

# TOWNSVILLE STORM TIDE EVACUATION GUIDE

This guide is used to inform residents of predicted storm tide inundation associated with a tropical cyclone.

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





## MESSAGE FROM THE MAYOR

North Queensland is one of the most cyclone-prone areas in Australia. Like many of our neighbouring coastal communities, natural disasters are a price Townsville residents pay for living in paradise.

Along the coast, storm tides can occur as a result of a cyclone. Cyclone threats in our region could result in an evacuation of particular areas in our city. We will only order an evacuation if a storm tide threatens to inundate developed areas.

This Storm Tide Evacuation Guide is to help you, as a resident, prepare for cyclone events that result in an evacuation. If you are not required to evacuate, your home is often the safest place for you. Before a cyclone event you will need to make sure that you are secure in your home. If you feel you are not secure in your home please make alternative arrangements with friends and family.

If you are told you have to evacuate, you should make your way to family or friends outside the threatened zone. Townsville's Local Disaster Management Group has shelters available for community members who have no other alternative. Remember that these shelters are intended for use by those identified as being in the storm tide area. Shelters unfortunately do not have the capacity to cater for people with special needs; and there are no support services such as bedding, food, drink or material aid.

I urge you to read the information provided in this booklet, view the detailed 'by suburb' maps on Council's website and understand the evacuation procedures. In the event of a cyclone or storm tide, take immediate action by following the checklists included in this booklet.

Regards,

Cr Jenny Hill

## WHAT IS A STORM TIDE?

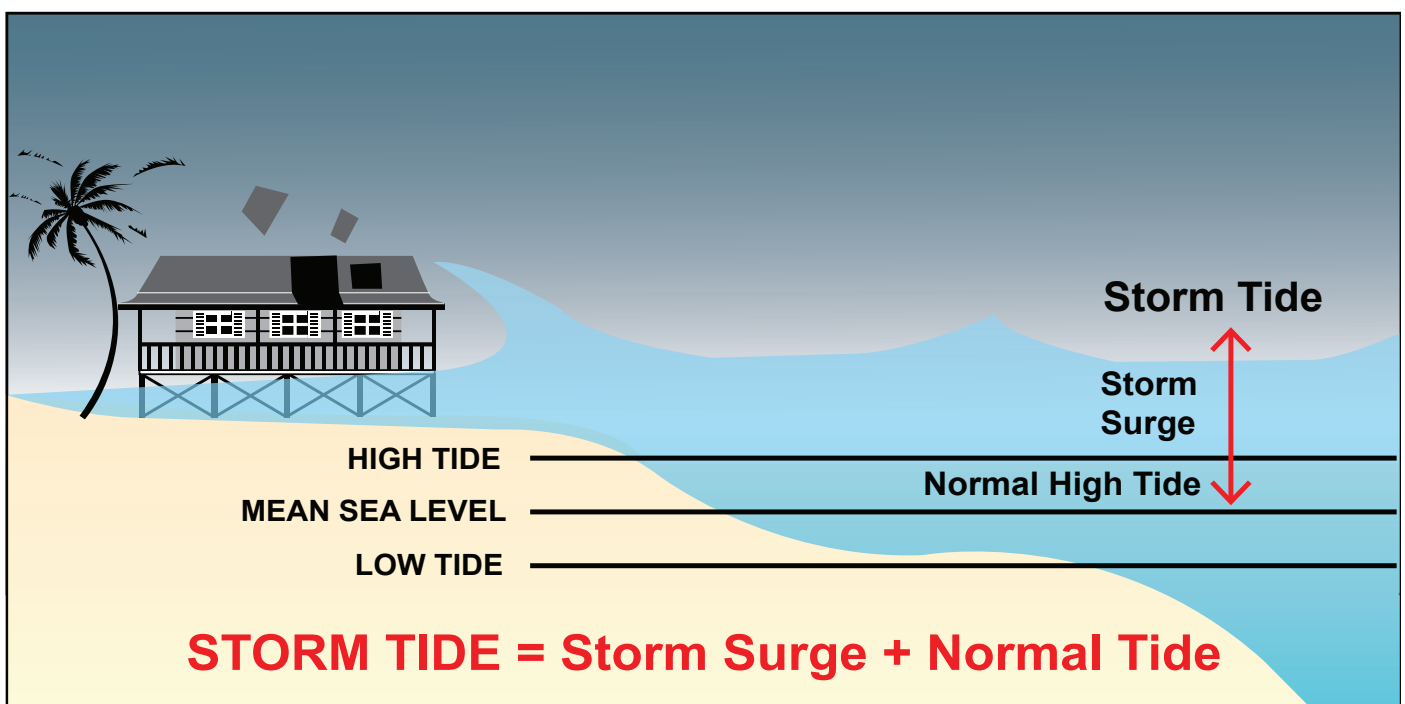
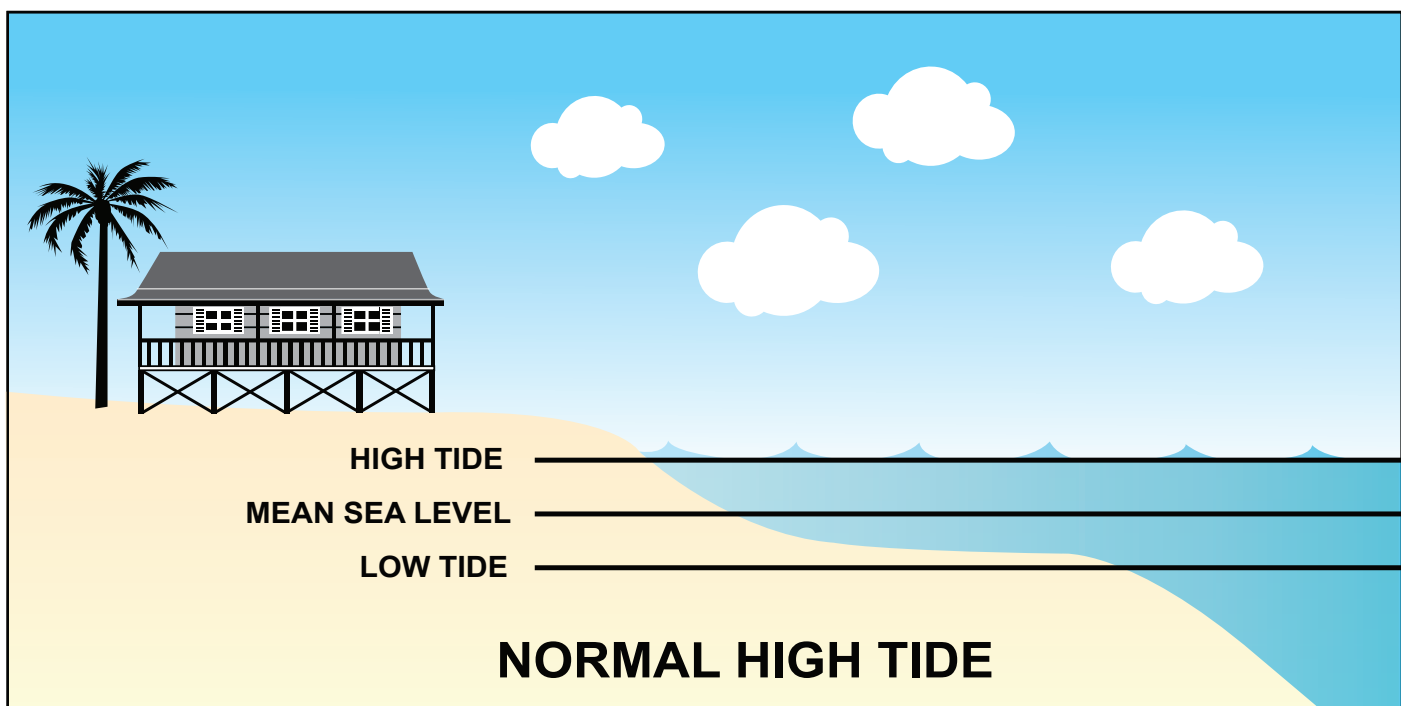
A storm tide is a rise above the tidal water level along a shore that is associated with a tropical cyclone. Storm tides will be accompanied by gale force winds, with successive waves of seawater rapidly moving across the foreshore.

When a cyclone forms over open waters the strong winds pushing the water, combined with the low atmospheric pressure in the eye of the cyclone cause the level of the sea to rise, which results in the formation of large waves.

If this happens away from land, the water can escape and move freely away from the building storm. As the cyclone moves towards land and the depth of the water becomes shallower, the ever-increasing wall of water does not have a chance to flow away. These waves may inundate land and cause destructive damage to anything in its path. Trees, building material and other debris may be carried along by the storm tide. Any evacuation must occur prior to the storm tide event.

Please note that inundation by storm tide is not comparable with riverine flooding.

A storm tide event should not be confused with a tsunami. A tsunami is a series of waves generated by a sudden upward movement of the ocean floor, normally due to earthquakes and is NOT related to a cyclonic event.





## WHAT IS A CYCLONE?

A tropical cyclone is a violent collection of whirling winds and dense cloud mass. Winds spiral clockwise around a central eye of exceptionally low pressure. With winds reaching speeds in excess of 200km/h, cyclones can be extremely dangerous.

## WHAT ARE CYCLONE CATEGORIES?

The severity of a tropical cyclone is measured by a category determined by the Bureau of Meteorology (BOM).

Cyclone categories range from 1 for weaker cyclones to 5 for the most severe cyclones. This helps the community assess the severity of the cyclone and take appropriate actions.

The category of a cyclone refers to the severity of winds in a maximum wind zone. You may not experience the effects of the maximum winds. Damage experienced may vary according to location factors.

N.B. The category of a cyclone does not refer to an associated storm tide. Warnings for a storm tide will be issued separately by the Bureau of Meteorology.

CATEGORY	CLASSIFICATION	STRONGEST GUST (KM/H)	TYPICAL EFFECTS
1	Tropical cyclone	90-125 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 destroyed. Power failure likely.
4	Severe tropical cyclone	225-279 km/h Very destructive winds	Significant roofing and structural damage. Many caravans 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



## CYCLONE WATCH

A cyclone watch is issued at six (6) hourly intervals if a cyclone or potential cyclone exists, and there is a likelihood gale force winds or stronger will affect coastal or island communities within the next 24 to 48 hours.

### Cyclone Warning

A cyclone warning is issued at three (3) hourly intervals if gale force winds or stronger are expected to affect coastal or island communities within the next 24 hours. Warnings are updated **every hour** when a cyclone is close to landfall. The Standard Emergency Warning Signal (SEWS) may be used with some cyclone warnings.

### Severe Weather Warning

A severe weather warning may be issued if the system is no longer a cyclone but communities are still being threatened by damaging winds, flooding rains or pounding seas.

## HOW TO USE THIS GUIDE

This Storm Tide Evacuation Guide was developed to assist residents in determining if their properties are at risk of inundation from a storm tide.

As a local resident, Council recommends that you:

1. Review the evacuation maps in this guide and identify the location of your property. **Visit Council's website to view more detailed mapping, with evacuation zones depicted by street and suburb.**
2. Consider the tips contained in this guide for preparing a household emergency plan and emergency kit.
3. Familiarise yourself with the local emergency contact details and radio station information.

If your residence is located in a coloured evacuation zone, your property may be inundated in a storm tide event. The height of the predicted storm tide during the disaster event will determine which zones will be affected.

N.B. – If you are not located in a coloured evacuation zone, your suburb will not be shown on the detailed maps located on Council's website.

## EVACUATION ZONES

EVACUATION ZONE	RISK OF INUNDATION	LEVEL OF INUNDATION	
		METRES ABOVE HAT	METRES ABOVE AHD
Red	Extreme	1.0m	Less than 3.0m
Orange	High	2.0m	3.0m – 4.0m
Yellow	Medium	2.0m – 4.0m	4.0m – 6.0m
Blue	Low	4.0m and above	6.0m – 8.0m

## 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 advice regarding storm tide will refer to a height (in metres) above HAT. Council will use this BOM information to advise which zones may be affected.

## WHAT IS AHD?

AHD stands for Australian Height Datum, which is the altitude measurement for land-based mapping. In 1971, mean sea level was assigned the value of 0.000m elevation based on observations recorded by thirty tide gauges around the coast of Australia for the period 1966–1968. The resulting datum surface, with minor modifications in two (2) metropolitan areas, has been termed the Australian Height Datum (AHD) and was adopted by the National Mapping Council in 1971 as the datum to which all vertical control mapping is to be referred. Elevations quoted using this datum are normally followed with the acronym (AHD).

# WHAT IF I AM IN AN EVACUATION ZONE?

## 1. Prepare a documented household emergency plan.

### EMERGENCY PLAN ACTIVATION

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Contact all householders      | <input type="checkbox"/> Tune into warnings   | <input type="checkbox"/> Check on neighbours     |
| <input type="checkbox"/> Shelter in our strongest room | <input type="checkbox"/> Locate Emergency Kit | <input type="checkbox"/> Make final preparations |

### EVACUATION DESTINATION

Place to meet:	Address:
Phone number:	Email address:

### OUT OF TOWN EMERGENCY CONTACT

Name:	Address:
Phone number:	Email address:

### MAIN SERVICE SUPPLIES LOCATION

### SWITCH OFF

Electricity:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Gas:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Water:	<input type="checkbox"/> Yes	<input type="checkbox"/> No

### VEHICLE REGISTRATION

### OUR STRONGEST ROOM IS

### PETS

Name:	Description:
Name:	Description:

### EVACUATION CHECKLIST

#### Prior to evacuation:

- |   |  |
|---|--|
| <input type="checkbox"/> Ensure vehicle is full of fuel | <input type="checkbox"/> Know the preferred evacuation routes      |
| <input type="checkbox"/> Ensure you have cash on hand   | <input type="checkbox"/> Know the location of our evacuation place |

#### When evacuating:

- |   |   |
|---|---|
| <input type="checkbox"/> Pack Emergency Kit, and a copy of our Emergency Plan | <input type="checkbox"/> Turn off mains supply for power, gas and water                                   |
| <input type="checkbox"/> Contact our out of town emergency contact            | <input type="checkbox"/> Secure and lock our home and proceed to our predetermined evacuation destination |

#### If flooding or storm surge is imminent:

- |                                       |  |
|---------------------------------------|--|
| <input type="checkbox"/> Sandbag home | <input type="checkbox"/> Store electrical items off the ground |
|---------------------------------------|--|











## 2. Prepare an emergency kit.

### Special Items

- ☐ Baby needs such as nappies and bottles
- ☐ Medication and scripts
- ☐ Contact lenses or prescription glasses
- ☐ Games, books and puzzles for entertainment
- ☐ Esky and ice
- ☐ Ensure you have enough cash on hand to last one week
- ☐ Fuel for car
- ☐ Pet food and supplies

### In a waterproof wallet

- ☐ Will and insurance policies
- ☐ Passports and immunisation records
- ☐ Bank account and credit card numbers
- ☐ Inventory of household contents
- ☐ Important phone numbers
- ☐ Family records such as birth and marriage certificates
- ☐ USB with the above documents saved electronically

Use this checklist when packing and updating your emergency kit.

### Water

- ☐ Water in plastic containers
- ☐ A three day supply; minimum 4L of water per person, per day

### Food

- ☐ Minimum three day supply
- ☐ Ready to eat canned meats, fruit and vegetables
- ☐ Canned juices, milk and soups
- ☐ Staples such as sugar, pepper, salt and high energy foods such as peanut butter, honey, jams and muesli bars
- ☐ Vitamins
- ☐ Food for babies, children, elderly persons or any special dietary requirements
- ☐ Comfort foods such as biscuits, lollies, cereals, coffee and tea

### Tools and supplies

- ☐ Cooking facilities such as gas BBQ/camping stove
- ☐ Plates, bowls, cups, utensils (paper or plastic plates don't require washing)
- ☐ Battery operated radio
- ☐ Battery operated torches
- ☐ Spare batteries
- ☐ Utility knife
- ☐ Toilet paper
- ☐ Soap/detergent
- ☐ Personal hygiene items
- ☐ Duct and masking tape
- ☐ Matches in waterproof container
- ☐ Disinfectant
- ☐ Mobile phone and charger
- ☐ Insect repellent and sunscreen

- ☐ Tools for temporary repairs
- ☐ Rope and chains for securing outdoor items
- ☐ Extension cords and power boards
- ☐ Plastic sheeting or tarps

### First aid kit

- ☐ Replace any used contents

### Clothing and bedding

- ☐ At least one complete change of clothing and footwear per person
- ☐ Long sleeve shirts and trousers
- ☐ Sturdy shoes
- ☐ Rain gear
- ☐ Blankets or sleeping bags
- ☐ Hats and work gloves
- ☐ Sunglasses

## 3. Consider your shelter and evacuation options (including major transportation routes).

### Shelter and Evacuation Options

1. Seek shelter outside of Townsville.
2. Seek shelter with family and/or friends located outside the risk area.
3. Seek shelter at an accommodation facility (e.g. motel).
4. Seek shelter at an identified Public Cyclone Shelter or Place of Refuge.

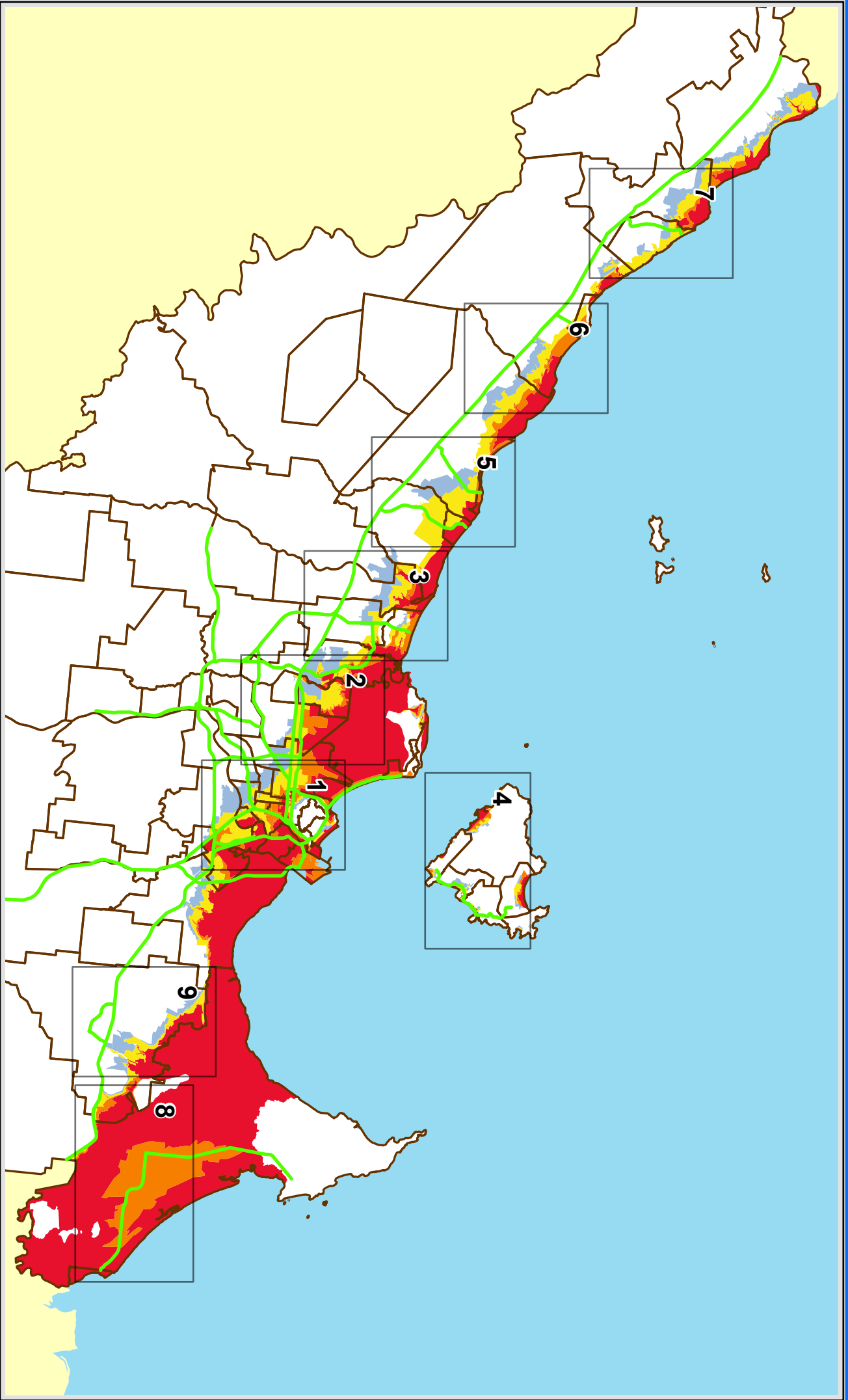
If you are self-evacuating and will not be staying within an identified Shelter, please register your location via the "Register, Find, Reunite" system available on the Australian Red Cross website. (N.B. this will be activated at the time of the pending disaster).

## 4. Tune into warnings. Authorities will advise which zones need to evacuate.

### Emergency Alert System

Townsville City Council utilises the Queensland Government's "Emergency Alert System". The "Emergency Alert System" is the national telephone based emergency warning system that sends voice messages to landlines (based on the location of the handset) and text messages to mobile phones (based on the location of the mobile phone).

**N.B. Authorities will advise of evacuations by the coloured zones, NOT streets or suburbs.**



**Evacuation Zones**

**Height above Highest Astronomical Tide (HAT)**

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

- Evacuation Routes
- Detail Maps
- Suburbs

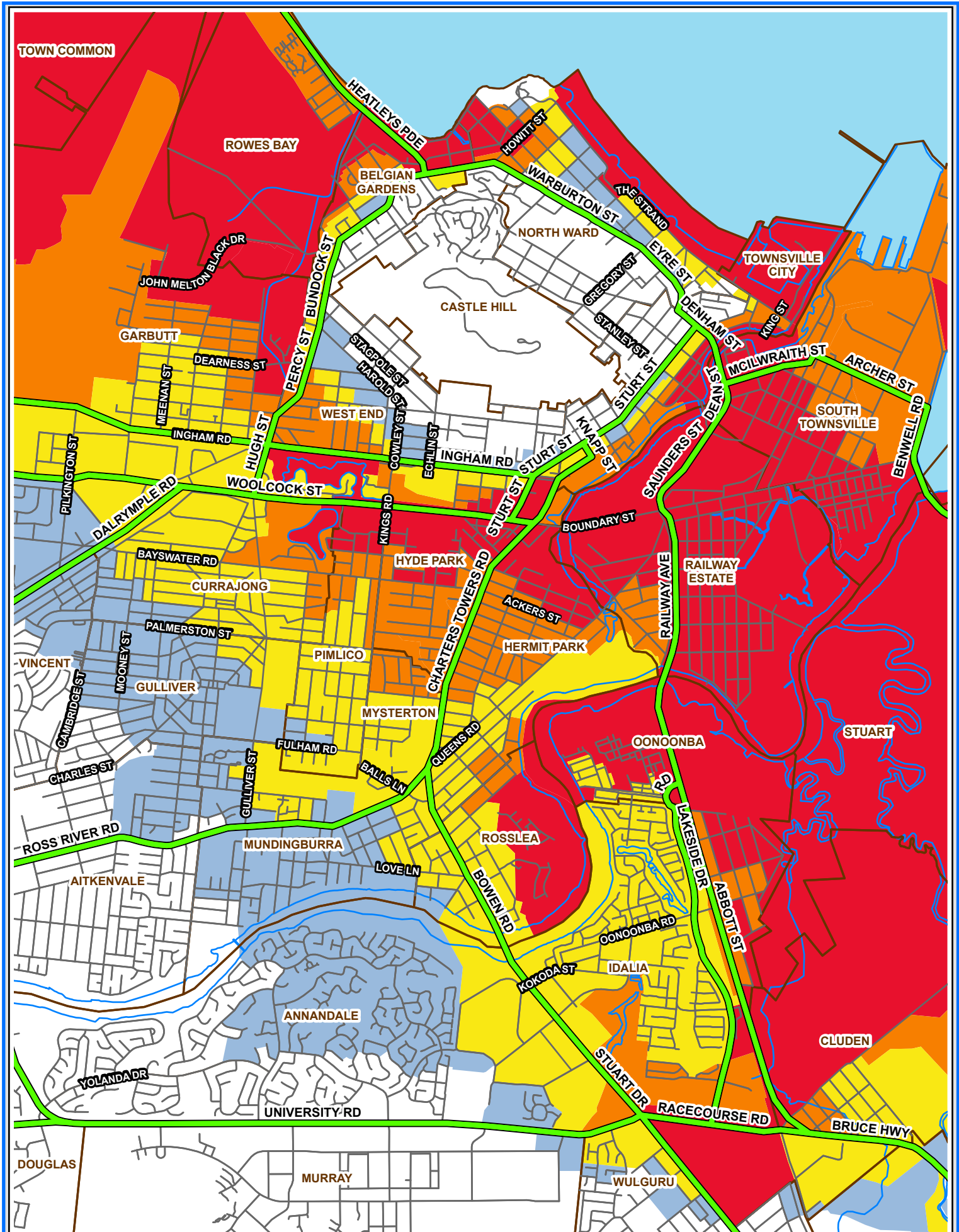
**TOWNSVILLE STORM TIDE  
EVACUATION ZONES**



**DISCLAIMER**  
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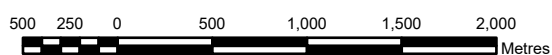




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## TOWNSVILLE STORM TIDE EVACUATION ZONES



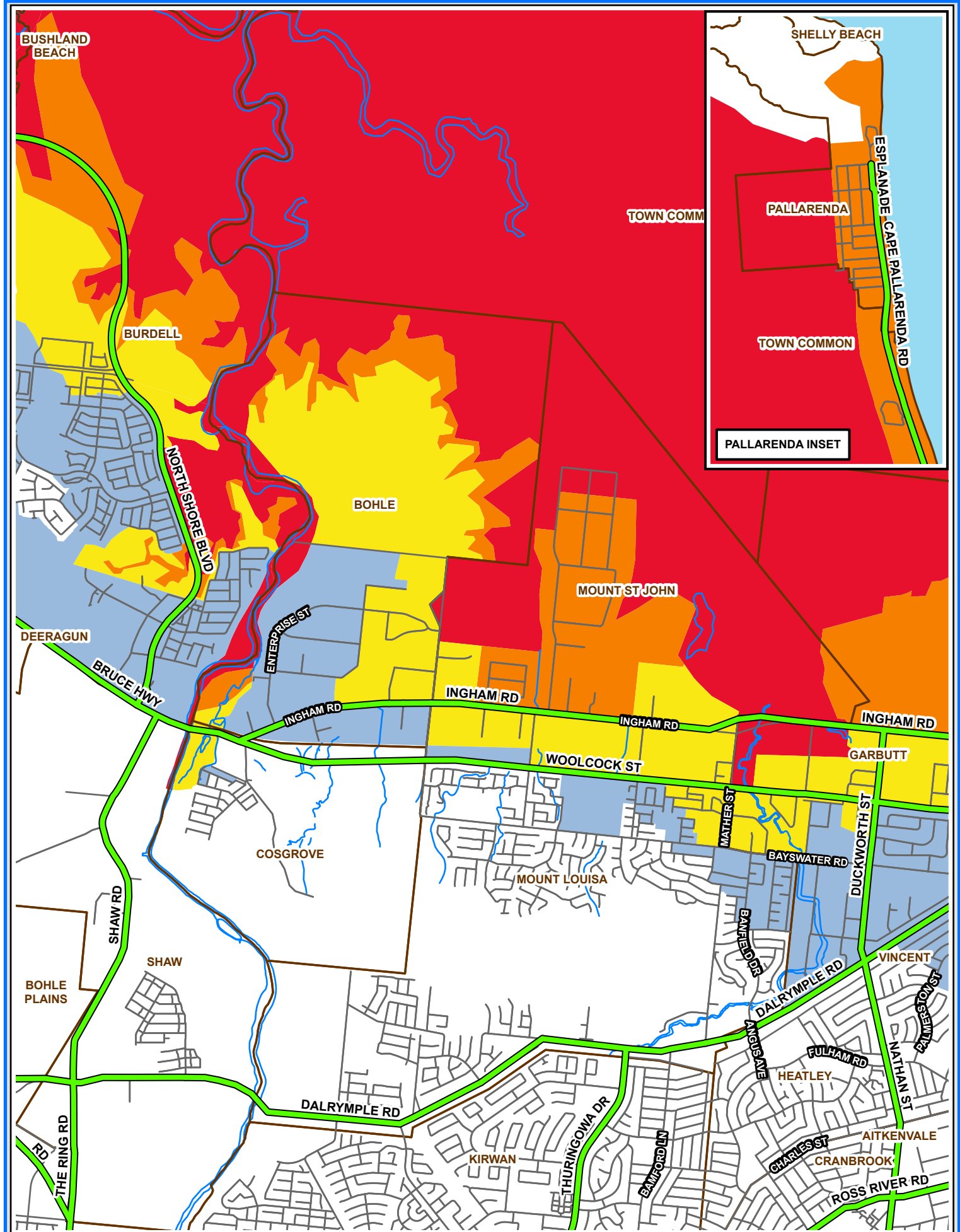
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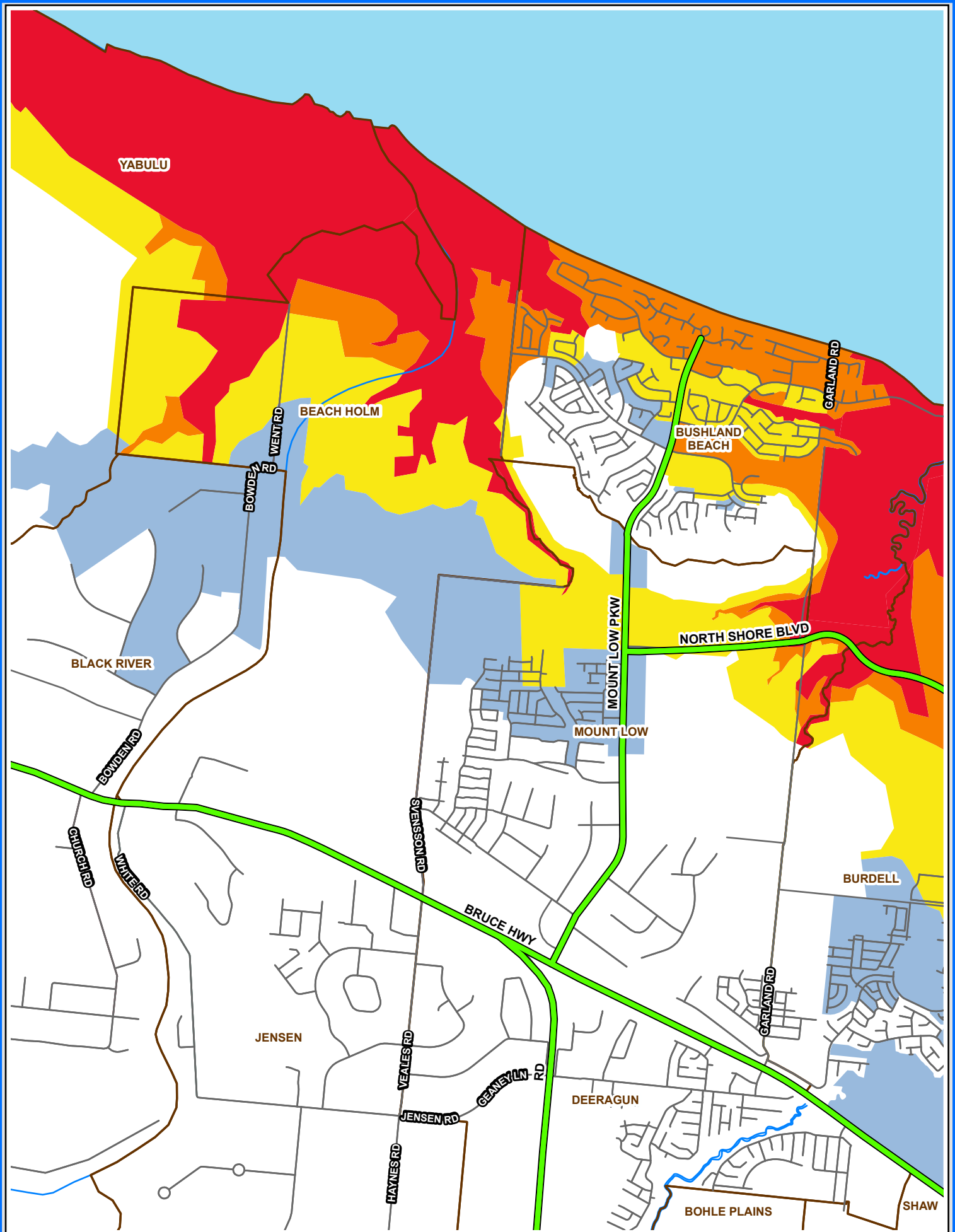
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500 250 0 500 1,000 1,500 2,000 Metres



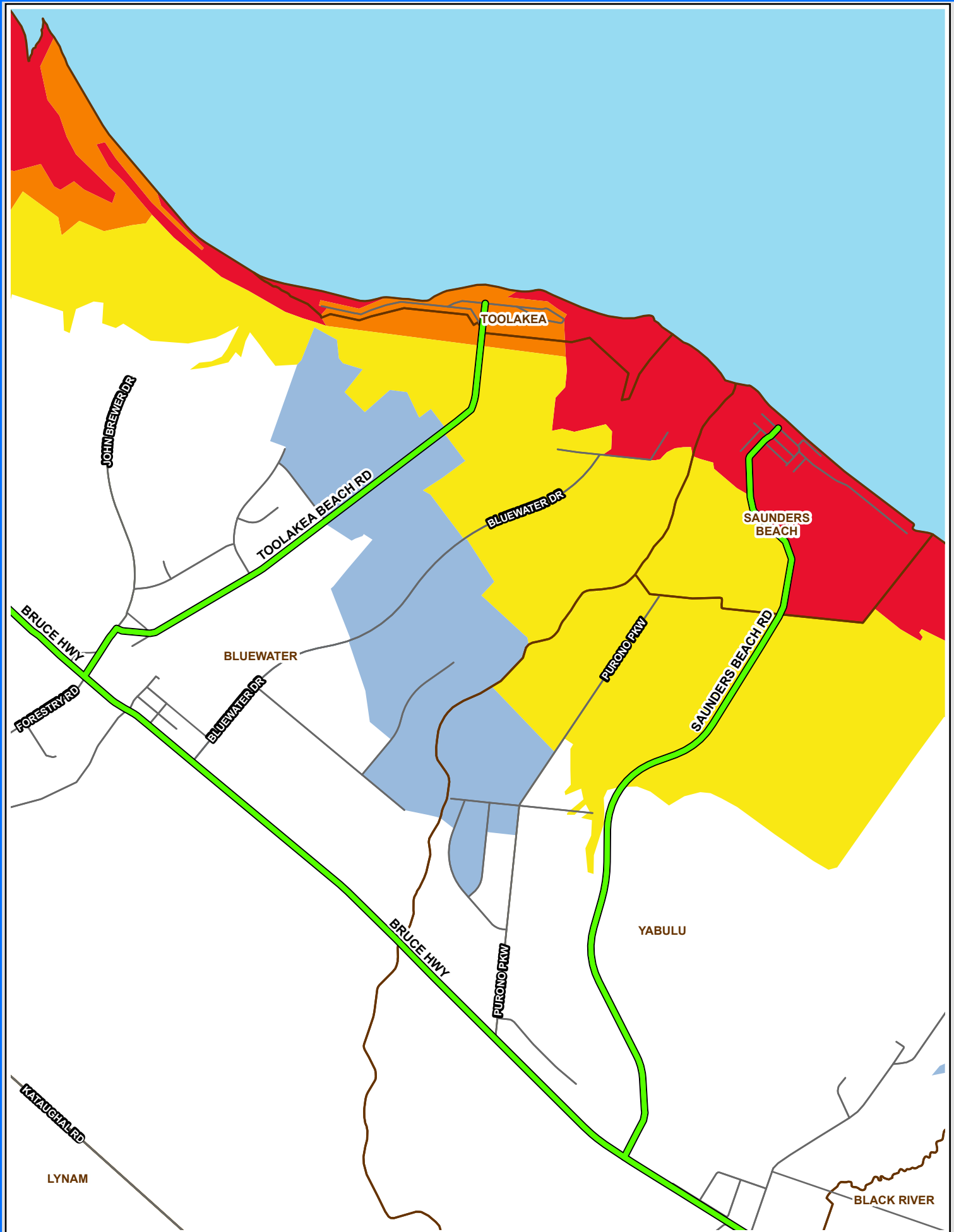
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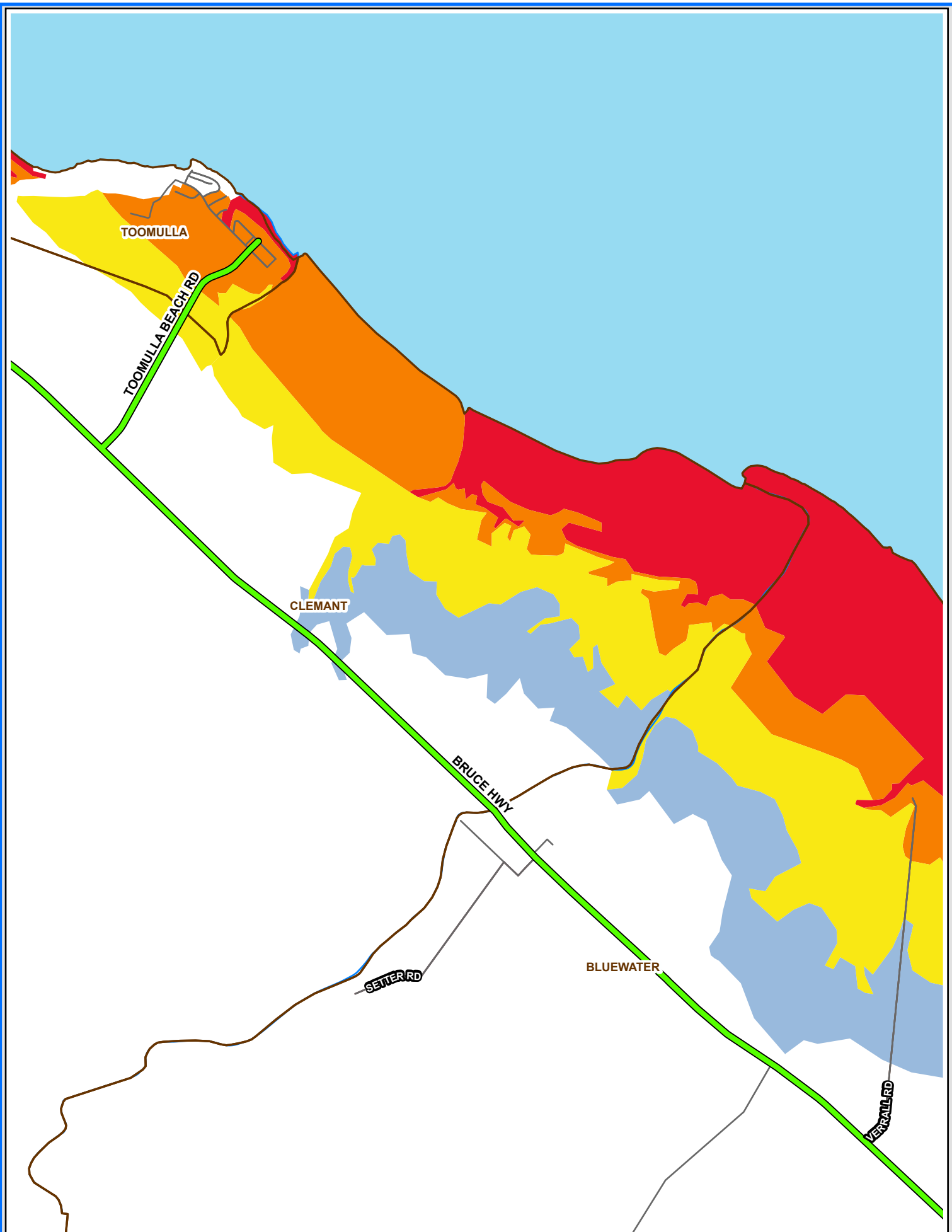
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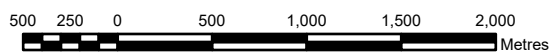




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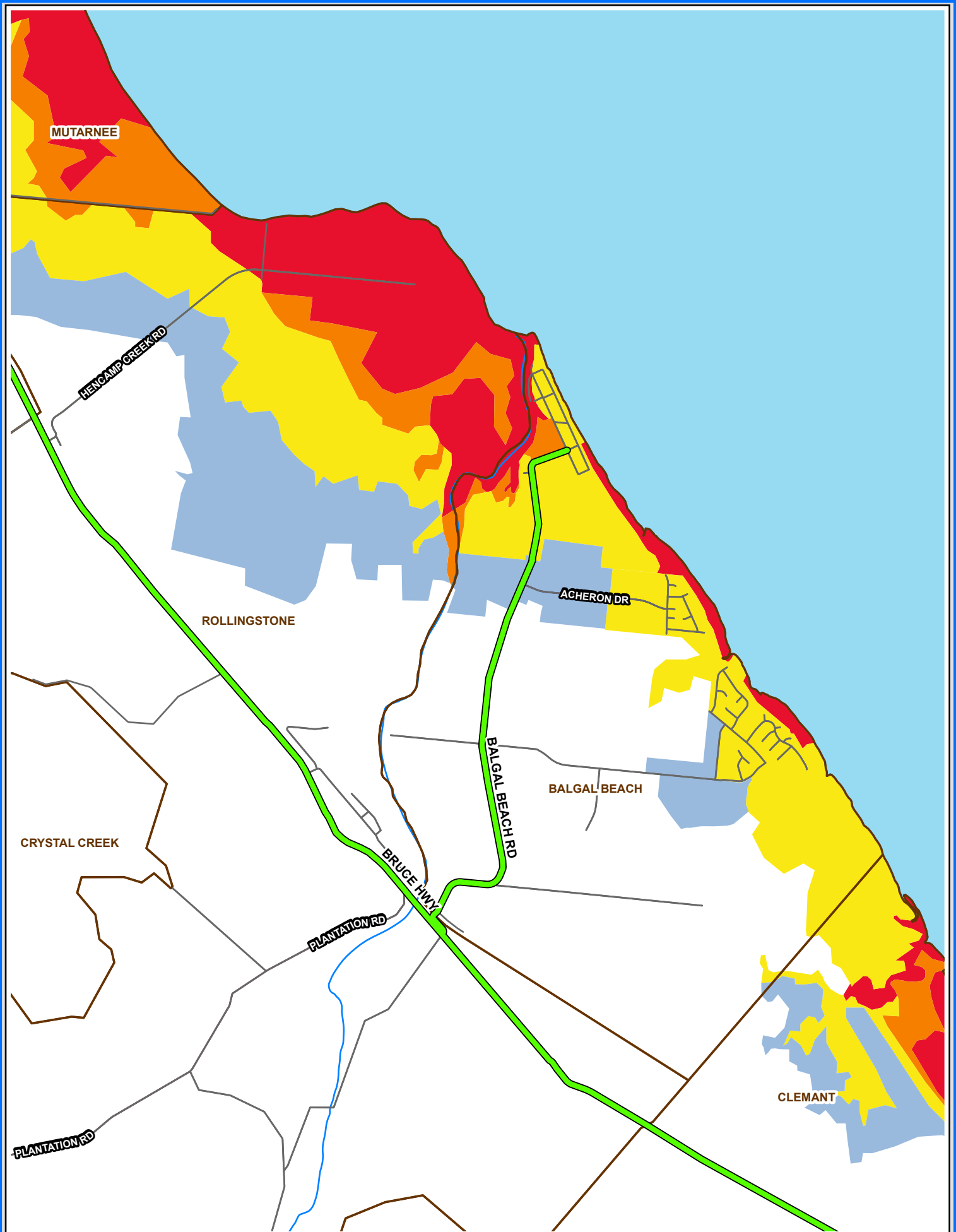
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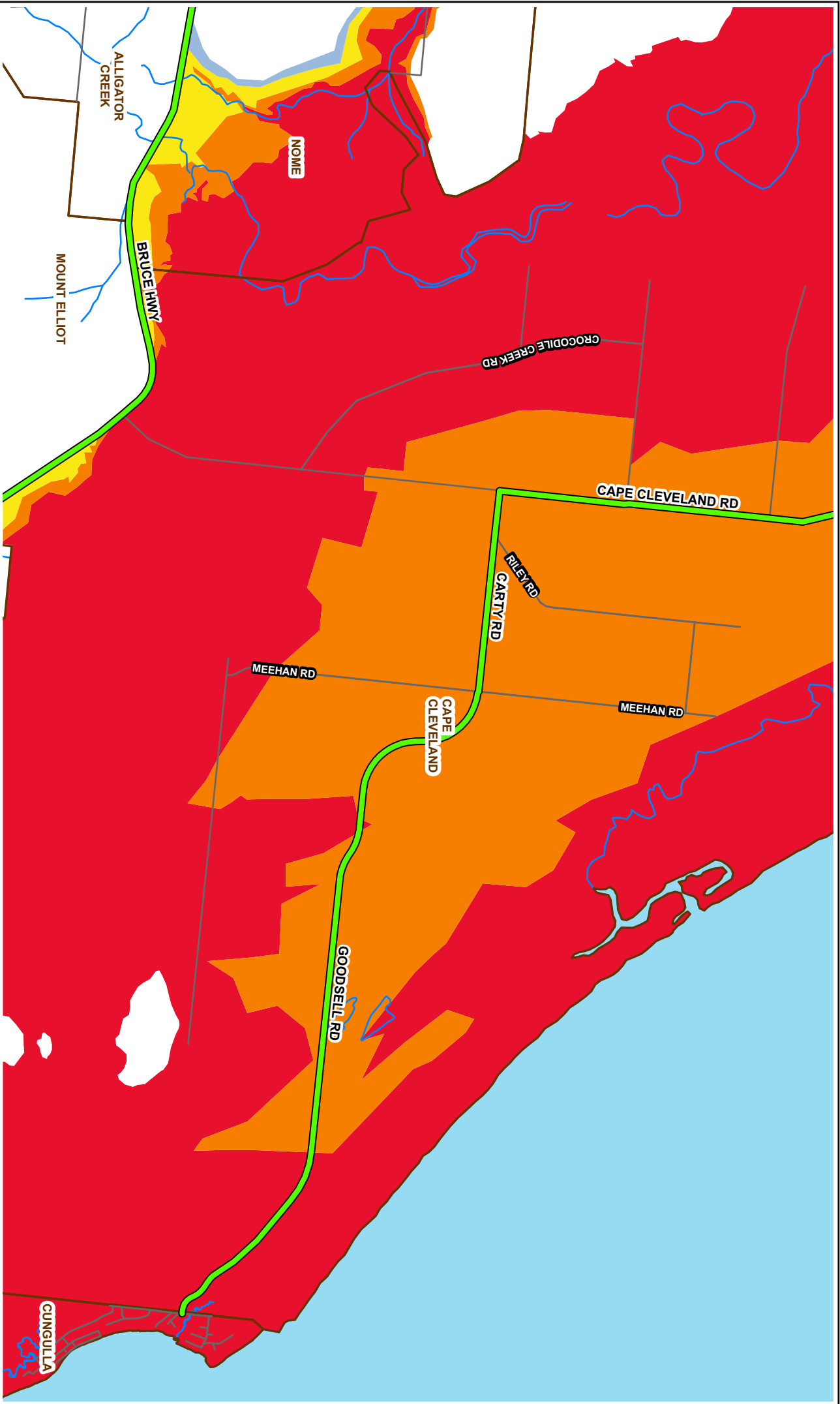


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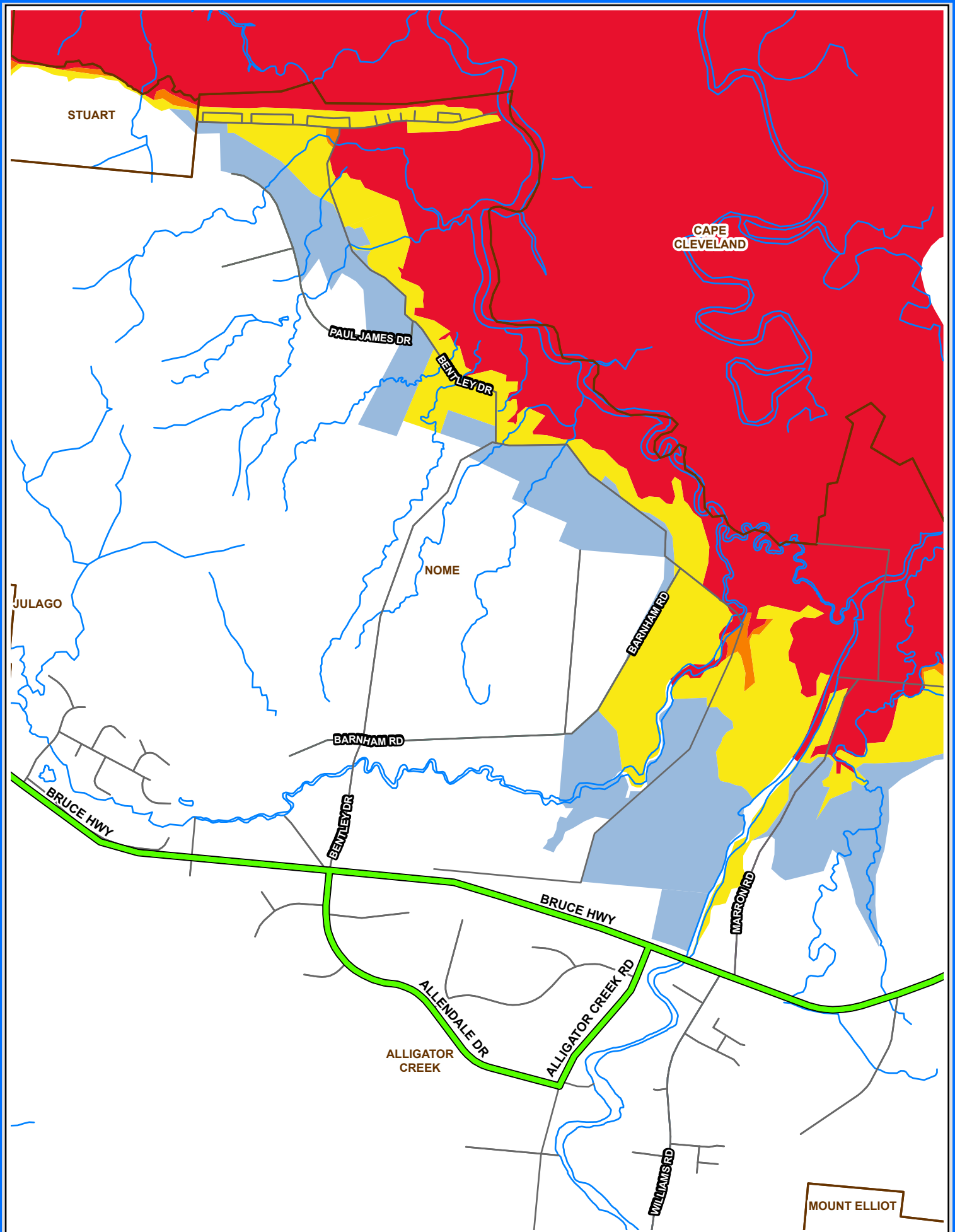
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## TOWNSVILLE EMERGENCY CONTACTS

SERVICE	NUMBER
Emergency Calls	000
State Emergency Service (SES) <i>Tarping/branches down</i>	13 25 00
Queensland Police Service Policelink <i>(non life-threatening calls)</i>	000 13 14 44
Queensland Ambulance Service Queensland Ambulance Service <i>(non life-threatening calls)</i>	000 13 12 33
Queensland Fire and Emergency Services	000
Townsville City Council <i>Emergency after hours, flood information, dengue outbreaks, sun safety information</i>	13 48 10
Emergency Management and Disaster Dashboard	13 22 96
Ergon Energy <i>Loss of supply and emergencies</i>	13 16 70
Origin Energy <i>Natural and LPG Gas emergencies (leaks only)</i>	1800 808 526
North Regional Gas <i>LPG Gas emergencies</i>	4774 5111
Telstra	13 22 03
Optus	13 13 44
Townsville Hospital and Health Service	4433 1111
Department of Transport and Main Roads <i>Road closures</i>	13 19 40
Translating and Interpreting Service	13 14 50
Veterinary Emergency Centre and Hospital	4781 3600

## TUNE INTO WARNINGS

Tune into your local radio station for the latest emergency information.

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

## WEBSITE

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

## SOCIAL MEDIA

-  Townsville Disaster Information