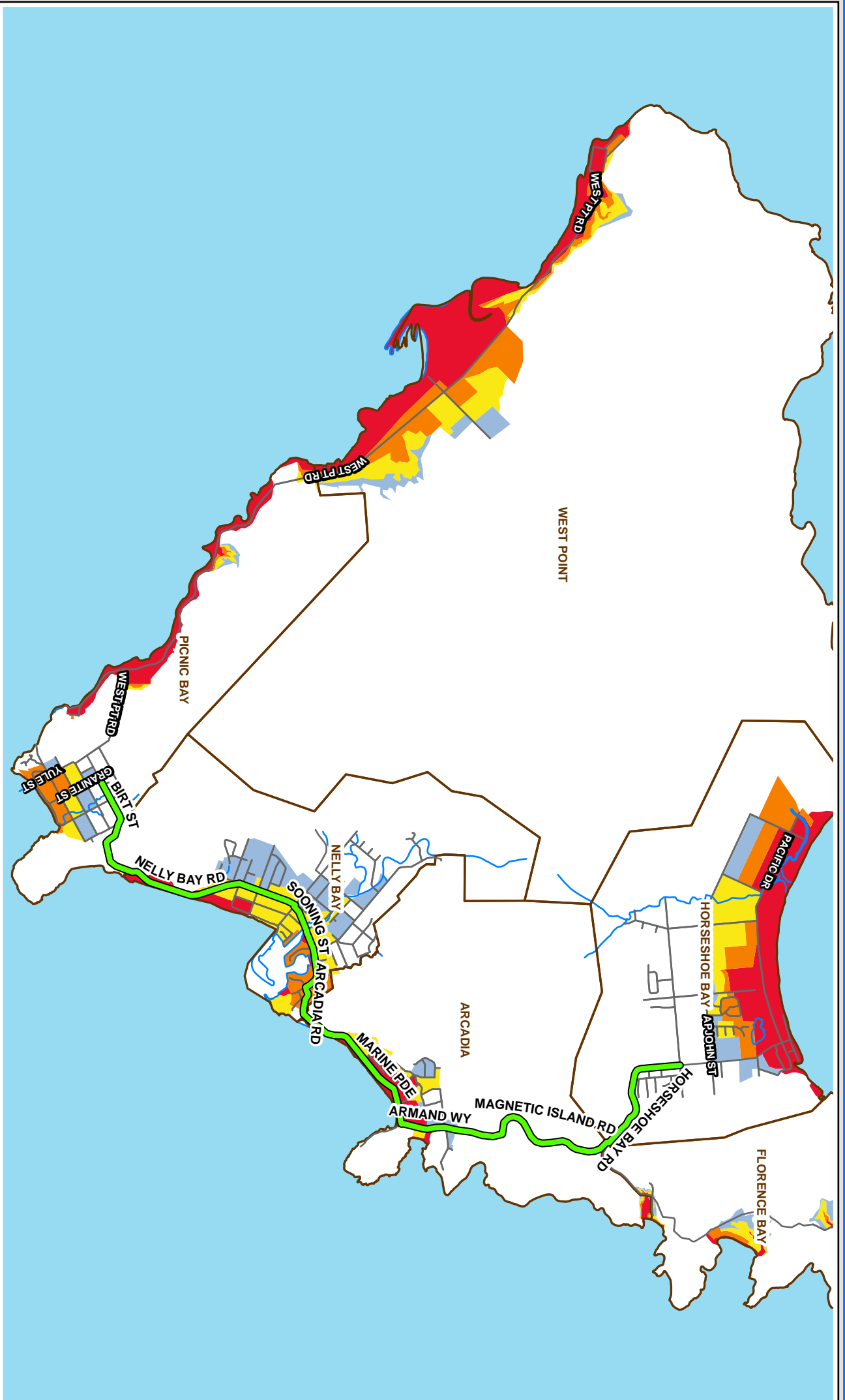
3



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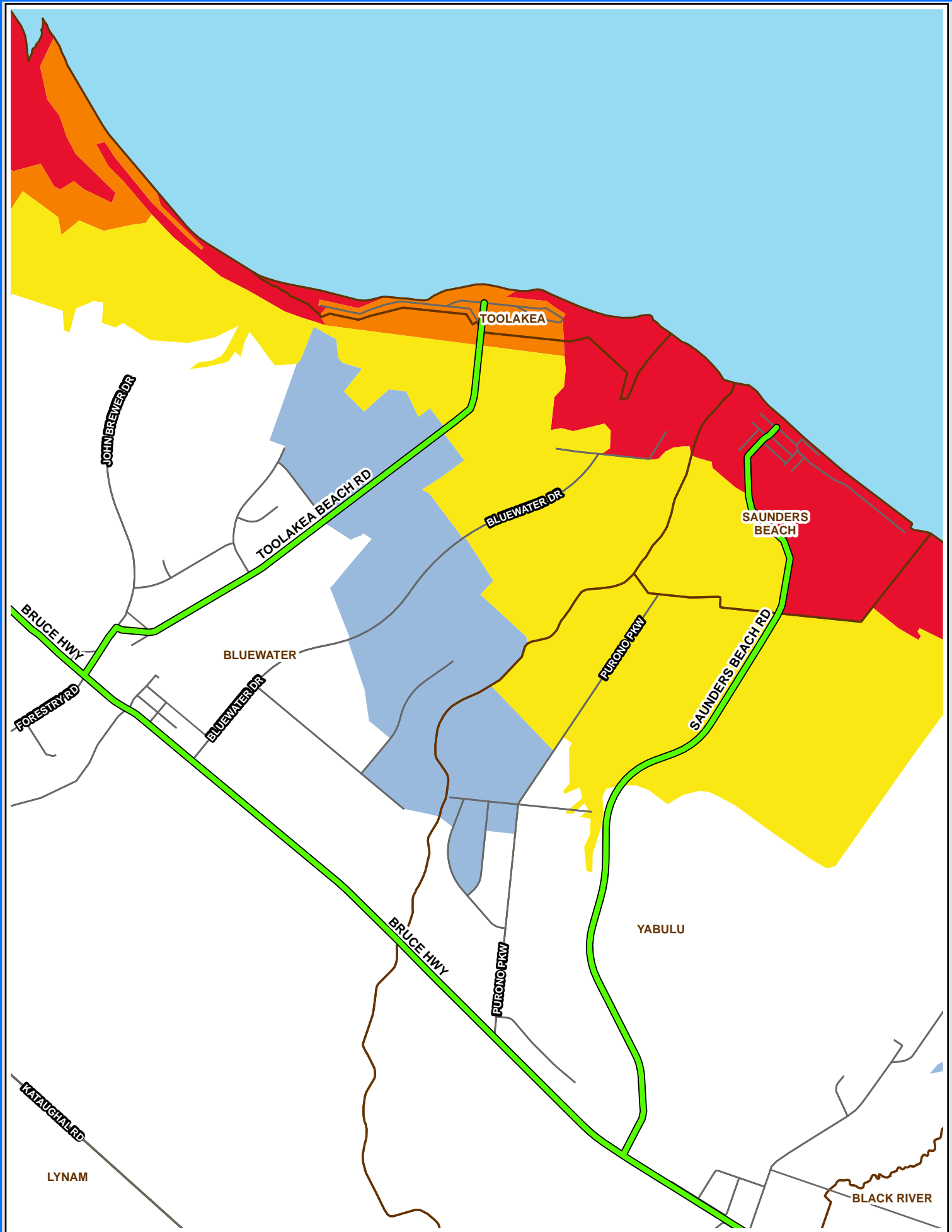
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500 250 0 500 1,000 1,500 2,000 Metres

## TOWNSVILLE STORM TIDE EVACUATION ZONES

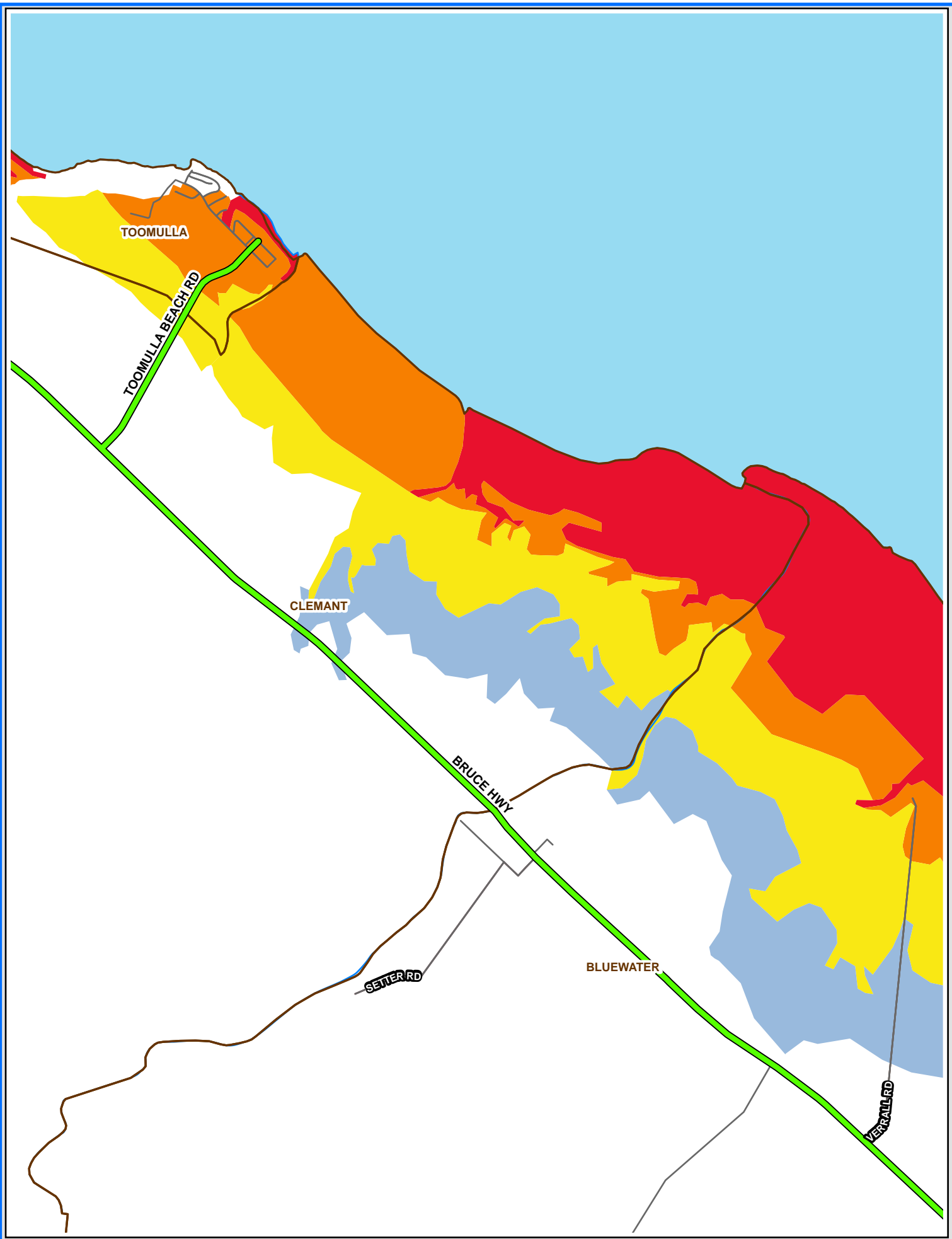
5



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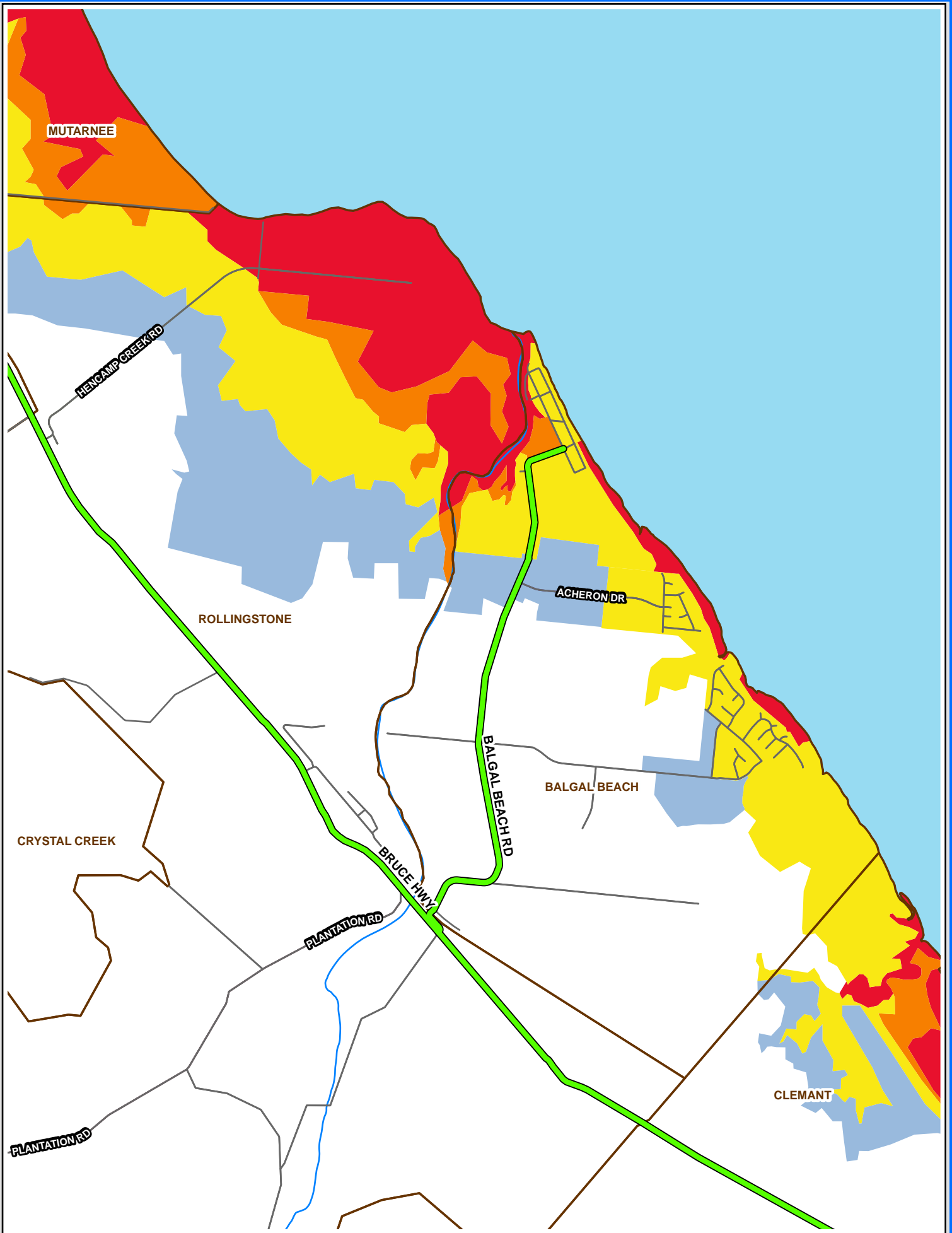
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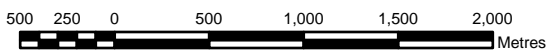




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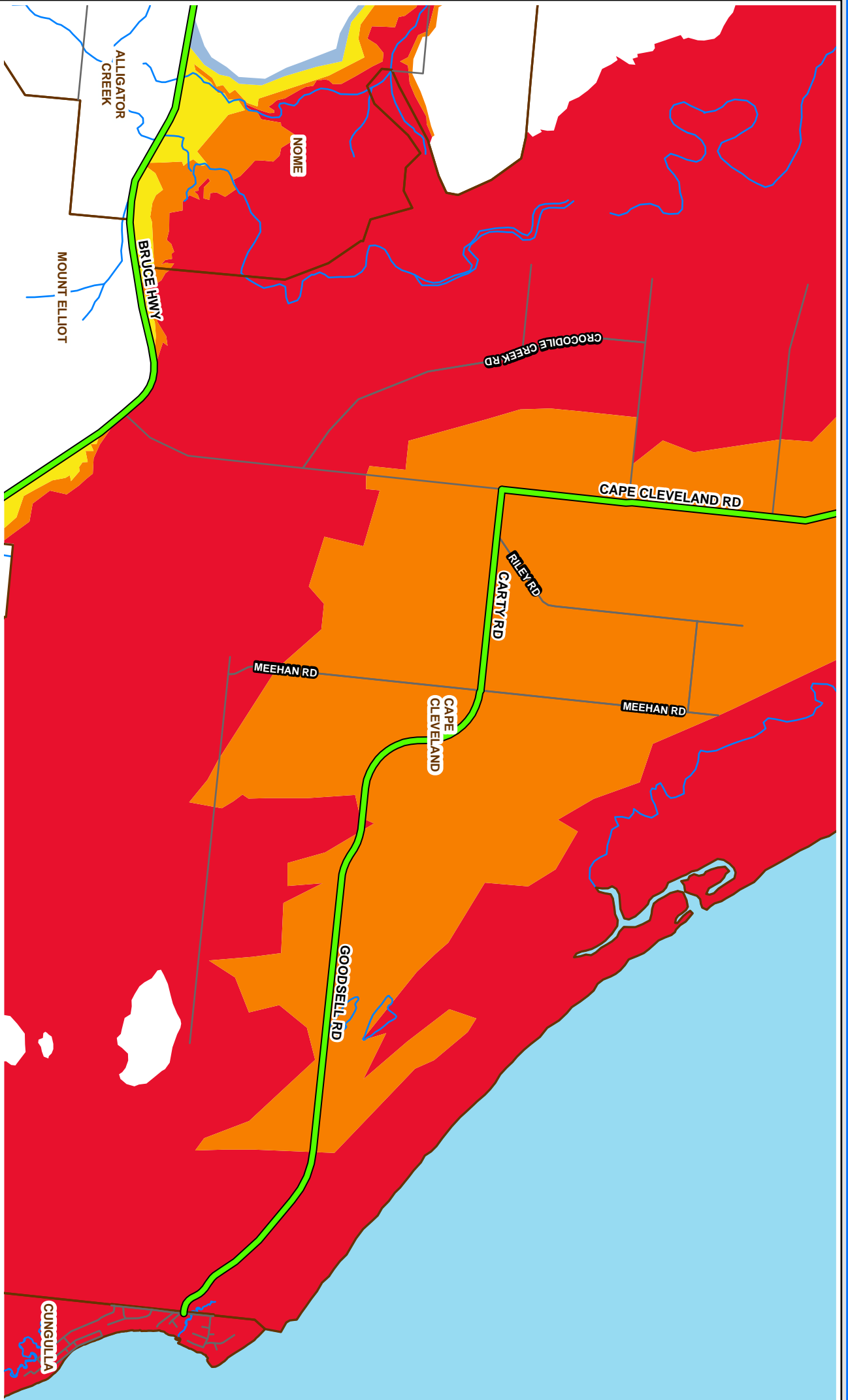
7



**DISCLAIMER**

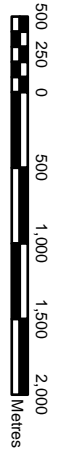
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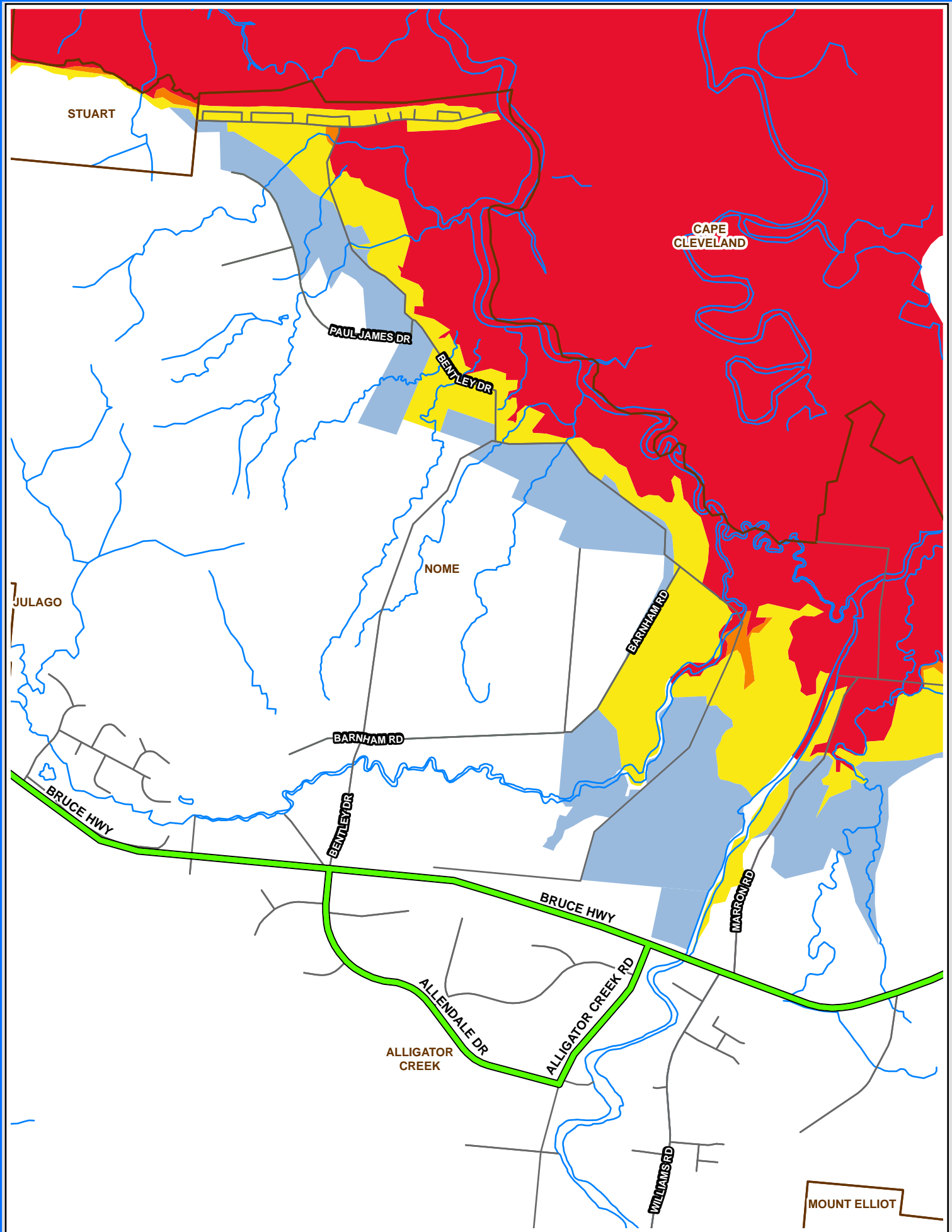
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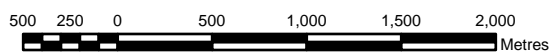




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9



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# FLOOD

A flood is the temporary, partial or complete inundation of land that is normally dry. Flooding can be caused by water that has escaped its natural confine due to heavy rain. Some floods develop slowly, while flash floods can develop in just a few minutes and without visible signs of rain.

A flood warning is issued by BOM when flooding is occurring or expected to occur in a particular area. When flash flooding is expected, a severe weather warning is issued.

Drains, creeks or rivers which have had little or no water flow in previous months may fill rapidly with fast-flowing water, which can spread to houses and streets. The height of the water may not have been seen in the same location previously.

There may not have been significant rainfall in our region, however there may have been heavy rain throughout our catchment area, causing river levels to rise quickly. Water levels may also be heightened by high tides happening around the same time.



# BEFORE A FLOOD

Before a flood, become familiar with the information available at:

 [disaster.townsville.qld.gov.au](https://disaster.townsville.qld.gov.au)

 [townsville.qld.gov.au](https://townsville.qld.gov.au)

 [Townsville Disaster Information](#)

 [bom.gov.au](https://bom.gov.au)

- ✓ Check your residence well in advance of the wet season at [townsville.qld.gov.au/building-planning-and-projects/mapping-services/flood-mapping-service](https://townsville.qld.gov.au/building-planning-and-projects/mapping-services/flood-mapping-service)
- ✓ Hold a family meeting to prepare your household Emergency Plan so everyone knows what to do, where to meet and how to get out
- ✓ Prepare your Emergency and Evacuation Kits
- ✓ Clean up the yard. Clear away all loose material
- ✓ Move outdoor equipment, garbage, chemicals and poisons to a safe location

- ✓ Move livestock, pets, machinery and animal feed to higher ground
- ✓ Identify how and where to turn off the mains supply for water, power and gas
- ✓ Disconnect electrical items
- ✓ Tie down sheds or other small structures not permanently fixed. Secure caravans, boats and vehicles or tie them together or to strong structures
- ✓ Sandbag areas at risk from flooding, such as doors and windows where possible
- ✓ Store potable water
- ✓ Put important documents such as photo albums up high in cupboards
- ✓ Know your Evacuation Zone (storm tide) and evacuation routes. These maps can be seen on pages 25-34
- ✓ Check neighbours, especially if elderly or new to the area.

# DURING A FLOOD

- ✓ Have a battery operated radio and tune in to your local radio station and heed warnings and advice (list of radio stations available on page 10)
- ✓ Boil tap water in case of contamination
- ✓ Do not enter floodwaters: *If it's flooded, forget it.*
- ✓ Never drive, walk, swim or play in floodwaters. Hazards could exist below the surface which you cannot see, regardless of how well you know the area. Water could be contaminated
- ✓ Keep refrigerator and freezer doors closed so food will stay cool without power for several hours, if necessary.





# AFTER THE FLOODWATERS HAVE RECEDED

- ✓ Have a battery operated radio and tune into your local radio station and heed warnings and advice (list of radio stations available on page 10)
- ✓ Know your evacuation routes
- ✓ If you have evacuated, do not return home until officially advised it is safe and do not panic. Wait until water has fallen below floor level to enter a house
- ✓ Do not use electric appliances if wet
- ✓ Beware of damaged power lines, bridges and trees
- ✓ Do not enter floodwaters: *If it's flooded, forget it.*
- ✓ Heed all warnings and do not go sightseeing. Instead, check and offer help to neighbours, friends and family
- ✓ Do not make unnecessary telephone calls
- ✓ Check whether electricity, gas or water supplies have been affected
- ✓ Wear rubber boots or rubber-soled shoes and rubber or leather gloves
- ✓ Watch for damaged flooring, walls and ceilings as well as unexpected visitors such as snakes
- ✓ Treat all items exposed to floodwater as contaminated
- ✓ Dispose of rubbish, wash mud, dirt and debris as soon as you can and wash hands thoroughly after handling anything that has been in contact with floodwater
- ✓ Follow any instructions for treating water and discard any food exposed to floodwater.



## Important Note

Most flood-related deaths result when people attempt to drive, walk, swim or play in floodwaters. Depth and current are easily misjudged and floodwater will sweep away and submerge even very large vehicles. Do not drive or walk into floodwater, especially where a current exists, even if the water appears to be shallow.

*IF IT'S FLOODED, FORGET IT.*

## Useful Links:

View flood maps for the Townsville City Council Local Government Area:  
[townsville.qld.gov.au/building-planning-and-projects/mapping-services/flood-mapping-service](https://townsville.qld.gov.au/building-planning-and-projects/mapping-services/flood-mapping-service)

Download a flood information guide:  
[bom.gov.au/water/floods/document/What\\_todo\\_floods.pdf](https://bom.gov.au/water/floods/document/What_todo_floods.pdf)

# SEVERE THUNDERSTORMS

A thunderstorm, also known as an electrical storm, is characterised by the presence of lightning and its acoustic effect on the Earth's atmosphere, known as thunder. They are usually accompanied by strong winds and heavy rain.

A Severe Thunderstorm Warning is issued when thunderstorms are expected to produce wind gusts of at least 90 kilometres per hour, tornadoes, lightning, hail or very heavy rain that leads to flash flooding.

The location of severe thunderstorms is difficult to accurately predict well in advance. As a result, Severe Thunderstorm Warnings will generally have a lead time of no more than an hour.

## BEFORE A SEVERE THUNDERSTORM

- ✓ Clean up the yard. Clear away all loose material
- ✓ Hold a family meeting to prepare your household Emergency Plan so everyone knows what to do, where to meet and how to get out
- ✓ Identify how and where to turn off the mains supply for water, power and gas.
- ✓ Disconnect electrical items
- ✓ Keep refrigerator and freezer doors closed so food will stay cool without power for several hours
- ✓ Shelter and secure pets
- ✓ Move outdoor equipment, garbage, chemicals and poisons to a higher location
- ✓ Check neighbours, especially if elderly or recent arrivals.



**If strong winds or hail are forecasted, you should:**

- ✓ Put vehicles under cover or cover with firmly tied tarps and blankets

**If very heavy rain and flash flooding are forecasted, you should:**

- ✓ Keep away from creeks and drains as you may be swept away.
- ✓ Do not enter floodwaters:  
*If it's flooded, forget it.*

# DURING A SEVERE THUNDERSTORM

- ✓ Tune into your local radio station and heed warnings and advice (list of radio stations available on page 10)
- ✓ Move indoors and away from windows
- ✓ If driving, stop clear of trees, powerlines and streams
- ✓ Avoid using the telephone.

# AFTER A SEVERE THUNDERSTORM

- ✓ Tune into your local radio station and heed warnings and advice (list of radio stations available on page 10)
- ✓ Do not use electrical appliances if wet
- ✓ Beware of damaged power lines, bridges and trees
- ✓ Do not enter flood waters:  
*If it's flooded, forget it.*
- ✓ Heed all warnings and do not go sightseeing. Instead, check and offer help to neighbours, friends and family
- ✓ Do not make unnecessary telephone calls
- ✓ Check whether electricity, gas or water supplies have been affected
- ✓ Wear rubber boots or rubber-soled shoes and rubber or leather gloves
- ✓ Watch for damaged flooring, walls and ceilings as well as unexpected visitors such as snakes
- ✓ Treat all items exposed to floodwater as contaminated. Dispose of rubbish, wash mud and dirt out and clear debris as soon as you can
- ✓ Wash hands thoroughly after handling anything that has been in contact with floodwater
- ✓ Follow any instructions for treating water and discard any food exposed to floodwater.





# EARTHQUAKES

Earthquakes are the vibrations caused by rocks breaking under stress. The underground surface along which the rock breaks and moves is called a fault plane.

Earthquakes in Australia are usually caused by movements along faults as a result of compression in the Earth's crust.

The impact of an earthquake depends on its depth, proximity to inhabited areas and rating or magnitude from 1-10 (1 may not be noticeable to 10 causing significant damage).

There may be little if any warning of an impending earthquake - it's possible you may feel it before emergency services know it's going to happen. Earthquakes can occur at any time of day and any time of year.

## BEFORE AN EARTHQUAKE

- ✓ Hold a family meeting to prepare your household Emergency Plan so everyone knows what to do, where to meet and how to get out
- ✓ Identify how and where to turn off the mains supply for water, power and gas.

### SIGNS AN EARTHQUAKE IS HAPPENING INCLUDE:

- ✓ Sometimes preceded by stillness and/or unusual animal behaviour
- ✓ Sounds such as rolling or rumbling may sometimes be heard
- ✓ Movement of the earth - this could be a jolt or series of jolts of varying intensities and/or a rolling sensation
- ✓ Inside a building, items may fall from the ceiling, walls or out of cupboards, the water in toilets may slosh around and walls may crack if the shock is severe.

# DURING AN EARTHQUAKE

## IF YOU ARE INDOORS:

- ✓ Take cover - get under a sturdy table, bed or other piece of furniture. Hold on until the shaking stops
- ✓ Stay away from glass windows and doors, outside doors and walls, and anything that could fall
- ✓ Stay inside until the shaking stops. There may be aftershocks
- ✓ Don't use lifts
- ✓ The electricity may go out and sprinkler systems or fire alarms may turn on.

## IF YOU ARE OUTSIDE:

- ✓ Stay there
- ✓ Move away from buildings, street lights and utility wires
- ✓ Once in the open, stay there until the shaking stops. The greatest danger exists directly outside buildings, at exits and alongside exterior walls.

## IF YOU ARE IN A MOVING VEHICLE:

- ✓ Stop as quickly as safety allows and stay in the vehicle. Avoid stopping near or under buildings, trees, overpasses and utility wires
- ✓ Proceed cautiously once the earthquake has stopped. Avoid roads, bridges and ramps that might have been damaged.

## IF YOU ARE TRAPPED:

- ✓ Do not light a match or use a lighter
- ✓ Keep as still as possible
- ✓ Cover your mouth with a handkerchief or clothing
- ✓ Tap a pipe or wall or call out so rescuers can locate you
- ✓ Call 000 if your mobile phone is with you and working.

# AFTER AN EARTHQUAKE

- ✓ Have a battery operated radio and tune into your local radio station and heed warnings and advice (list of radio stations available on page 10)
- ✓ Try to stay calm and help others around you
- ✓ Check for injuries and apply first aid. Do not move seriously injured people unless they are in immediate danger
- ✓ Beware of damaged power lines, bridges and trees
- ✓ Heed all warnings and don't go sightseeing. Instead, check and offer help to neighbours, friends and family
- ✓ Be prepared for aftershocks
- ✓ Don't make unnecessary telephone calls
- ✓ Turn off electricity, gas or water supplies and check whether they have been affected
- ✓ Do not light matches until after you have checked for gas or fuel leaks
- ✓ Wear rubber boots or rubber-soled shoes and rubber or leather gloves
- ✓ Check for cracks and damage to your building's floors, walls and ceilings. Evacuate if the building is badly damaged
- ✓ Follow any instructions for treating water. Conserve food and water as supplies may be interrupted.



# BUSHFIRES

**You do not have to live in the bush to be threatened by bushfire, just close enough to be affected by burning material, embers and smoke.**

Fires may be started through arson (deliberately lit), carelessness (e.g. discarded cigarettes, sparks from machinery, unattended fires), as the result of an accident or very rarely, as the result of a controlled burn or lightning. If you light a fire, on purpose or accidentally, you are responsible for controlling it.

Fires can move extremely fast - faster than you can run. They can also be unpredictable, for instance changing direction. You may find yourself suddenly in danger. Heat, wind, smoke and burning material blowing around may make it difficult to see, hear or breathe.

If there is a long spell of hot, dry weather and it is windy, the fire risk increases. Generally the fire season in North Queensland is through the winter ("dry" season) and spring months.

## TYPES OF FIRE

- Grassfires are fast moving, passing in five to ten seconds and smouldering for minutes. They have a low to medium intensity and primarily damage crops, livestock and farming infrastructure, such as fences.
- Bushfires are generally slower moving but have a higher heat output. This means they pass in two to five minutes, but they can smoulder for days. Fire in the crown of the tree canopy can move rapidly.
- Cane fires are large controlled paddock fires that farmers use to burn off the trash after the sugar cane has been harvested.



# WARNING MESSAGES

Queensland Fire and Emergency Services (QFES) has the responsibility for issuing bushfire warnings in Queensland.

If lives or property are threatened, you will receive Advice, Watch and Act or Emergency Warning messages:

- An Advice message tells you a fire has started and will provide general information to keep you updated
- A Watch and Act message represents a higher level of threat such as conditions are changing, a fire is approaching and lives may be threatened
- An Emergency Warning is the highest level message advising of impending danger and you may hear the Standard Emergency Warning Signal (SEWS) first. With any fire warning, follow the instructions immediately.

## EMERGENCY WARNING

- »» Seek shelter immediately
- » Seek shelter
- » Leave immediately

## WATCH AND ACT

- » Leave now
- » Prepare to leave

## ADVICE

- » Stay informed

# BEFORE A BUSHFIRE


Before a bushfire, become familiar with the information available at:

 [qfes.qld.gov.au](http://qfes.qld.gov.au)

 [Rural Fire Service Townsville](#)

 [disaster.townsville.qld.gov.au](http://disaster.townsville.qld.gov.au)

 [Townsville Disaster Information](#)

 [bom.gov.au](http://bom.gov.au)

- Plan. Prepare. Act.* Hold a family meeting to prepare your Bushfire Survival Plan so everyone knows what to do, where to meet and how to get out. Visit [qfes.qld.gov.au](http://qfes.qld.gov.au) to prepare your plan online
- Prepare your Emergency and Evacuation Kits

- Keep grass cut and vegetation clear of the property. If you are in a medium or high risk area, you must accommodate a fire break which is appropriately separated from hazardous vegetation
- Do not dump garden rubbish in neighbouring reserves or bush areas
- Move flammable items away from the house, e.g. woodpiles, boxes, hanging baskets, garden furniture
- Keep access ways to the property clear for fire trucks
- When warnings are given, act immediately on the instructions provided. Do not wait. Leave when advised, even if it feels safe where you are at the time. Take your Household Emergency and Evacuation Kits with you. Go in the direction advised for your location.

Whether your family plan is to leave early or stay and defend:

If you plan to leave, then you must leave your home well before a bushfire threatens and travelling by road becomes hazardous.

Take the following items with you:

- Long sleeve shirt
- Jeans
- Boots
- Hat
- Safety goggles
- Bottled water (enough for all)
- Battery-operated radio
- Batteries
- Mobile phone and charger
- Blankets (natural fibres)
- Passports and birth certificates
- Wallets/purses
- Medications
- Family photos, valuables and documents
- Children's toys

Your property should be well-prepared for the fire, even if you intend to leave early. A well prepared property stands a greater chance of surviving.

- Tune in to warnings and updates on local radio, websites and social media
- Move cars to a safe location
- Remove garden furniture, door mats and other items from your yard
- Close windows, doors and shut blinds
- Take down curtains and move furniture away from windows
- Seal gaps under doors and windows with wet towels
- Bring pets inside, restrain them (leash, cage or secure room) and provide water
- Block downpipes (at the top) and fill gutters with water if possible
- Wet down the sides of buildings, decks and close shrubbery in the likely path of the bushfire
- Wet down fine fuels (e.g. leaf litter) close to buildings
- Turn on garden sprinklers for 30 minutes before the bushfire arrives
- Fill containers with water - baths, sinks, buckets, wheelie bins
- Put on protective clothing
- Drink lots of water.

## BUSHFIRE EMERGENCY KIT

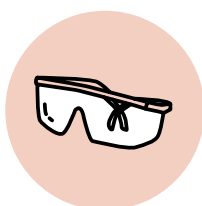
View the Emergency Kit on page 8 and add the below items



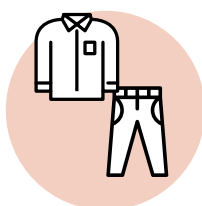
Hat



Smoke mask



Safety goggles



Long sleeve shirt and pants



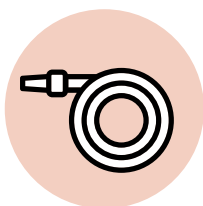
Boots



Shovel



Fire extinguisher



Hose



Knapsack sprayer



Mop & bucket



Ladder



Towels and blankets

# DURING A BUSHFIRE

## If your family plan is to stay and defend against the fire:

Preparation is the key to survival. In making your decision to stay there are a few things you need to consider.

You will need to:

- ✓ Be mentally and physically ready and you will need to have a plan
- ✓ Be able to withstand the impact of bushfire. Check the specific factors which reduce risk at: [bushfire-survival-plan.qfes.qld.gov.au](http://bushfire-survival-plan.qfes.qld.gov.au)
- ✓ Have well-maintained resources and equipment and know how to use them
- ✓ Clearly understand what you will do to protect your property and life when the fire arrives
- ✓ Discuss details of your plan with family, friends and neighbours
- ✓ Prepare a Bushfire Emergency Kit so you will be equipped to extinguish small fires
- ✓ Have basic protection from heat, smoke and flames.

## As the fire front arrives:

- ✓ Disconnect hose and fittings and bring inside
- ✓ Go inside for shelter
- ✓ Drink lots of water
- ✓ Shelter in your house on the opposite side of the approaching fire
- ✓ Patrol and check for embers inside, particularly in the roof space
- ✓ Check on family and pets
- ✓ Maintain a means of escape
- ✓ Continually monitor conditions.

# AFTER A BUSHFIRE

## After the fire front has passed:

- ✓ In an emergency dial 000
- ✓ Tune in to your local radio station and heed warnings and advice (list of radio stations available on page 10)
- ✓ If you evacuated, wait until the all-clear has been given by emergency services before leaving your safe area
- ✓ Consider using a face mask or similar (e.g. hanky, flannel)
- ✓ Check around the property for live electricity, leaking gas, sewage leaks, hot embers, overhanging trees or branches or structural damage
- ✓ If unsure about the safety of the property, seek advice from local emergency services

- ✓ Do not take any risks
- ✓ Drink lots of water
- ✓ If you are stranded, hurt or need other help, contact emergency services on 000.

## Check for small spot fires and burning embers:

- ✓ Inside the roof space
- ✓ Under floorboards
- ✓ Under the house space
- ✓ On verandahs and decks
- ✓ On window ledges and door sills
- ✓ In roof lines and gutters
- ✓ In garden beds and mulch.



# HEATWAVES

A heatwave is three or more days of maximum and minimum temperatures that are higher than usual for that location.

Heatwaves will likely be more challenging for the elderly, pregnant women, young children and babies.

Heatwaves are a risk for anyone who does not take precautions to keep cool, even if you are healthy.

Heatwaves can also cause normally reliable infrastructure such as power and transport to fail.

Severe and extreme heatwaves have taken more lives than any other natural hazard in Australia's 200 year history. An example was in February 2009, where 173 people perished as a direct result of the bushfires in Victoria, however 374 people also lost their lives to an extreme heatwave before the bushfires.

Heat stress and heat exhaustion can be serious, even fatal.

# BEFORE A HEATWAVE

Before a heatwave, become familiar with the information available at:

 [disaster.townsville.qld.gov.au](https://disaster.townsville.qld.gov.au)

 [townsville.qld.gov.au](https://townsville.qld.gov.au)

 [Townsville Disaster Information](#)

 [bom.gov.au](https://bom.gov.au)

- Think about modifying your planned activities so that you are indoors or in air-conditioning
- Install blinds, curtains or other devices which help to keep the heat out
- Check your fans and air-conditioners are working properly
- Plan ahead to make sure you have enough food, water and medicine.

## KNOW THE SIGNS:

- Breathlessness
- Chest pain
- Confusion
- Intense thirst
- Weakness
- Dizziness
- Cramps which get worse or don't go away.

## DURING A HEATWAVE

- Drink plenty of water and avoid caffeine and alcohol
- Stay out of the sun, especially between 11am – 3pm
- Close curtains and blinds to keep rooms cool
- Avoid physical exertion if possible
- Wear loose, cool clothing, and wear a hat, glasses and sunscreen if going outside
- Have cool baths or showers or splash yourself with cool water.

## AFTER A HEATWAVE

- Check on friends, neighbours and vulnerable people who may be less able to look after themselves.



# TSUNAMI

A tsunami is a long ocean wave (or series of waves) or surges, caused by a major disturbance to the sea floor such as an undersea earthquake, landslide or volcanic eruption. They are different to the storm tide surge which can occur with cyclones and from large waves which can accompany storms.

The phenomenon is usually associated with earthquakes, landslides or volcanic eruptions in, or adjacent to oceans and results in sudden movement of the water column. Until recently tsunamis were called tidal waves, even though the event has nothing to do with tides.

In deep water, tsunamis can reach speeds of up to 950km/hr and may travel across the sea for hundreds of kilometres hitting distant communities hours after they are generated. They slow down, but grow in size as they come ashore. Rather than one huge wave, a tsunami may look like a rapidly rising or falling tide and occur as a series of waves with periods of time in between.

Despite the presence of the Great Barrier Reef, the Townsville region could still be affected by a tsunami. Although the reef may reduce the impact of a tsunami, the scale of impact depends on what caused the tsunami, how far away the event is and where it is in relation to our city.

There may be only a few hours warning. Even a relatively small tsunami of less than one metre can move with force and cause dangerous rips and currents.



## TSUNAMI WARNING SIGNS

- ✓ You may notice changes such as the water withdrawing or becoming shallow
- ✓ A shaking of the ground in coastal regions may reflect the occurrence of a large undersea earthquake nearby that may generate a tsunami
- ✓ A roaring sound may precede the arrival of a tsunami
- ✓ A tsunami may not be one large wave approaching the coast. It can occur as a series of seemingly quite low, but very powerful waves. The force of the water may be so strong it can carry vehicles, boats, bridges and buildings with it.



# DURING A TSUNAMI

- ✓ Tune into your local radio station and heed warnings and advice (list of radio stations available on page 10)
- ✓ Follow local instructions and take immediate action, no matter how small the tsunami may be
- ✓ If you are at the beach, immediately move inland or to higher ground. Get out of the water and away from the coast
- ✓ If you are in your boat and your boat is in deep water and offshore, maintain your position
- ✓ If your boat is berthed or in shallow water, secure your vessel and move inland or to higher ground
- ✓ If you are on the coast and cannot move inland, seek shelter in the upper levels of a stable building
- ✓ Stay where you are if your location is on high ground.

# AFTER A TSUNAMI

- ✓ In an emergency dial 000
- ✓ Tune into your local radio station and heed warnings and advice (list of radio stations is available on page 10)
- ✓ Stay at your high ground location until advised it is safe to leave. More waves are likely to follow the first and it may take time for this to happen
- ✓ Beware of damaged power lines, roads, bridges and fallen trees
- ✓ Heed all warnings and do not go sightseeing. Instead, check and offer help to neighbours, friends and family
- ✓ Turn off electricity, gas or water supplies and check whether they have been affected
- ✓ Wear rubber boots or rubber-soled shoes and rubber or leather gloves
- ✓ Check for cracks and damage to your building's floors, walls and ceilings. Evacuate if the building is badly damaged
- ✓ Treat all items exposed to water as contaminated
- ✓ Dispose of rubbish, wash mud, dirt and debris as soon as you can
- ✓ Wash hands thoroughly after handling anything that has been in contact with water
- ✓ Follow any instructions for treating water. Conserve food and water as supplies may be interrupted.

## DO NOT STAY TO WATCH THE TSUNAMI!

CALL 1300 TSUNAMI FOR LATEST WARNING INFORMATION.



# LANDSLIDES

A landslide is the movement of rock, debris or earth down a slope. Landslides result from the failure of the materials which make up the hill slope and are driven by the force of gravity. Landslides are known also as landslips, slumps or slope failure.

Landslides can be caused by earthquakes or volcanic activity, but in Queensland they are generally caused by heavy rain.

The rain saturates the soil on a hillside often where there has been human activity (e.g. construction where trees and plants have been removed), past the point where any remaining vegetation can't support the soil's weight against the force of gravity. The top saturated layer of soil then slips down the hill - taking whatever is on the land with it.

Be aware of the area you live in - is it close to a hillslope, cliff or steep rocky area? Is there a history of landslides? If you live in such an area and there has been a period of heavy rain, you may be at risk of a landslide. Make sure your household Emergency Plan includes this hazard.





# BE AWARE

You may notice changes in the yard or house such as:

- ✓ Leaning trees, slumping earth, movement in fences or trees, cracks in paths
- ✓ Outside walls start to pull away from the building, new cracks appear in plaster, tile, brick or foundations, doors or windows stick for the first time
- ✓ You may hear a rumbling sound which increases as the landslip nears. A trickle of falling mud or debris may precede a larger slip
- ✓ Emergency services may have little or no warning of a landslide.

## DID YOU KNOW?

Landslides usually occur from rainfall and friction. Stay away from the landslide area and check for injured people. Alert emergency services as soon as possible.

## DURING A LANDSLIDE

- ✓ Tune into your local radio station and heed warnings and advice (list of radio stations available on page 10)
- ✓ If it is safe to do so, leave the area and go quickly to your agreed safer location
- ✓ Advise neighbours and emergency services of the slip threat
- ✓ If you cannot leave, move to a second storey if there is one. Otherwise curl into a tight ball and protect your head
- ✓ Follow any instructions from emergency services.

## AFTER A LANDSLIDE

- ✓ Tune into your local radio station and heed warnings and advice (list of radio stations available on page 10)
- ✓ Stay away from the slip area - there may be danger of additional slips
- ✓ Watch for flooding, which may occur after a landslide or debris flow
- ✓ Check for injured and trapped people near the slip and alert emergency services
- ✓ Look for and report broken utility lines, damaged roads to the appropriate organisations (list of important contacts available on page 54).







# IMPORTANT CONTACTS

Service	Contact
Police, Fire and Ambulance (emergency calls only)	000
Policelink (non life-threatening calls)	13 14 44
SES	13 25 00 <a href="http://ses.qld.gov.au">ses.qld.gov.au</a>
Townsville City Council	13 48 10 <a href="http://townsville.qld.gov.au">townsville.qld.gov.au</a>
Townsville Local Disaster Management Group (TLDMG)	<a href="http://disaster.townsville.qld.gov.au">disaster.townsville.qld.gov.au</a>
Bureau of Meteorology Weather and warnings Cyclone warnings	<a href="http://bom.gov.au">bom.gov.au</a> 1300 659 219 1300 659 212
Bushfire warnings	<a href="http://qfes.qld.gov.au">qfes.qld.gov.au</a>
Road Conditions	Contact
QLD Traffic	<a href="http://qldtraffic.qld.gov.au">qldtraffic.qld.gov.au</a>
Department of Transport & Main Roads	13 19 40
Townsville City Council <i>Where possible, Council will provide an update on local road conditions, these can be found on Council's Emergency Management and Disaster Dashboard.</i>	<a href="http://townsville.qld.gov.au">townsville.qld.gov.au</a> <a href="http://disaster.townsville.qld.gov.au">disaster.townsville.qld.gov.au</a>
Electricity and Gas	Contact
Ergon Energy For emergencies To report a fault	<a href="http://ergon.com.au">ergon.com.au</a> 13 16 70 13 22 96
Origin Energy Natural and LPG gas emergencies ( <i>leaks only</i> )	1800 808 526
Telecommunications	Contact
Optus Faults	13 13 44
Telstra Faults	13 22 03





Other	Contact
Australian Government Disaster Recovery Assistance Line	180 22 66 <a href="http://disasterassist.gov.au">disasterassist.gov.au</a>
Townsville Hospital and Health Service	07 4433 1111
Translating and Interpreting Service	13 14 50
Centrelink <i>Department of Communities</i> Community Recovery Department of Housing	<a href="http://humanservices.gov.au">humanservices.gov.au</a> 1800 173 349 1800 806 197
GIVIT (Emergency donations)	<a href="http://givit.org.au">givit.org.au</a>
Legal Aid <i>Assistance with insurance claims</i>	1300 651 188 <a href="http://legaid.qld.gov.au">legaid.qld.gov.au</a>
Lifeline – Counselling	13 11 14 <a href="http://lifeline.org.au">lifeline.org.au</a>
Wildlife Care NQ	0414 717 374
Queensland Disaster Management Services	<a href="http://disaster.qld.gov.au">disaster.qld.gov.au</a>
Red Cross - North QLD Volunteer Services	07 4759 6111 <a href="http://redcross.org.au">redcross.org.au</a>
RSPCA	1300 264 625 <a href="http://rspcaqld.org.au">rspcaqld.org.au</a>
Volunteering North Queensland	07 4725 5990
Volunteer Community Recovery Coordination Group <i>Pre and Post Disaster Volunteering</i>	07 4725 5990



