

# Cyclone Gabrielle Response

13 April 2023





# Te Whakatauākī a Taumata Arowai

Ko te wai ahau, ko ahau te wai.  
He whakaaturanga tātau nō te  
wai.

Ko te ora te wai ko te ora o te  
tangata.

He taonga te wai me tiaki.

Ko wai tātou.

Ko wai tātou.

I am water, water is me.

We are reflections of our  
water.

The health of the water is the  
health of the people.

Water is a treasure that must  
be protected.

We are water.

Water is us.



# What we will cover today

- **Ainslie Ryder, Lead Advisor Response Management**
  - Introduction
  - Our role in an emergency
  - What we observed and next steps
- **Peter Wood, Regulatory Team Leader**
  - What happened and how it affected water supplies
  - What we did – communications and deployment
- **Pātai / questions**
  - Opportunity to answer any further pātai / questions you might have



**Ka hoki kōmuri ngā whakairo kia  
anga whakamua te titiro**

Turn our minds to the past to  
determine our way forward

# What happened?

- Category 3 severe tropical cyclone devastated parts of the North Island.
- National state of emergency declared on 14 February 2023.
- Areas affected included Gisborne and Hawkes Bay.
- Issues that affected water services:
  - Severe flooding, land slips.
  - Loss of electricity, phone service and internet connections.
  - Road closures.





# How it affected water supplies

- Supplies not functional.
- Supplies on boil water notices.
- Supplies on restrictions/conserve water notices.
- Examples:
  - Muriwai – Treatment Plant red-stickered, relying on tankered water from main Auckland supply. Long resolution time.
  - Waipawa – Boil water notice.
  - Napier – Ran on reduced capacity while supply reinstated.
  - Gisborne – Unable to get to Waingake plant to distribute water.
  - Eskdale – Total loss of supply.



# Our role in an emergency

# Our role in a Civil Defence emergency

- At a national level, we work with Civil Defence Emergency Management (CDEM) to coordinate the drinking water response to an emergency.
- We support registered suppliers and response agencies to ensure that people have access to safe drinking water during and after an emergency.
- We also support sector coordination for wastewater and stormwater.
- If required, we can also declare a concurrent drinking water emergency alongside a CDEM emergency.



# Working with others

- Public health / Te Whatu Ora / Te Aka Whai Ora
- Water New Zealand
- National Coordination Centre (NCC)
- Council supplies
- Non-council registered supplies, including Kāinga



# Suppliers' role in an emergency

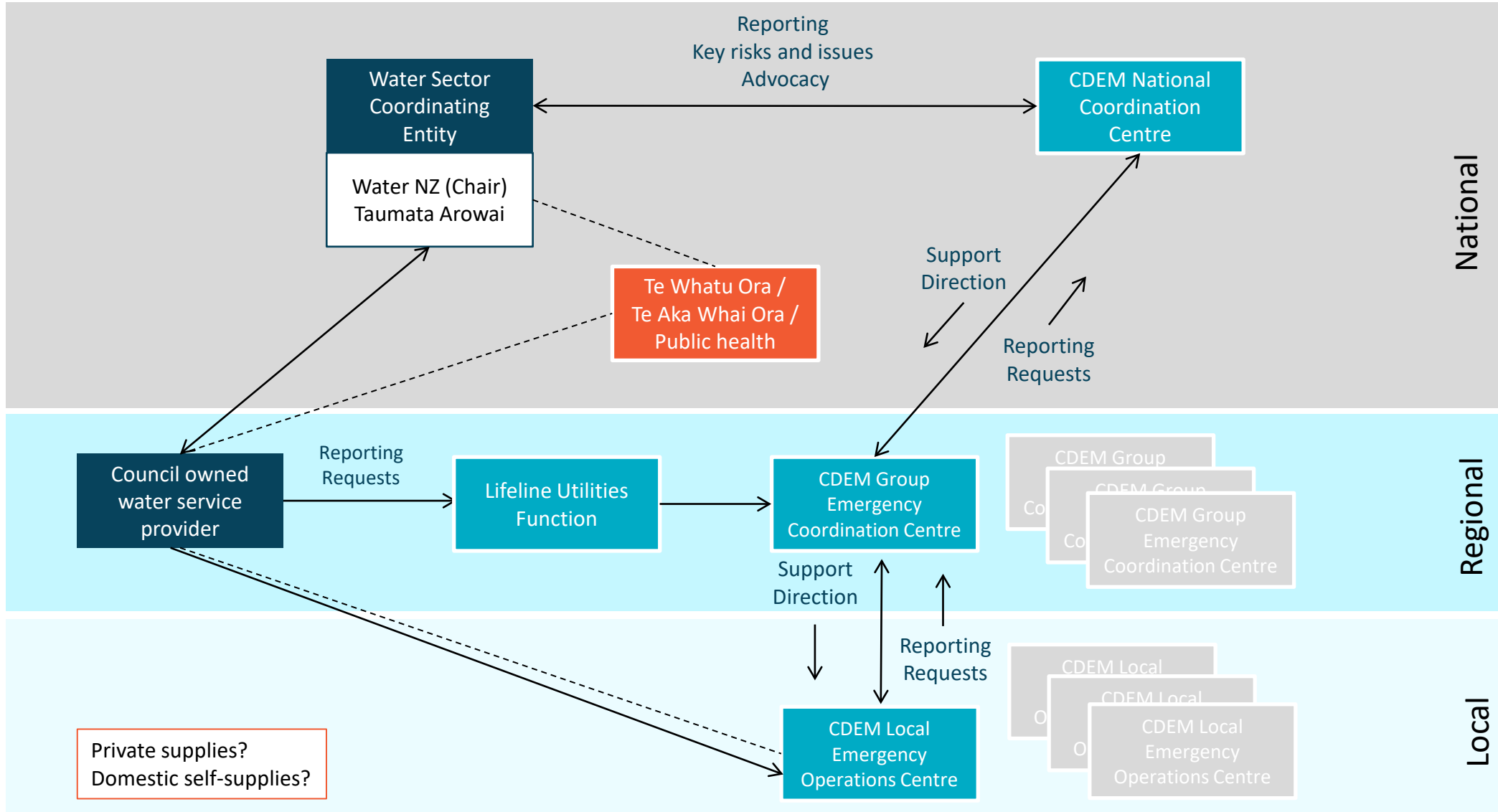
Lifeline Utility as defined under the CDEM Act 2002 – An entity that supplies or distributes water to the inhabitants of a city, district, or other place.

## Duties of lifeline utilities

Every lifeline utility must—

- a) ensure that it is able to function to the fullest possible extent, even though this may be at a reduced level, during and after an emergency:
- b) make available to the Director in writing, on request, its plan for functioning during and after an emergency:
- c) participate in the development of the national CDEM strategy and CDEM plans:
- d) provide, free of charge, any technical advice to any CDEM Group or the Director that may be reasonably required by that Group or the Director:
- e) ensure that any information that is disclosed to the lifeline utility is used by the lifeline utility, or disclosed to another person, only for the purposes of this Act.

# Water sector coordination in the CDEM response framework





# Emergency supply of water

Supply	Regulator	Emergency supply (during State of Emergency)	Who pays?	Emergency supply (outside State of Emergency)	Who pays?
Council	<ul style="list-style-type: none"> <li>Taumata Arowai (Water Services Act)</li> </ul>	<ul style="list-style-type: none"> <li>Civil Defence Emergency Management</li> </ul>	<ul style="list-style-type: none"> <li>Central Government (through CDEM response reimbursement structure)</li> </ul>	<ul style="list-style-type: none"> <li>Territorial Authority (LGA)</li> </ul>	<ul style="list-style-type: none"> <li>Territorial Authority</li> </ul>
Non-council supplies - registered	<ul style="list-style-type: none"> <li>Taumata Arowai (Water Services Act)</li> </ul>	<ul style="list-style-type: none"> <li>Civil Defence Emergency Management</li> </ul>		<ul style="list-style-type: none"> <li>Territorial Authority (LGA)</li> </ul>	<ul style="list-style-type: none"> <li>Supplier</li> </ul>
Non-council supplies - unregistered	<ul style="list-style-type: none"> <li>Territorial Authority (Building Act)</li> <li>Taumata Arowai (Water Services Act) - in relation to duty to provide safe drinking water, full regulation from 2028.</li> </ul>	<ul style="list-style-type: none"> <li>Civil Defence Emergency Management</li> </ul>		<ul style="list-style-type: none"> <li>Territorial Authority (LGA)</li> </ul>	<ul style="list-style-type: none"> <li>Supplier</li> </ul>
Domestic self-supply	<ul style="list-style-type: none"> <li>Territorial Authority (Building Act)</li> <li>Taumata Arowai (Water Services Act) if serious risk to public health due to insufficient quantity of drinking water.</li> </ul>	<ul style="list-style-type: none"> <li>Civil Defence Emergency Management</li> </ul>		<ul style="list-style-type: none"> <li>Territorial Authority (LGA)</li> </ul>	<ul style="list-style-type: none"> <li>Households</li> </ul>



# What we did – communications and deployment

# Website and animated video

**Cyclone Gabrielle** Kati tahuha  
Close

If you live in a community affected by Cyclone Gabrielle and you're concerned about the safety of your drinking water, visit our emergency page to [find out more](#).


Te Mana o te Wai   Guidance and resources   Legislation   Register / Login   

Mō About
Mō te iwi whānui For the public
Mō ngā kaiwhakarato wai For water suppliers
Mō ngā whare pūtaiao For laboratories
He pitopito kōrero News, Events & FAQs

[For the public](#)

## Ngā ohotata Emergencies

Information on what to do in a drinking water incident or emergency to protect the health of you and your whānau.

### Cyclone Gabrielle

Taumata Arowai is currently working with suppliers and communities in areas affected by Cyclone Gabrielle. If you need urgent support, including access to safe drinking water supplies, please contact your [local civil defence group](#).

This fact sheet, [Drinking water supplies following a flood event](#), provides advice on steps you should take to ensure your drinking water is safe.

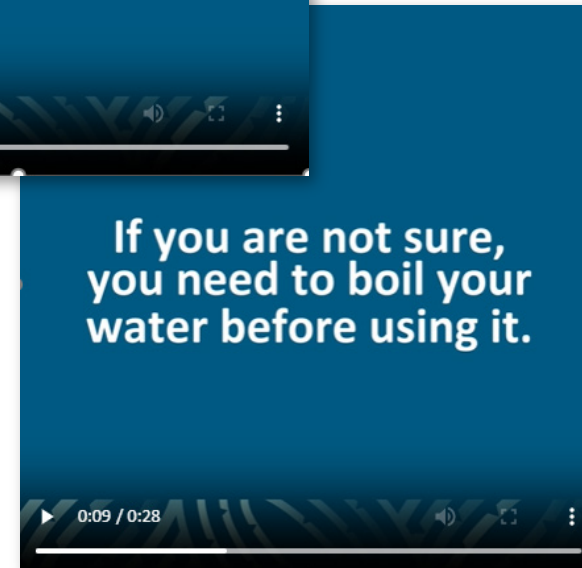
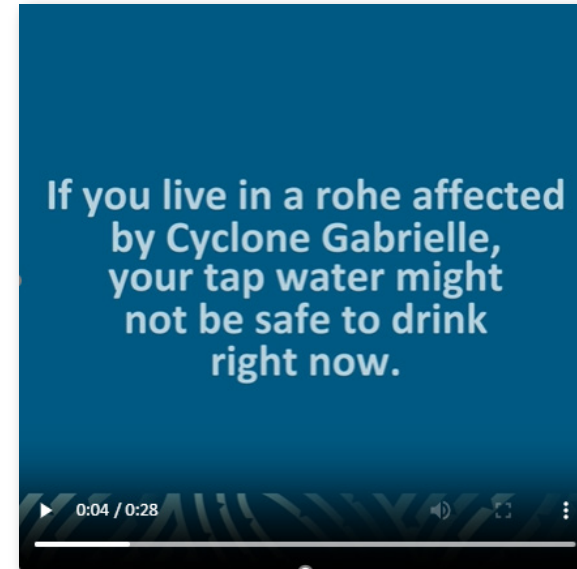
Cyclone Gabrielle boil water video

We've created a short, [animated video](#) that can be shared through social media. It encourages people who aren't sure about the quality of their drinking water to boil it before consuming, until they are confident it's safe again.

Cyclone Gabrielle drinking water safety animated video
Download (MP4, 13 MB)

Are you concerned about your drinking water?

If you are concerned about the safety of your drinking water, the first thing to do is to contact your drinking water supplier. They have a duty of care under the [Water Services Act 2021](#) to ensure the water they supply is safe, to inform consumers if there is a problem and to respond to protect public health and restore safe water supply.






# Emails to suppliers

Emails were sent to suppliers in affected regions:


1. Email sent to Māori stakeholders offering awhi and information about keeping drinking water supplies safe.
2. Email sent to registered suppliers in affected regions.
3. Follow up email.

**1.** 

**Awhi for you to provide safe drinking water**

Ka rere ngā mihi kia koutou e ngā...  
 I hope this email finds you and your community safe and well. We are very aware that marae are hugely impacted by the cyclone. We appreciate your leadership and massive effort to ensure the safety of communities in the aftermath of the cyclone.

As you may know, Taumata Arowai is currently in a difficult time, we want to make sure you and your whānau.

**2.** 

**Demonstrating compliance with Taumata Arowai requirements during extreme weather events**

Kia ora tātou

I hope this email finds you safe and well. Our community was impacted by Cyclone Gabrielle over the past few weeks.

We have been approached by several suppliers asking us to demonstrate compliance with Drinking Water Act requirements cannot be collected during or immediately after events like the cyclone.

We advise that you should not collect samples or test related to demonstrating compliance if there is a risk that this cannot be eliminated or adequately minimised.

**3.** 

**Safe water every day for everyone**

Kia ora tātou

**Thank you for your critical role in ensuring your community has access to safe drinking water during these challenging times.**

Cyclone Gabrielle has had a significant impact on drinking water supplies in areas affected by flooding. Depending on where you are in Aotearoa, your response and recovery from this event will be at various stages.

Last week, our Chief Executive Allan Prangnell emailed you and acknowledged that, in the aftermath of the cyclone, it may be difficult or unsafe to collect samples normally used to show compliance with legislative requirements.

In these situations, we will take a reasonable and pragmatic approach to where you have not been able to collect samples safely.

# Factsheets and public info

Factsheets created for lead response agencies to distribute through their communications channels.

1. Drinking water supplies during a flood event.
2. Advice for drinking water suppliers following a flood event
  - Rainwater
  - Bore water

### Drinking water supplies following a flood event

It's important that water used for drinking, the preparation of food or drinks (including baby formula), brushing teeth, or washing dishes and utensils is safe and free from contamination that could cause illness.

**⚠ DO NOT drink or use:**

- Water contaminated with chemicals or fuel.
- Water contaminated with floodwater or silt.

If you have no access to safe drinking water during a state of emergency, contact your local council's civil defence group. They will arrange access to a safe supply of drinking water.

If you are unsure about the safety of your drinking water use bottled water.

**Flooding and silt can affect the safety of drinking water**

This can be due to changes in the water supply, contamination of stored water, damage to pipes, tanks, pumps, etc or through loss of power supply.

Floodwater and silt can be contaminated with farm run-off, chemicals, and sewage. If this gets into drinking water supplies it can make you sick.

Contaminated drinking water supplies may have harmful microorganisms (bugs or germs) which can cause illness such as diarrhoea and vomiting. Infants, children, older people, and people with low immunity are particularly vulnerable to these illnesses.

These microorganisms can be hard to treat. For example, while chlorine will kill bacteria, protozoa are resistant to chlorine. That's why many water treatment plants use a multi-barrier approach to their treatment process to make sure that all microorganisms are killed.

For bottle-fed infants or people who are immunocompromised, you need to be extra careful to ensure the water is safe to drink.

**You should take extra steps to ensure your drinking water is safe**

- Check with your local council or water supplier to see if any consumer advisories have been issued (like a boil water notice) before drinking or using water from the tap.
- If you don't know where your drinking water comes from or if it's safe to drink, don't drink it. Use bottled water if it's available.
- Water contaminated with floodwater or silt should never be used.
- While boiling water can kill microorganisms (bugs and germs) it will not remove any chemical contamination.

**Wai ora. Tangata ora.  
Healthy water. Healthy people.**

### Advice for drinking water suppliers following a flood event – Rainwater

Your drinking water supplier will let you know what you need to do to protect public health – consumer advisories/Boil Water Notices.

**Emergency treatment effectiveness against microorganisms**

Chlorine / Bleach	Boil
High	High

**Boiling water is the most effective way to kill microorganisms**

**To treat water by boiling**

- Bring water to a rolling boil. Boiling water automatically shuts off its safe to drink.
- Once cooled - store in a clean, covered container.
- Boiled water is best used as soon as possible.

**If you can't boil water, use unscented bleach**

If you cannot boil water, you can treat your water with unscented bleach. However, bleach is not as effective as boiling.

**To disinfect water with unscented bleach**

- Add 5 drops of plain or regular household liquid bleach to 1 litre of water.
- Stir the water well, and let it stand for 30 minutes. Don't drink water that has been treated with bleach. Don't use bleaches that contain fragrances or other additives.

**Find out more at**

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Healthy water. Healthy people.**

### Advice for drinking water suppliers following a flood event – Bore water

If the drinking water you supply is, or could be unsafe, you need to tell the people who rely on your supply and let them know what measures should be taken to protect their health.

**Water storage tanks**

If your water supply or storage tank has been damaged or inundated with floodwater or silt, then your water supply is likely to be contaminated. Drinking contaminated water could make you and the people you supply sick.

If you are a registered supplier, you should notify Taumata Arowai if the water you are supplying is, or may be unsafe, or if there is an insufficient supply available.

If you have no access to safe drinking water during a state of emergency, contact your local council's civil defence group. They will arrange access to a safe supply of drinking water.

If you are unsure about the safety or operation of your supply contact Taumata Arowai through our online portal [www.taumataarowai.govt.nz](https://www.taumataarowai.govt.nz), call us on 04-889 8350, or email us at [info@taumataarowai.govt.nz](mailto:info@taumataarowai.govt.nz).

**Rainwater supplies**

If you have a rainwater supply and your roof has been contaminated by floodwater or silt, disconnect your downpipe to prevent further contamination entering your tank.

If it is possible to do so safely, brush the roof to dislodge any dust, silt or debris (remember to wear a mask/goggles and PPE).

It is recommended you conserve water, however if you are confident you have an adequate store of water, then you can clean the roof. Otherwise wait until there has been sufficient rainfall to clean the roof before reconnecting to the tank.

You should arrange to have your water supply tested by an accredited laboratory.

**Water storage tank(s)**

If your water storage tank(s) has been contaminated by flood water or silt, ideally it should be cleaned out and disinfected. However, there are risks around this you will need to consider:

- Check your water tank(s) for any damage.
- Water tanks are a confined space and can be very dangerous. Do not enter drinking water tanks, until professional advice and/or help is available. Ideally, tanks should be cleaned by a qualified professional.
- Do you have sufficient water for cleaning the tank, or are you required to conserve water?
- What parts of the system can you access safely to clean? You should not undertake work from height unless you are sure you can do so safely.
- Do you have personal protective equipment (PPE) and approval available?

If you have plain unscented bleach available, you may be able to disinfect your tanks and system using the following process.

Do not use bleaches that have detergents/surfactants (i.e. foam up when shaken). Fragrances (e.g. lemon-scented) or any gel. Ideally use liquid bleach which contains 5-8% sodium hypochlorite.

- Calculate the volume of the tank:
  - Circular tank:  $3.142 \times \text{radius (m)}^2 \times \text{depth (m)}$  of water ( $\text{m}^3 = 1000 \times \text{number of litres}$ ). Radius = half the diameter (the widest part of the circle).
  - Square tank:  $\text{Length (m)} \times \text{width (m)} \times \text{depth of water (m)} \times 1000 = \text{number of litres}$ .

Note: all measurements are in metres.
- Run water from the bore to waste (flush) for several hours to flush contaminated water through the system. Then disconnect the bore and system in the following way:
  - Pour approximately 2 litres of plain unscented bleach (which has 5-8% sodium hypochlorite) into a large bucket and dilute with water.
  - Pour the bleach solution down the inside of the well casing.
  - Turn on each tap and flush each toilet in the house or buildings until you smell chlorine and then close the tap. You are trying to get the chlorine solution to all parts of the plumbing, if there are any in-line filters, they should be removed and replaced with new filters after the disinfection is complete.
  - Allow the chlorine to sit in the pipes for at least two (2) hours, preferably overnight.
  - Open all taps and flush out the chlorine solution for a couple of minutes to ensure it is all through the pipes. Your bore and distribution system should now be disinfected.

**Wai ora. Tangata ora.  
Healthy water. Healthy people.**

# Deployment to Gisborne

- Taumata Arowai kaimahi deployed: Caroline Robertson, Colin Perrin, Peter Wood.
- Liaison role with Gisborne District Council, Gisborne office of Te Whatu Ora.
- Aims:
  - Supporting non-council supplies, with a focus on isolated areas not on a council supply.
  - Providing information/key messages.
  - Strengthening links between CDEM, Taumata Arowai and public health response.
  - Understanding which isolated areas do not have water supply.



# What we observed and next steps

# Strengths and challenges



- Willingness of the sector to help each other
- Multi-agency response and coordination
- Strength of relationships within the sector



- Wastewater and stormwater impacts
- Who is looking after unregistered supplies / domestic self-supplies?
- Key messages around drinking water safety – getting these to the right people at the right time
- Mixed levels of success connecting with the Civil Defence response
- Dual reporting requirements – how do we streamline the process?
- Change in roles within health sector and water sector

# Building readiness and resilience

- Identify and learn lessons for the next response – post-action debriefs and reporting.
- Improve our approach to sector coordination in a major emergency – supplier / community focus.
- Explore ways to build back better – RMA amendments and legislative change.
- Continue to strengthen connections with CDEM Groups and health partners.
- Drinking water safety planning – best practice examples.



# Pātai | Questions?