

Drinking Water Regulation Report 2022

Presented to the House of Representatives pursuant to section 137 of the Water Services Act 2021.

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Drinking Water Regulation Report 2022

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Te Whakatauākī a Taumata Arowai

Ko te wai ahau, ko ahau te wai He whakaaturanga tātou 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

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Forewords

Message from our Board

Hutia te rito o te harakeke Kei whea te kōmako e kō Kī mai ki ahau: "He aha te mea nui o te ao?" Māku e kī atu: "He tangata, he tangata, he tangata".

Hutia te rito speaks to a core value of Taumata Arowai, the importance of people.

Taumata Arowai is a young organisation. Since our establishment in 2021, we have focused on building a strong foundation based on principles of leadership, influence, and protection.

Our work with Te Puna, the Taumata Arowai Māori advisory group, has been integral to this. Together, we are establishing our vision as the regulator of water services in Aotearoa, 'kia tiakina te wai, hei oranga te katoa – safe water every day for everyone.'

In the year ahead, we will build on these foundations, educating New Zealanders about our regulatory role and making sure we have the tools we need to deliver on our obligations.

While we are now actively regulating the quality of drinking water consumed by most New Zealanders, tens of thousands of smaller drinking water suppliers will also need to register with us by 2025 and be fully compliant by November 2028. This is a time for us to listen and understand what we need to do to build a new regulatory system that works for all shapes and sizes. We plan to continue our regulatory leadership in relation to giving effect to Te Mana o te Wai. We also intend to work with communities, suppliers, and government agencies to help build resilience to respond to emergency events.

This is the second Drinking Water Regulation Report produced by Taumata Arowai and the first to cover a full year as the water services regulator.

Over the period covered by this report, we have continued to build a foundation to ensure drinking water suppliers and New Zealanders understand our regulatory role. We will continue to hold ourselves, and our staff accountable for delivering on our obligations to communities across Aotearoa New Zealand.

Message from Te Puna

Tēnā a Matariki kua rewa i te pae. Nō reira, kawea atu ngā mate o te tau kia wheturangitia ki te pō. E ao te rā ki a tātou te hunga ora. Nei rā ngā mihi a Te Puna e rere atu ana ki a koutou katoa.

E taku wai ora, me pēwhea rā. Kua warewaretia tō mana e te ao hou nei, ā, nei rā te ōati a Te Puna ki a koe; kia whakamutua atu te takahia o too mana. Kia whai hua tā mātou whakahua i te koorero ko wai au, ko wai koe, ko wai tātou.

We are Te Puna, the Māori advisory group for Taumata Arowai. Our mahi is to make sure the voices of Māori lead in building a system that provides safe drinking water and restores the thriving well-being of our wai.

Māori have managed freshwater resources in Aotearoa for over a thousand years and we continue to live in close contact with our wai. Our wai is intrinsic to who we are. Through our unique relationship with the environment as tāngata whenua, we have developed a deep knowledge about wai. This means that mātauranga Māori must play a role to ensure Te Mana o te Wai guides how we manage drinking water supplies across Aotearoa. Many whānau live in small rural communities at high risk of significant damage to drinking water supplies from climate change events. Currently, whānau in Taitokerau, Tairāwhiti and Heretaunga are still rebuilding from the recent destruction of Cyclone Gabrielle and Cyclone Hale. Catastrophic weather events will continue and may become more frequent in some rohe.

Over the past year, it has been our responsibility to be a Māori voice for change within the water services sector and ensure Te Tiriti o Waitangi is acknowledged, Te Mana o te Wai is understood, and the wai protected. Our efforts will continue.

Ko te ora o te wai, ko te ora o te tangata. Our health and that of the water is one and the same.

Message from our Chief Executive

It is my great pleasure to present our second Drinking Water Regulation Report.

In this report, we have taken the opportunity to focus on local and central government supplies that serve the majority of New Zealanders with drinking water. We've focussed on these supplies because they present the greatest risk to people and communities if they underperform.

The Government's inquiry into the 2016 Havelock North drinking water contamination event showed what can happen when things go wrong and the impacts that waterborne illness can have on public health and vulnerable communities. It is estimated that 5,500 of the 14,000 residents of Havelock North became ill with campylobacteriosis and at least four deaths have been attributed to the outbreak. This event was a catalyst for the Three Waters Review and reforms.

The reform programme included the introduction of new legislation in the form of the Water Services Act 2021 (the Act), our establishment as the Water Services Regulator in 2021, and proposed changes to the way water services are delivered through the Government's affordable water reforms.

Our establishment and new legislation have presented us with an opportunity to approach the regulation of drinking water supplies differently. Rather than solely focussing on compliance, we know that to ensure suppliers provide safe drinking water we will also need to focus on risk management. For drinking water suppliers this means effectively managing their risks, including through Drinking Water Safety Plans for their supplies and a multibarrier approach to drinking water safety. This also includes prioritising how we, and suppliers, give effect to Te Mana o te Wai.

We will continue to build our relationships with tangata whenua to understand what Te Mana o te Wai means for them at a local level. This knowledge will be embedded in the way that we give effect to Te Mana o te Wai and how we assess whether drinking water suppliers are meeting this objective. Our Drinking Water Regulation Report is informed by data and information about registered drinking water supplies collected through our online portal Hinekōrako.

We are starting to form a clearer picture of the state of drinking water in Aotearoa, but we've got a long way to go. We know that for some suppliers the pathway to compliance and active risk management will require significant investment in infrastructure and the capability of their people. Our focus will be to work with these suppliers to better understand how they will work towards becoming compliant and, in the meantime, how they will meet their duty to provide safe drinking water.

There is a transition period in the Act which means that the very large number of unregistered supplies (estimated to be up to 75,000) have until 2025 to register and up to 2028 to fully comply with the requirements of the Act. Until then we will only have part of the full picture.

Part of our purpose as the regulator is to establish a framework for the continuous and progressive improvement in the quality of water services in New Zealand. We continue to observe non-compliance with aspects of the Act by drinking water suppliers and safety risks not actively being managed. Over the coming year as we start to review Drinking Water Safety Plans, we expect to see more non-compliance as further details about supply performance emerge.

Given the potential impacts to public health this is very concerning. For example, drinking water suppliers with long-term boil water or 'do not use' notices in place, or high-risk supplies with no treatment or other barriers to contamination, must urgently work to address these issues to provide consumers with confidence about the safety of their drinking water.

Our expectation is to see improvement in the year ahead and we will be working with suppliers to ensure that compliance is increasing, and the quality of drinking water services improves.

About us

We are the new water services regulator. Our core function is to ensure drinking water suppliers continue to provide safe and sufficient drinking water to people and communities throughout Aotearoa.

Commencing from October 2023, we will also have a role to play in relation to the environmental performance of wastewater and stormwater networks.

Responsibility for drinking water regulation transferred to us from Manatū Hauora – Ministry of Health on 15 November 2021. This is our second Drinking Water Regulation Report, but it is the first report that considers a view of data and information collected from registered suppliers over a full calendar year (2022).

We are still standing up our regulatory systems and building our knowledge of the performance of the sector. Over time, and in future reports, we will be able to show year-on-year comparisons and trends that will help to highlight the sector's performance.



Introduction

About this report

Our Drinking Water Regulation Report covers the 2022 calendar year and looks at the data and information provided to us by registered drinking water supplies owned and run by or for local and central government. This approach aligns with our Compliance, Monitoring and Enforcement (CME) strategy, where our first focus is on large suppliers who provide drinking water to people in Aotearoa.

We acknowledge there is a group of registered noncouncil supplies such as rural and Māori suppliers (e.g. marae, kura kaupapa, kōhanga reo), facilities, and water carriers who had limited engagement with the previous regulatory regime administered by the Manatū Hauora – Ministry of Health. We are working with them to help them understand their new obligations and get to know their circumstances. The data and information collected from such registered non-council supplies will be included in future reports.

There are many people living in rural or isolated areas who get their water from unregistered small and very small drinking water supplies.¹ There are also standalone dwellings that are considered a domestic self-supply and are not covered by the Act.

Owners of unregistered supplies have until 2025 to register with us and up to 2028 to demonstrate full compliance with the Act.

As the new drinking water regulator this highlights the need for us to develop a proportionate regulatory system that reflects the scale, complexity, and risk of these different supplies. This report is split into five key parts:

- » Part one: discusses Te Mana o te Wai and the fundamental role it has protecting freshwater in Aotearoa
- » Part two: discusses safe drinking water and key principles to ensure safe drinking water for all
- » Part three: looks at the safety of drinking water supplies in Aotearoa
- » Part four: addresses drinking water supplier performance
- » Part five: considers our performance, sector capability and the extent to which the Act is meeting its main purpose.

About drinking water suppliers

The provision of drinking water in Aotearoa is complex. There are a variety of ways that drinking water is supplied to communities, which sometimes means people receive water that may not always be safe to drink.

The Water Services Act 2021 imposes a duty of care on all drinking water suppliers to provide safe drinking water.

¹ Small networked supplies provide drinking water to a population of between 26 and 100 people. Very small communities supplies provide drinking water to a population of up to 25 people, excluding domestic self-supplies.

Supplier type	Description		
Included in this report			
Local government	Local authorities like territorial authorities and regional councils		
Central government	Te Tāhuhu o te Mātauranga – Ministry of Education (schools).		
	Te Papa Atawhai – Department of Conservation (campsites and huts).		
	Ara Poutama Aotearoa – Department of Corrections (prisons).		
	Te Ope Kātua o Aotearoa – New Zealand Defence Force (facilities).		
Not included in this report			
Māori suppliers	This group includes iwi entities, kura kaupapa Māori, kōhanga reo, marae, papakāinga, and Māori communities.		
Facilities	Such as universities, private schools, hospitals, airports, and ski fields.		
Other	Such as mixed-use rural supplies. Residential and other private or community supplies not owned by councils.		
Water carriers	Operators who transport drinking water to homes and events without reticulation. Water carriers do not record the population served by water carriers.		
Unregistered	Suppliers who own or operate a supply that is not yet registered on the public register of drinking water supplies maintained by Taumata Arowai.		
Not a drinking water supplier under the Water Services Act 2021			
Domestic Self Supply	Own stand-alone domestic dwelling supply like a roof water supply.		

Water supplies represented in this report



Most schools get their drinking water from local government supplies. There are 432 schools that supply their own drinking water and are therefore central government supplies.

About the data in this and future drinking water regulation reports

In this report we look at data provided by drinking water suppliers which are indicators of drinking water safety and compliance. This includes consumer advisories and notifications, the submission of Drinking Water Safety Plans and information about the use of residual disinfection and drinking water treatment.

Data on water supplier performance that was previously collected by Manatū Hauora - Ministry of Health does not directly align with our new reporting requirements, so we will not be looking at historical data in this report. In future reports we will include a more comprehensive range of data on drinking water supplies to highlight rates of compliance, risk, and overall performance of the sector.

Over time, we will be able to make direct year-byyear comparisons. Trends around notifications and consumer advisories will identify areas of high risk that suppliers will need to address to improve the safety of the drinking water they supply.

Key sources of information in the future will be:

- reports from supplies under requirements in the new Drinking Water Quality Assurance Rules, when reporting requirements began on 1 January 2023
- » information from our review of Drinking Water Safety Plans that will commence in 2023
- » data from notifiable risks and hazards reporting.

We will also consider how to measure and assess whether suppliers are giving effect to Te Mana o te Wai.



PART ONE: Te Mana o te Wai

In this part we discuss Te Mana o te Wai and the key role it plays in ensuring the safety of drinking water.

A fundamental concept for Aotearoa

A key obligation for all persons exercising functions, powers, or duties under the Act, including Taumata Arowai and drinking water suppliers, is to give effect to Te Mana o te Wai to the extent it relates to the performance of those functions, powers, and duties.

All New Zealanders have a special relationship with water and a sense of connection to the rivers, lakes, and wetlands of Aotearoa. Te Mana o te Wai recognises that the well-being of these waters must be protected for us and the environment to thrive.

We are committed to supporting tangata whenua in their work to define Te Mana o te Wai for the freshwater bodies they have relationships with.

Our strategic goals, objectives, and deliverables demonstrate activities we are undertaking to give effect to Te Mana o te Wai. These are set out in the Enduring Performance Framework. We will continue to work closely with Māori to update the framework. Te Mana o te Wai is guided by six principles, informed by mātauranga Māori, which reflects the intrinsic connection that tangata whenua and other New Zealanders have with all our natural resources and by local tikanga. More recently Te Mana o te Wai has been recognised in mainstream planning documents including the National Policy Statement for Freshwater Management (NPSFM) made under the Resource Management Act 1991.

Te Mana o te Wai is a fundamental concept across all parts of the natural resource management system (including the planned new water services entities) and Aotearoa as a whole.

Te Mana o te Wai requires us to provide for and protect the health and mauri of water as the priority. This is a key driver in ensuring the health needs of people (such as drinking water) and providing for other uses while not eroding or degrading the mauri of the wai.

Principles	Overview
Mana whakahaere	The power, authority, and obligations of tangata whenua to make decisions that maintain, protect, and sustain the health and well-being of, and their relationship with, freshwater.
Kaitiakitanga	The obligation of tangata whenua to preserve, restore, enhance, and sustainably use freshwater for the benefit of present and future generations.

Te Mana o te Wai principles

table continued over page

Principles	Overview
Manaakitanga	The process by which tangata whenua show respect, generosity, and care for freshwater and for others.
Governance	The responsibility of those with authority for making decisions about freshwater to do so in a way that prioritises the health and well-being of freshwater now and into the future.
Stewardship	The obligation of all New Zealanders to manage freshwater in a way that ensures it sustains present and future generations.
Care and respect	The responsibility of all New Zealanders to care for freshwater in providing for the health of the nation. ²

Te Mana o te Wai and safe drinking water

Giving effect to Te Mana o te Wai requires us to build effective, positive, and enduring relationships with tangata whenua. Tangata whenua are the hereditary kaitiaki of natural resources within their takiwā. Their role as kaitiaki is protected under Te Tiriti o Waitangi, and their responsibility to exercise kaitiakitanga over natural and physical resources is recognised under the Resource Management Act 1991.

Tangata whenua are responsible for defining what Te Mana o te Wai means for them and their communities at a local level. It is these local definitions that drinking water suppliers need to consider under the Act. Part of our mahi is to awhi the water services sector to understand how to practically give effect to Te Mana o te Wai.

We are considering:

- how any new secondary legislation or policies will be guided by or reflect Te Mana o te Wai, for example, our Network Environmental Performance Measures will include Te Mana o te Wai measures
- » how we can place Te Mana o te Wai at the centre of our regulatory interventions and decision-making
- » how we support the sector to grow its knowledge about Te Mana o te Wai.

Suppliers should consider:

- » how to best engage with local iwi and hapū to understand what Te Mana o te Wai means to them and their aspirations for wai
- » how to best engage with the wider community to understand what Te Mana o te Wai means to them
- » how to reflect this in how they provide drinking water and their long-term planning.

Water services entities will also have a separate obligation to give effect to Te Mana o te Wai under the Water Services Entities Act 2022 to the extent that it applies to their duties, functions or powers under that Act

² Ministry for the Environment (February 2023), National Policy Statement for Freshwater



PART TWO: Principles of drinking water safety

In this part we define safe drinking water, the importance of drinking water safety planning and discuss the six principles of drinking water safety.

Safe drinking water

Access to safe drinking water is an internationally recognised human right.

All drinking water supplies are vulnerable to contamination. Drinking water is safe if it is unlikely to cause a serious risk of death, injury, or illness. These risks may occur immediately or over time, whether they are caused by consuming drinking water, using it for oral hygiene purposes, or washing dishes or other utensils associated with eating or drinking.

Drinking water safety planning

Active risk management in the form of drinking water safety planning strengthens the focus on preventive measures across the whole drinking water supply system. It requires a multi-barrier approach to managing risks, which safeguards against the failure of any one barrier. By understanding the risks associated with a water supply and actively managing those risks, the safety and resilience of the drinking water supply will be improved.

Drinking water safety planning supports continuous improvement and guides day-to-day activities now and into the future. A Drinking Water Safety Plan (DWSP) is supplyspecific, and every registered drinking water supply must have an individualised plan. Having a DWSP is essential to the good management of a drinking water supply. It reflects the six fundamental principles of drinking water safety that are widely accepted within New Zealand and overseas.

Principles of drinking water safety

The Report of the Havelock North Drinking Water Inquiry identified six principles of drinking water safety for New Zealand.

Supply systems are vulnerable in countless ways to contamination and a single vulnerability has the potential to cause widespread illness, injury, or death. By following all the principles of drinking water safety, we minimise the risk of contamination.

These principles are ingrained in good practice worldwide, they form the foundations of the new legislative requirements, and suppliers should be mindful of them in how they operate their supplies.

Principles	Overview
A high standard of care must be embraced	As unsafe drinking water can cause illness or death, all those involved in supplying drinking water must embrace a high standard of care.
Protection of source water is of paramount importance	The risks to sources of drinking water must be well understood and managed since the protection of source drinking water provides the first barrier against drinking water contamination and illness.
Maintain multiple barriers against contamination	Drinking water systems must have robust, multiple barriers against contamination. No single barrier is effective against all sources of contamination and barriers can fail at any time.
Change precedes contamination	As contamination is almost always preceded by change of some kind, water suppliers must monitor and respond to any changes as part of their due diligence.
Suppliers must own the safety of drinking water	Drinking water suppliers must manage the risks to their water supply operation to ensure they supply safe drinking water to their consumers.
Apply a preventive risk management approach	Drinking water suppliers should conduct a systematic assessment of risks throughout their drinking water supply. This will provide the best protection against waterborne illness.



PART THREE: Drinking water safety in Aotearoa

In this part, we look at data and information collected from consumer advisories and notifications about the safety of drinking water supplies in Aotearoa.

Consumer advisories

Suppliers use consumer advisories if they identify issues with the drinking water they supply. This enables suppliers to inform consumers of any public health risks and what they need to do to protect their health, like boiling water, while the supplier takes steps to improve the water quality.

While consumer advisories can be effective safety measures, for example in response to extreme weather events, ongoing use of long-term consumer advisories like boil water notices likely indicate systemic problems with the supply. Use over extended periods can also become dangerous if advisories become normalised and ignored by consumers.

Long-term consumer advisories are often issued by suppliers as an ongoing risk mitigation measure when they identify that they are unable to provide certainty around when they will remedy a problem with a supply. It is not generally acceptable for any supplies to be on long-term consumer advisories. Over the coming year, we will be working with these suppliers to understand the issues they face and how they will manage the safety of their supplies to resolve their reliance on consumer advisories.

Number of consumer advisories



We received notification of **188** consumer advisories from local and central government supplies, including **164** Boil Water notices, **21** Do Not Drink notices, and **3** Do Not Use notices.

These consumer advisories were issued by:

- » 36 councils (50.7%) issued consumer advisories for 87 supplies throughout Aotearoa.
- » 3 government agencies issued consumer advisories for 30 supplies.

Consumer advisories





Long-term consumer advisories





Supplies with long-term consumer advisories

Region	Supply	Supplier	Population served	Туре	Duration	Ongoing into 2023
Auckland	Whatipu, Huia	Auckland Council	50	Boil Water	Unknown	Yes
Waikato	Piripiri School	Ministry of Education	17	Boil Water	20 days	Yes
Waikato	Huirimu	Otorohanga District Council	120	Boil Water	>1 year	Yes
Waikato	Whakamaru Settlers Hall	Taupo District Council	45	Boil Water	>2 years	Yes
Waikato	Matatoki	Thames Coromandel District Council	150	Boil Water	>5 years	Yes
Bay of Plenty	Torere School	Ministry of Education	30	Do Not Drink	>1 year	Yes
Wellington	Hautere	Kapiti Coast District Council	910	Boil Water	196 days	No
Wellington	Wainuioru Rural	Masterton District Council	184	Boil Water	>6 years	Yes
Tasman	Bark Bay Campsite	Department of Conservation	250	Boil Water	167 days	Yes
Tasman	Dovedale Rural	Tasman District Council	470	Boil Water	>4 years	Yes
Marlborough	French Pass Camp	Department of Conservation	48	Boil Water	199 days	Yes
Marlborough	Awatere	Marlborough District Council	1333	Boil Water	173 days	Yes
West Coast	Mokihinui	Buller District Council	100	Boil Water	>1 year	Yes
West Coast	Punakaiki	Buller District Council	230	Boil Water	10 days	No
West Coast	Reefton	Buller District Council	951	Boil Water	>2 years	Yes
West Coast	Waimangaroa	Buller District Council	300	Boil Water	>5 years	Yes
West Coast	Hans Bay -Lake Kaniere Camp Ground	Department of Conservation	160	Boil Water	301 days	Yes
West Coast	Fox Glacier	Westland District Council	252	Boil Water	255 days	Yes
Canterbury	Methven/Springfield	Ashburton District Council	178	Boil Water	19 days	No
Canterbury	Montalto	Ashburton District Council	90	Boil Water	349 days	Yes
Canterbury	Mt Somers	Ashburton District Council	260	Boil Water	5 days	No
Canterbury	Balmoral Rural	Hurunui District Council	273	Boil Water	172 days	Yes
Canterbury	Peaks Rural Water Supply	Hurunui District Council	84	Boil Water	173 days	No
Canterbury	Waitohi Upper	Hurunui District Council	513	Boil Water	141 days	No
Canterbury	Kaikoura East Coast Rural	Kaikoura District Council	120	Boil Water	>6 years	Yes
Canterbury	Springfield	Selwyn District Council	580	Boil Water	93 days	No
Canterbury	Downlands	Timaru District Council	4550	Boil Water	>1 year	Yes
Canterbury	Seadown	Timaru District Council	895	Boil Water	73 days	No
Canterbury	St Andrews	Timaru District Council	280	Boil Water	>1 year	Yes
Canterbury	Te Moana Scheme	Timaru District Council	1650	Boil Water	>1 year	No
Canterbury	Cannington/Motukaika Rural	Waimate District Council	90	Boil Water	305 days	Yes
Canterbury	Lower Waihao Rural	Waimate District Council	700	Do Not Drink	117 days	No
Canterbury	Waihaorunga Rural	Waimate District Council	99	Boil Water	>1 year	Yes
Canterbury	Waikakahi Rural	Waimate District Council	344	Boil Water	278 days	Yes
Canterbury	Bushy Creek	Waitaki District Council	29	Boil Water	>7 years	Yes
Canterbury	Ohau Alpine Village	Waitaki District Council	36	Boil Water	>7 years	Yes
Otago	Glenkenich Rural	Clutha District Council	705	Boil Water	171 days	Yes
Otago	Tuapeka West	Clutha District Council	283	Boil Water	>1 year	No
Otago	Waitahuna Rural	Clutha District Council	922	Boil Water	24 days	Yes
Otago	Stoneburn	Waitaki District Council	86	Boil Water	139 days	No

Notifications

Notifications help to provide continual, up-to-date information about the safety of drinking water throughout Aotearoa.

Suppliers and accredited laboratories must notify us when any tests undertaken as part of their monitoring requirements show non-compliance with the Drinking Water Standards or Drinking Water Quality Assurance Rules.

The Drinking Water Standards set out Maximum Acceptable Values (MAVs) for a range of determinands that may be found in drinking water.³ When a MAV is exceeded, the drinking water supplier and the accredited laboratory must both notify Taumata Arowai. Other reasons for notifications from suppliers include planned or unplanned interruption of supplies (for example to undertake repairs or maintenance) or other risks that have been identified by suppliers.

While notifications reveal where supplies may be providing unsafe drinking water, they also indicate suppliers who are taking steps to monitor the safety of their supply. This is vital information to enable both the supplier and Taumata Arowai to take appropriate action to reduce potential harm from consumers drinking unsafe water.



3 Water Services (Drinking Water Standards for New Zealand) Regulations 2022.

We received **911** notifications from local and central government supplies in 2022. This included:

- » 387 notifications that determinand levels exceeded a MAV
- » 495 other risks to safety and compliance
- » 23 interruptions to supply
- » 6 concerns or complaints.
- » 37 councils found determinands (including E. coli) exceeding MAVs in 75 supplies throughout Aotearoa. Of these, 28 Councils notified E. coli exceedances across 51 supplies.
- » E. coli was found exceeding MAV in 45 schools,
 6 DOC campsites and 1 NZDF facility.

One of the determinands found in drinking water is Escherichia coli or *E. coli*. *E. coli* is a species of bacteria that is used as an indicator of faecal contamination of water. The presence of *E. coli* almost certainly indicates the water contains pathogens harmful to human health are present.

The detection of determinands exceeding a MAV in a single test result does not always mean that drinking water is unsafe. However, it is always an indicator of risks to a drinking water supply which must be appropriately investigated and managed by the drinking water supplier in the first instance. We actively monitor notifications to ensure that appropriate action is taken depending on the seriousness of the notification. This includes notifying Public Health Units where appropriate.



PART FOUR: Drinking water supplier performance

In this part, we address how suppliers proactively manage the safety of their supplies, take into consideration source water, and how they treat water to make it safe.

Drinking Water Safety Plans

The Act requires every supplier to submit a DWSP, discussing the steps they are taking to ensure that drinking water is safe, unless the supplier is following an Acceptable Solution.⁴

Supply owners were required to prepare a DWSP for each of their registered supplies, and to provide a copy to Taumata Arowai, by 15 November 2022.

Preparing a DWSP is a risk management process that aims to ensure a safe, reliable, and resilient supply of drinking water.

The DWSP must be proportionate to the scale and complexity of, and the risks that relate to, the supply and must identify:

- » any hazards that relate to the supply and assess any risks associated with those hazards
- » how those risks will be managed, controlled, or eliminated to ensure that drinking water is safe and complies with legislative requirements
- » how the DWSP will be reviewed on an ongoing basis, and how its implementation will be amended, if necessary, to ensure that drinking water is safe and complies with legislative requirements
- » how the supply will be monitored to ensure that drinking water is safe and complies with legislative requirements

- » how the supplier will ensure that enough drinking water is provided
- » how the supplier will respond to events and emergencies in relation to the supply.

The DWSP must also:

- » include procedures to verify the DWSP is working effectively
- » detail the multi-barrier approach to drinking water safety that will be implemented
- » if the supply includes reticulation, require, and provide for the use of, residual disinfection in the supply unless an exemption is obtained
- » comply with the relevant requirements of the Drinking Water Quality Assurance Rules.

⁴ Acceptable Solutions provide drinking water suppliers with a ready-made option to meet selected compliance obligations under the Water Services Act. They apply to particular supply types and situations and must be implemented in their entirety. There are currently three Acceptable Solutions for: Roof Water Supplies, Spring and Bore Drinking Water Supplies and Mixed-use Rural Water Supplies.

Supplies which have provided a Drinking Water Safety Plan (DWSP) or are using an Acceptable Solution



- » 24 supplies owned by nine councils have neither submitted a DWSP or informed us they are using an Acceptable Solution.
- » 370 out of 432 school supplies have neither submitted a DWSP or informed us they are using an Acceptable Solution.
- » 35 out of 38 campsite supplies owned by the Department of Conservation have neither submitted a DWSP or informed us they are using an Acceptable Solution.
- » 3 out of 11 facilities owned by the NZDF have neither submitted a DWSP or informed us they are using an Acceptable Solution.
- » All 3 prison supplies owned or operated by the Department of Corrections have submitted a DWSP.
- » 95% of council-owned supplies have either submitted a DWSP or informed us they use an Acceptable Solution.
- » 16% of government owned supplies have either submitted a DWSP or informed us they use an Acceptable Solution.

We are in contact with council and government suppliers who have not yet submitted a DWSP for the supplies that they manage. We are working with Te Tāhuhu o te Mātauranga – Ministry of Education and Te Papa Atawhai – Department of Conservation who are developing a programme to address the compliance issues at schools and conservation sites.

In 2023 we will begin reviewing DWSPs in accordance with our CME strategy.

Source Water Risk Management Plans

The Act sets out requirements for information to better understand risks to source water. Most drinking water suppliers must complete a Source Water Risk Management Plan (SWRMP), which is deemed to be a part of their DWSP. The Act outlines in sections 43–46 the legislative framework for how:

- » drinking water suppliers must prepare and implement a SWRMP, monitor the quality of the source water in accordance with their SWRMP and relevant compliance rules, and report results to Taumata Arowai
- » local authorities will contribute information for SWRMPs
- » Taumata Arowai will collect source water quality monitoring information from suppliers and annually report monitoring results to regional councils
- » Taumata Arowai will provide local authorities with information on drinking water abstraction points for verification while drinking water suppliers and local authorities share information on known risks and hazards.

This framework includes national planning direction made under the Resource Management Act 1991 (RMA), primarily the National Policy Statement for Freshwater Management (NPS-FM) and National Environmental Standard for Drinking Water (NES-DW).

Over the year, we worked with the Ministry for the Environment to refine a package of proposed amendments to the NES-DW. These changes will support suppliers by taking a preventative approach to managing high-risk activities that could impact sources of drinking water.

In November 2022, we received the first set of SWRMPs from registered drinking water suppliers. We expect that the quality of SWRMPs will improve once all source water provisions in the Act are operating fully. We anticipate this will be in the first half of 2024.

Some suppliers have experience identifying and monitoring risks to source water. However, many suppliers are new to such practices.

The information available to suppliers about risks and hazards near a source also varies across local authorities, as does suppliers' ability to access and use information. This will be improved over time, as we establish rules on the content and format of information regional councils and territorial authorities must share with drinking water suppliers. This will need to be supplemented by a package of work to upskill workers to understand how to reduce risks and hazards.

We do not have comprehensive data on how many SWRMPs have been submitted to Taumata Arowai as suppliers generally submitted them as an integrated part of their DWSP. As we start reviewing these plans, we will gradually improve our understanding in this area.

Treating drinking water

Water suppliers should understand the risks to their supply and what they need to do to make sure the water they supply is safe to drink.

The treatment of drinking water is an important step making it microbiologically safe. It can also improve drinking water aesthetic values like taste, smell, and appearance.

Bacteria and protozoa in drinking water can cause serious illness and can be especially dangerous for infants, older people, or those with weakened immune systems. Some types of chemicals in drinking water may not present an immediate risk but can cause harm over time.

There are several methods that can be used to remove contaminants and make water safe to drink. Common treatment processes include:

Treatment type	Description
Filtration	Filtration removes physical particles from water. Filtration can be a necessary step for other treatments to be effective, like Ultraviolet (UV) light disinfection and chlorination.
Ultraviolet (UV) treatment	UV disinfection uses ultraviolet light of a particular wavelength (254 nanometres) to disinfect water of bacteria, protozoa, and to a lesser extent, viruses. On contact, ultraviolet light damages the genetic code of a microbiological organism, preventing pathogens from reproducing.
Chlorination	Adding chlorine kills most bacteria and viruses. Unless removed, chlorine also continues to protect water in the pipes between the treatment plant and the tap. Monitoring residual chlorine levels in distribution networks can also help to find other problems – for example, low chlorine levels can be a sign of contamination or other issues.

Under the Act, DWSPs for reticulated supplies must show how the supplier will provide for residual

disinfection: for example, by chlorination. The alternatives are to adopt an Acceptable Solution

authorised by Taumata Arowai for certain kinds of supply types or to apply for and obtain an exemption to the requirement to provide residual disinfection.

We received 14 residual disinfection exemption applications in 2022.

From our interactions with suppliers around New Zealand, we are aware that some suppliers will need to invest in the infrastructure and capability

necessary to meet the new requirements or apply for an exemption from the requirement to use residual disinfection.

However, where exemptions have not yet been obtained or further upgrades to infrastructure are required, we expect to see these considerations and anticipated timeframes addressed in suppliers' DWSPs, along with information about how safe drinking water will be provided in the meantime.

Networked supplies with no residual disinfection and no Acceptable Solution



- » 62 networked supplies owned by 23 councils have no residual disinfection and are not using an Acceptable Solution
- » 8 schools, 30 Department of Conservation campsites and 1 New Zealand Defence Force facility have no residual disinfection and are not using an Acceptable Solution.
- » 33 supplies owned by 14 councils have no treatment and are not using an Acceptable Solution
- » 5 schools, 18 Department of Conservation campsites and 1 New Zealand Defence Force facility have no treatment and are not using an Acceptable Solution.



Supplies with no treatment and no Acceptable Solution



PART FIVE: Our performance

In this part, we look at our achievements, how we are contributing to lifting capability, and discuss the extent to which the Water Services Act 2021 is meeting its main purpose.

Our achievements

In July 2022, we published our first Compliance, Monitoring and Enforcement (CME) strategy which describes our approach to compliance and enforcement-related activities up to 2025. Our organisation and the drinking water regulatory regime are still very new, therefore our focus in 2022 was continuing to build the new regulatory system and to improve our knowledge of registered drinking water supplies.

Key achievements included:

- » transitioning 1,889 (523 council, 477 government, 889 other) registered drinking water supplies from the Ministry of Health's previous register. As of 31 December 2022, we had confirmed the details for registered supplies that provide 85.4% of New Zealand's population with drinking water
- » developing and issuing new Drinking Water Standards, Drinking Water Quality Assurance Rules, Aesthetic Values and three Acceptable Solutions, which all came into effect on 14 November 2022
- issuing and publishing the first set of Drinking Water Network Environmental Performance Measures, which came into effect on 1 July 2022. These are designed to provide greater transparency about the performance of drinking water services operated by local authorities and other public agencies
- » publishing guidance and templates to help water supplies to prepare DWSPs and SWRMPs

- establishing systems and processes to consider exemption applications, and publishing guidance for drinking water suppliers
- » establishing systems to receive, process and respond to notifications where the safety of drinking water may be at risk
- » building internal capability to respond to a drinking water emergency and facilitating emergency exercises with drinking water suppliers to help build external capability around readiness and response in a drinking water emergency.

A summary of our progress against the CME strategy focus areas is attached in the appendix.

Our engagement with Māori

During the 2022 calendar year we engaged with Māori from a range of iwi and hapū, marae, kura kaupapa, kōhanga reo, and Māori organisations, businesses, and entities. We did this through webinars, online hui, attending marae committee meetings and in person hui.

Our priority was to build meaningful relationships that provide a platform for communicating who we are and what our role is, and to learn more about issues for Māori supplies, suppliers and consumers. We aim to work in partnership with Māori on the shared goal of safe drinking water for all our communities.

Taumata Arowai is building its ability to support this way of working and meet our Te Tiriti o Waitangi

obligations and give effect to Te Mana o te Wai, to the extent it relates to our functions and duties.

As one of a number of Crown agencies and entities working in this space, we are mindful of the need to avoid duplication and the significant pressures and demands on Māori capacity to engage.

Issues we are monitoring

Lead: During 2022 we received four notifications about lead exceeding the Maximum Acceptable Value (MAV).

Drinking water can become contaminated with lead at various stages of its journey from source to tap. Lead can be in the source water or can leach from lead contained in fittings within pipe networks of taps and fittings in households. The amount of lead dissolved in water can change over time and is dependent on factors such as pH, temperature, the time water sits in pipes and tap fittings, and interactions with other minerals in the water.

The MAV for lead is 0.01mg/L, based on World Health Organization (WHO) Guidelines. WHO says there is no safe level for lead and water suppliers should keep levels as low as reasonably practical. Last year we began work to assess whether the MAV for lead in the Drinking Water Standards should be reduced to 0.005mg/L. We engaged with water suppliers and public health experts to better understand the risks and impacts of reducing the MAV. This work continues.



Nitrates: During 2022 we received four notifications about nitrate exceeding the MAV.

Nitrates form naturally in the environment. Microorganisms in the soil convert nitrogen (N2) from air into nitrogen-containing compounds, which are then taken up by plants and support plant growth. Nitrates also form in the environment from decomposition of waste from plants and animals (which get their nitrogen from plants), for example, from animal urine.

Human activities have increased the level of nitrates in the environment. Some farming activities contribute nitrate to the environment, including from cattle urine and fertiliser application. Nitrate from these sources can contaminate surface or groundwaters which may then be used as drinking water sources.

Concentrations of nitrates in surface and groundwater, by location, have been both increasing and decreasing for the past few decades with 45.7 per cent of the monitored groundwater sites increasing and 44.8 per cent of sites decreasing over the past 10 years.

With intensive agriculture and horticulture in many regions of Aotearoa, the presence of nitrates exceeding the MAV for drinking water is a cause for concern.

There is no time series data for nitrate levels in source water for drinking water. An increasing trend in nitrate levels in surface water (rivers and lakes) and ground water is a particular problem in Canterbury, Southland, Hawkes Bay, and the Wairarapa. We anticipate that long-term nitrate levels will continue to grow nationwide and nitrate levels in some regional supplies will exceed the MAV (including short-term exceedances due to adverse weather events).

The key issue is that if the increasing nitrate trends continue then there is the potential that drinking water within a nitrate hot spot will exceed the MAV and the water supplier would need to stop supplying drinking water, identify other water sources, or incur significant additional costs (or some combination of these). The MAV for nitrates in drinking water is set at 50mg/L NO₃ (or 11.3mg/L NO₃-N). This follows World Health Organization (WHO), European Union, and Australian guidelines.

There is a growing interest in potential health risks associated with nitrates in drinking water and whether the MAV is set at an appropriate level. This interest has been sparked by a small number of studies focused on investigating potential associations between nitrates in drinking water and colorectal cancer and adverse reproductive outcomes.

The Prime Minister's Chief Science Advisor's 2022 published web content 'Nitrates in drinking-water' summarised the current evidence on the health impacts of nitrates in drinking water. It did not identify a causal relationship in the studies and did not make any recommendations on amending the MAV.

Manatū Hauora - Ministry of Health advises us on the MAV for nitrate in the Drinking Water Standards. Current advice is that the MAV is appropriate and effective based on the available evidence. Manatū Hauora - Ministry of Health will continue monitoring emerging evidence and will tell us of any recommended changes to the MAV.

In 2022, Manatū Mō Te Taiao – Ministry for the Environment and Manatū Hauora - Ministry of Health in consultation with Taumata Arowai provided a report for Ministers on risks associated with nitrates in drinking water. The full report can be found here: <u>risks-associated-with-nitrates-in-</u> <u>drinking-water.pdf (environment.govt.nz)</u>

Along with Manatū Hauora - Ministry of Health and Manatū Mō Te Taiao – Ministry for the Environment, we continue to monitor this issue closely.

Lifting sector capability

The lift in capability needed across the sector is urgent. There are unfilled existing roles and future workforce demands across all areas of the drinking water sector.⁵

Small and very small supplies are often dependent on volunteer operators and need to be able to access localised training and development. We are working to understand these needs so we can then partner with training and technical providers to offer appropriate support.

Taumata Arowai has taken a support role contributing to the work led by industry groups and training providers in the development of the Workforce Strategy, Ko Wai Tātau. We have had further involvement in the next phase of this work associated with the strategy's activation, the Mahere Whakamahinga.

We will continue to support workforce development initiatives across the sector.

The Act also provides for the establishment of an authorisations framework to improve the professional capability of drinking water suppliers, so workers in water networks have the right skills, qualifications, or experience. In late 2022, Taumata Arowai began work on an authorisations framework, which will continue into 2023 and beyond.

Meeting the purpose of the Act

The main purpose of the Act is to ensure that suppliers provide safe drinking water by:

- a. providing a drinking water regulatory framework that is consistent with internationally accepted best practice, including a duty on drinking water suppliers to:
 - » have a Drinking Water Safety Plan
 - comply with legislative requirements (such as drinking water standards) on a consistent basis.
- b. Providing a source water risk management framework that, together with the <u>Resource</u> <u>Management Act 1991</u>, regulations made under that Act, and the National Policy Statement for Freshwater Management, enables risks to source water to be properly identified, managed, and monitored.
- c. providing mechanisms that enable the regulation of drinking water to be proportionate to the scale, complexity, and risk profile of each drinking water supply.

The Act was just over a year old in the period covered by this report, and it will take time to assess whether it is achieving its main purpose.

From our experience so far, the Act provides a strong basis to achieve the outcome of consumers receiving safe drinking water. However, the data we are seeing from drinking water suppliers suggests that there is still a lot of work to do to ensure New Zealanders receive safe drinking water.

We have made good progress building the necessary features and components that bring the Act's regulatory framework into operation, and there is more to do. With something in the order of 75,000 unregistered suppliers to come into the system in the next few years, we will learn more about the right regulatory approach for what are likely to be mainly small or very small supplies, and what new or different approaches may be needed to achieve compliance in a proportionate way.

⁵ According to Deloitte's 2022 Water Workforce Analysis findings, approximately 2000 more staff are needed in roles across the sector, with an estimated growth of 11,500 FTEs needed in the next decade. Capability for drinking water suppliers includes the conditions, mechanisms, means, and learning that provides the capacity and ability of suppliers, including individuals, organisations, käinga, and communities.

Data on the performance of the water sector will help to assess whether the Act is achieving its main purpose.

A broader aspect of reporting reflects Government expectations for regulatory stewardship. Relevant considerations include:

- » the extent to which we are achieving objectives and targets set out in our CME strategy
- whether suppliers have access to simple, timely information about their regulatory obligations and opportunities to engage with us
- » how effectively we are working with other regulatory and policy agencies
- » whether the Act is being applied in a proportionate, fair, and reasonable way that achieves its main purpose while minimising costs and adverse impacts on competition, property rights, and the individual autonomy and responsibility of drinking water suppliers and other regulated people.

Glossary Ko ngā kupu Māori Te Reo Māori terms

Te Reo Māori term	English meaning		
Aotearoa	New Zealand.		
Hinekōrako	Our Regulatory and Intelligence system. This name was gifted to Taumata Arowai by Te Atiawa and means a rainbow made with moonlight.		
Нарū	Section of a large kinship group and the primary political unit in traditional Māori society.		
lwi	Extended kinship group or tribe.		
Каирара	Matter for discussion, plan, theme, issue, initiative.		
Kaitiakitanga	Guardianship and stewardship. The obligation of tangata whenua to preserve, restore, enhance, and sustainably use freshwater for the benefit of present and future generations.		
Mana	Prestige, authority, control, power, influence, status, spiritual power.		
Marae	Māori community meeting place or surrounds.		
Mātauranga	Knowledge, wisdom, understanding.		
Mauri	Life principle, life force, vital essence, special nature.		
Papakāinga	Home base, village, communal Māori land.		
Tāngata, tangata	People, persons, human beings.		
Taiao	Natural world, environment.		
Taonga	Treasure, anything prized.		
Taumata Arowai	Taumata is a term associated with a summit. Aro is to give attention to or be in the presence of, while wai is water.		
Te Mana o te Wai	A concept that refers to the fundamental importance of water and recognises that protecting the health of freshwater protects the health and well-being of the wider environment.		
Tikanga	The customary system of values and practices that have developed over time and are deeply embedded in the social context.		
Te Tiriti o Waitangi	The te reo Māori version of The Treaty of Waitangi.		
Wai	Water.		
Whānau	Extended family group, a familiar term of address to a number of people.		

Source: Te Aka Māori Dictionary

Ko ngā kupu Hangarau Technical terms

Technical terms	Meaning	
Acceptable Solution	Prescribed requirements which a water supplier can adopt to meet some of the legislative requirements set out in the Water Services Act 2021.	
Accredited laboratory	A scientific facility equipped to test source water, raw water and drinking water. Registered drinking water suppliers must use an accredited laboratory. Accreditation is managed through International Accreditation New Zealand (IANZ).	
Aesthetic Values	Standards on the quality of water that make it pleasant to consumers, such as appearance, taste, or odour.	
Boil Water notice	A notice issued by a water supplier when the drinking water supply contains, or could contain, bugs or microorganisms that could make consumers sick. Water for drinking, preparing food, brushing teeth, and preparing infant formula must be boiled (or have some other treatment e.g. bleach) before use.	
Consumer	A person who consumes or uses drinking water supplied by a drinking water supplier.	
Determinand	A substance or characteristic that is determined or estimated in drinking water.	
Do Not Drink notice	A notice issued by a water supplier when the drinking water supply contains harmful chemicals and toxins. In this case boiling water will not make it safe.	
Do Not Use notice	A notice issued when the water is, or could be, contaminated in way that any contact, for example with the skin, lungs, or eyes, may be unsafe. These types of notices are rare.	
Domestic self-supply	A stand-alone domestic dwelling that has its own supply of drinking water	
Drinking Water Quality Assurance Rules (the Rules)	Rules that set out what drinking water suppliers need to do to comply with key parts of the Drinking Water Standards and the Water Services Act	
Drinking Water Standards (the Standards)	Drinking Water Standards set the Maximum Acceptable Values for a range of contaminants which can affect the safety and quality of drinking water.	
Drinking water supplier	A person who supplies drinking water through a drinking water supply to more than one standalone domestic dwelling. Includes the owner and operator of a drinking water supply (refer to the Water Services Act 2021, s8 for a full definition).	
Drinking water supply	Infrastructure and processes used to abstract, store, treat, transmit, or transport drinking water for supply to consumers or another drinking water supplier. Does not include temporary or unplanned drinking water supplies, or domestic self-supplies.	
E. coli	A bacteria species used as an indicator of faecal contamination of water. The presence of <i>E. coli</i> almost certainly indicates pathogens harmful to human health are present.	
Incident	A response to information in or relevant to a notification. An incident may be raised, for example, when a notification is given a high level of priority.	

Technical terms	Meaning	
Maximum acceptable value or MAV	The Drinking Water Standards set limits for the concentration of determinands in drinking water. The limits are referred to as maximum acceptable values (MAVs). The MAVs for any determinand must not be exceeded at any time.	
Microbiological organism	Living organisms too small for the naked eye to see. This includes bacteria, viruses, protozoa, and algae, collectively known as microbes.	
Monitoring	Sampling and analysis of drinking water to test for compliance with the Drinking Water Standards, or for process control, by detecting changes in the concentrations of its constituent determinands or deviations of these from target values.	
Non-compliant	When a drinking water supply has not met legislative requirements. Refers specifically to non-compliance with Drinking Water Standards in the context of section 22 of the Act.	
Notifications	When suppliers and accredited laboratories notify Taumata Arowai if any tests undertaken as part of their monitoring requirements show non-compliance with the Drinking Water Standards or Drinking Water Quality Assurance Rules.	
Registered supply	A drinking water supply registered in accordance with the requirements of subpart 7 of Part 2 of the Act.	
Residual disinfection	A disinfectant, typically chlorine, remaining in the water after it leaves a treatment plant to act as a barrier to recontamination of water in a distribution system.	
Safe drinking water	Water that is unlikely to cause a serious risk of death, injury, or illness.	
Unsafe drinking water	Drinking water that is likely to cause a serious risk of death, injury, or illness. These risks may occur immediately or over time, whether the serious risk is caused by consuming drinking water, using it for hygiene purposes, or other household uses like washing dishes.	
Unregistered supply	A drinking water supply not registered in accordance with the requirements of subpart 7 of Part 2 of the Water Services Act 2021. Supplies that were not required to be registered under the Health Act 1956, or any other legislation.	
Water carriers	A drinking water supplier that transports drinking water (other than by reticulation) for the purpose of supplying it to consumers or another drinking water supplier.	
Water services sector	The water services sector refers to any organisation or agents involved with the regulation, provision or management of water supply, trunk sewers, local reticulation, sewage treatment and stormwater assets.	

Source: Definitions from various sources including Water Services Act 2021, Drinking Water Quality Assurance Rules, Drinking Water Standards, Water New Zealand and Department of Internal Affairs.

Appendix A

Drinking Water Regulation Reporting on CME activities for July to December 2022

Component	Measures for Year 1 (2022/23)	DWRR progress
Build the regulatory system and set expectations – Give effect to Te Mana o te Wai	Produce source water risk management guidance.	Complete
	Engage with Ministry for the Environment to ensure alignment of Water Services Act requirements to the NES-DW.	In progress
	Develop understanding of Te Mana o te Wai through internal and external engagements.	In progress
	Develop and implement drinking water network environmental performance measures.	First tranche of measures for drinking water complete and in force
Build the regulatory system and set expectations - Drinking water supplier guidance and information	DWSP and SWRMP guidance; templates for less complex/low risk supplies.	Complete
	Risk management guidance and risk maturity model.	Guidance complete
		Risk maturity development in progress
	Supporting material and user guides to assist suppliers using Hinekōrako.	Complete
	Explanatory information on supplier duties and obligations.	Complete
	Guidance for suppliers seeking exemptions.	Complete
	Information for registered supplies transitioning from the Ministry of Health into Hinekōrako.	Complete
	Information for how to apply to register supplies for planned temporary events.	Complete
	Requirements for registered suppliers to operate under current Drinking Water Standards.	Complete
	Good practice expectations guidance.	Not started
Build the regulatory system and set expectations - Marae/ Papakāinga engagement	Engagement to understand issues and needs to inform design of fit for purpose regulatory approaches/ application of regulatory tools for marae/kāinga supplies.	In progress
	Register any marae and papakāinga supplies who wish to register early.	In progress
Build the regulatory system and set expectations - Unregistered suppliers (marae/papakāinga; rural; small population supplies)	Engage with suppliers and sector reference groups to understand needs to inform design of fit for purpose regulatory approaches / application of regulatory tools.	In progress
	Engage third party expertise to support small suppliers and to test potential Acceptable Solutions and regulatory interventions, templates, and guidance.	In progress

Component	Measures for Year 1 (2022/23)	DWRR progress
Build the regulatory	Drinking Water Quality Assurance Rules.	Complete
system and set expectations - Develop regulatory instruments (regulations; rules; standards; notices)	Drinking Water Standards	Complete
	Review Maximum Acceptable Value for lead in Drinking Water Standards.	In progress
	Notifiable hazards and risks.	In progress
	Acceptable Solutions: (Rural & Agriculture; Roof Water; Bores & Springs).	Complete, scope for more to be developed over time
	Drinking Water Network Environmental Performance Measures.	First tranche of drinking water measures complete and in force. Consultation on second tranche complete
	Source Water Risk Management Plan guidance.	Complete
	Drinking Water Aesthetic Values.	Complete
Monitoring performance - Review and audit of	Design the methodology for reviewing DWSPs and SWRMPs.	In progress
DWSPs and supplier	Determine priority order for review.	In progress
performance	Develop Regulatory risk framework and assessment tool.	In progress
	Develop drinking water supply audit methodology and programme.	In progress
Monitoring performance - Receive and monitor	Design, develop and implement online system to receive notifications.	Complete
notifications of non- compliance	Receive and respond to notifications.	Complete
Monitoring performance - Supplier water quality monitoring data reporting	Develop and consult on Drinking Water Quality Assurance Rules and Drinking Water Network Environmental Performance Measures.	Complete
Drinking water incidents	Internal training and capability building.	Complete
& emergencies -	Establish relationships and engage with suppliers and response sector agencies.	Complete
	Carry out annual drinking water emergency exercise and share lessons learnt.	Complete
	Regional and national coordination activities.	Complete
	Determine and articulate response triggers for incidents and emergencies.	Complete
Targeted Interventions &	Receive and process exemption applications.	Ongoing
Enforcement activities - Exemptions	Establish international expert panel for exemptions.	Complete
Targeted Interventions & Enforcement activities - Statutory direction/ Remedial actions	Design and develop regulatory approach guidance for drinking water sector.	Complete
	Exercise statutory decision making and issue directions and require remedial actions as appropriate.	Ongoing
Targeted Interventions & Enforcement activities - Enforceable undertakings	Design and develop enforceable undertaking guidance for drinking water suppliers.	In progress
Targeted Interventions & Enforcement activities Higher level enforcement activities	Work to develop an infringements regime.	Project now being led by DIA
	Prosecutions and s83 appointments as required.	In progress



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