



Performance Summary of the Water Services System 2023

Incorporating **Network Environmental
Performance** and **Drinking Water
Regulation Reports**



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

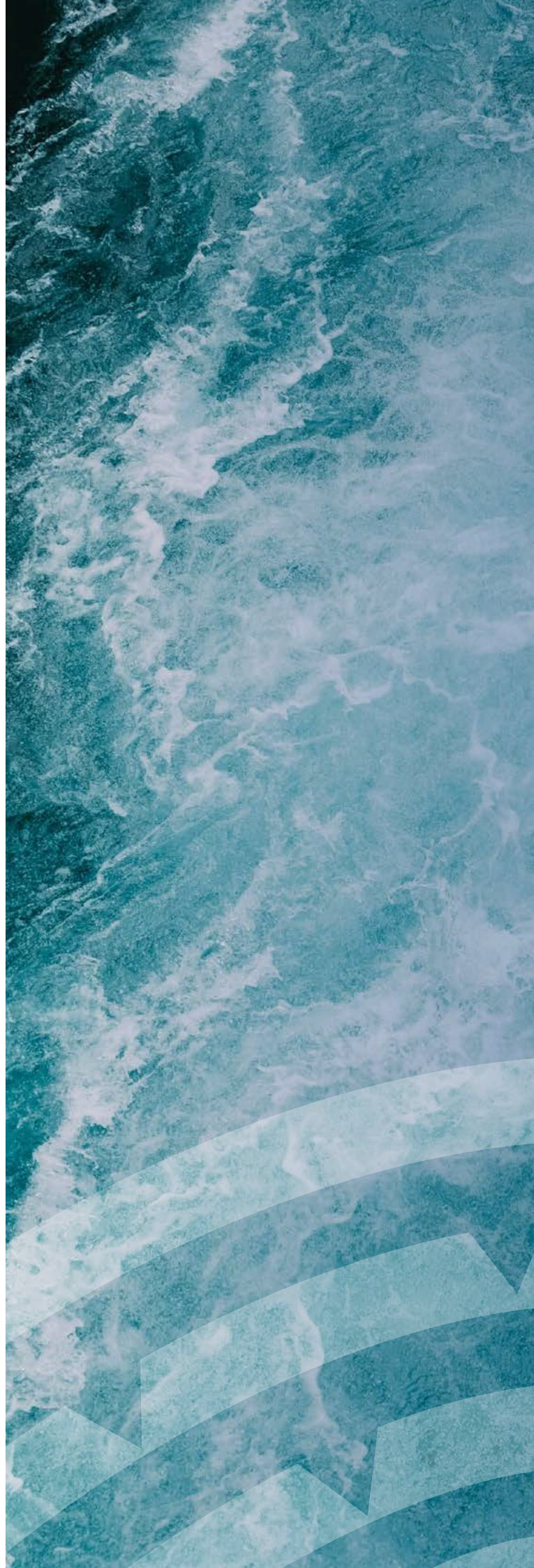
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Performance Summary of Water Services System 2023

Date: June 2024
ISSN: 3021-2553 (online)
ISSN: 3021-2545 (print)

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Te Whakatauāki 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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Foreword

It is our pleasure to present this summary report on the performance of the New Zealand water services system over 2023.

We are required by the Water Services Act 2021 (the Act) to produce two major reports each year. This year, for the first time, we are publishing a report on the state of New Zealand's network performance and its effects on the environment. We are also publishing our third Drinking Water Regulation Report.

This summary report aims to bring together both reports' key findings to provide a national 'systems view' of the water services in Aotearoa New Zealand, based on sector reporting.

The two reports complement each other – the way our water networks are maintained and operated directly affects water suppliers' ability to provide safe and sufficient drinking water. This work goes to the heart of our role as a regulator in shining a light on the sector's performance as well as communicating and encouraging best practice to uplift the sector's capability. It also reinforces the importance of our work supporting the sector to ensure Te Mana o te Wai is understood and the wai is cherished.

The good news is that most of our drinking water is safe. However, there is still much work to do. Drinking water suppliers' compliance with the minimum requirements of the Drinking Water Quality Assurance Rules (the Rules) was highly variable and needs to improve to provide ongoing assurance to the

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public that suppliers are taking an effective multi-barrier approach to drinking water safety.

The number of *E. coli* notifications we received for registered supplies is especially concerning, given it indicates the presence of bacteria that have the potential to cause widespread illness. These supplies can also be at risk of significant damage from catastrophic weather events related to climate change as we saw with Cyclone Gabrielle in February 2023.

Most council supplies have protozoa and bacteria barriers and use residual disinfection. However, about one in five treatment plants serving large supplies do not have these multi-barrier protections installed. Our current focus is ensuring council supplies have basic multi-barrier protections in place, as this is the best way to prevent people getting sick from their drinking water. Queenstown's *cryptosporidiosis* outbreak in September 2023 is an example of what can occur when there is no effective multi-barrier treatment in place. Working with the sector to address water treatment gaps is a high priority area for us.



While it is true to say that we now have richer information on the state of our networks and drinking water quality than has ever been available before, the quality and completeness of the data submitted to us is widely uneven. We are concerned that network operators do not hold good information about their networks, which impacts their ability to manage those networks. This may lead to an increase in safety risks and costs because operators are more likely to be undertaking reactive maintenance rather than planning strategically.

We will work closely with network operators to mature their data quality assurance processes and, in the years ahead, our expectation is to see progressive improvement in the quality of water services data and performance.

As is already well documented, the data indicates that water loss is very high, but the true extent of that loss is unknown. We want to see network operators prioritise identifying and managing water loss across their networks. This is critical to the supply of safe drinking water and minimising adverse environmental impacts as well as saving money.

Kia tiakina te wai, hei oranga mō te katoa. Safe water every day for everyone.



A handwritten signature in blue ink that reads "Allan Prangnell". The signature is written in a cursive, flowing style.

Allan Prangnell
Chief Executive

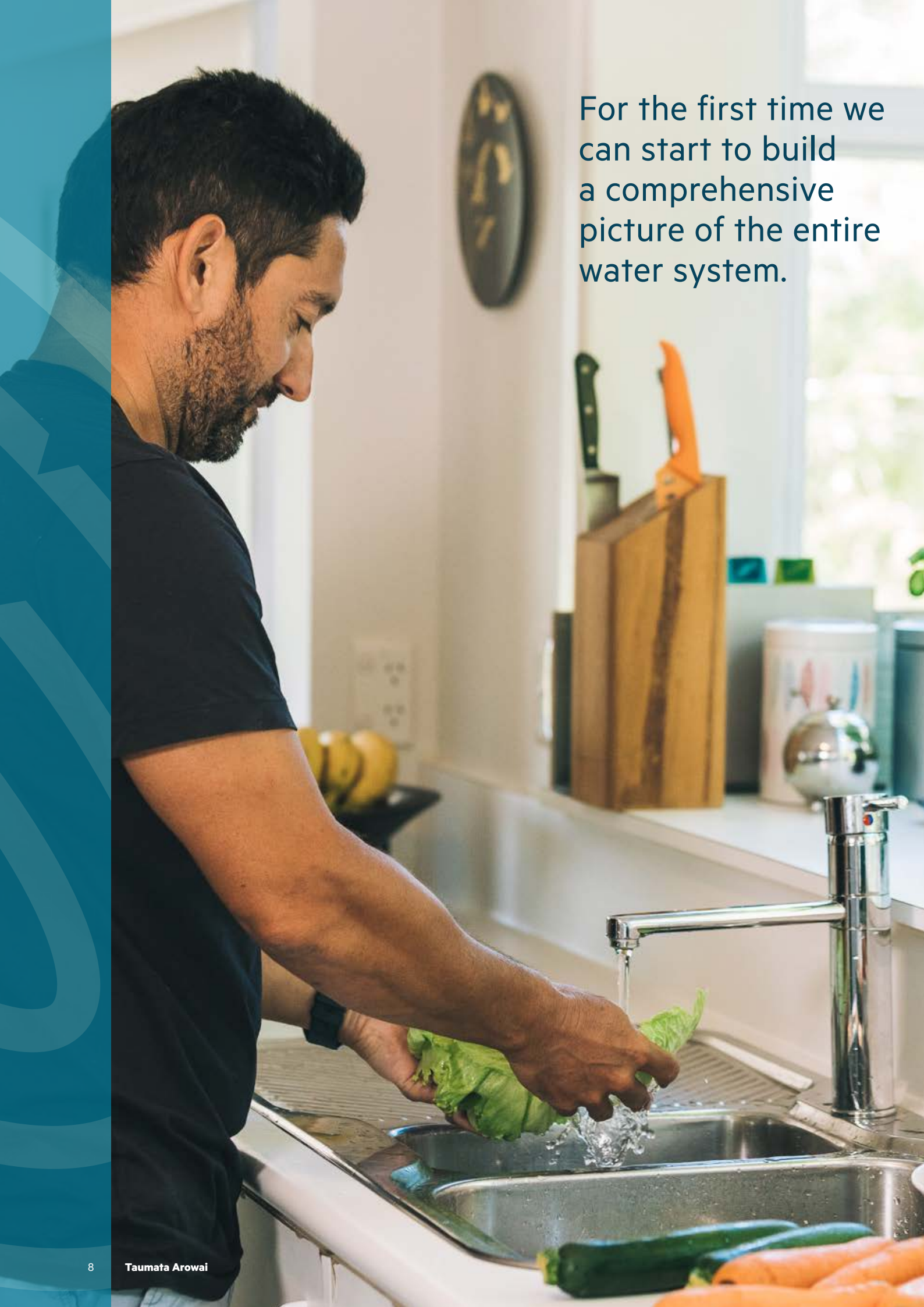
About Taumata Arowai

Established in 2021, Taumata Arowai is New Zealand's water services regulator. Our core function is to ensure drinking water suppliers provide safe and sufficient drinking water to people and communities throughout New Zealand. We also provide a national view of the environmental performance of public drinking water, wastewater, and stormwater networks. Our role in wastewater and stormwater began on 4 October 2023.

Incidents like the Havelock North drinking water contamination event in 2016 demonstrated the need for a dedicated water services regulator. The waterborne *campylobacteriosis* outbreak hit the 15,000 population and saw up to 8,000 people become ill. Forty-two were hospitalised and the contamination led to the death of four people. The incident was the largest event of its type ever reported in the world, and today some people still suffer the effects. The outbreak had considerable economic and human impact, and raised the risk of reputational damage to local tourism operators and exporters that made up a large part of the region's economy.

We regulate and assist the water services sector to help improve outcomes for the health of the water, people, and the environment. This means working in partnership with drinking water suppliers and network operators across New Zealand who have a clear responsibility to ensure they provide clean and safe drinking water and minimise the negative impacts of water services on the environment.



A man with a beard and dark hair, wearing a black t-shirt, is shown in profile from the waist up, washing a head of green lettuce in a stainless steel kitchen sink. Water is running from a modern chrome faucet. In the foreground, several carrots and a cucumber are visible on the sink's edge. The background shows a kitchen counter with a wooden cutting board, a knife block, and a window with a view of greenery. The overall scene is brightly lit, suggesting a clean and fresh environment.

For the first time we
can start to build
a comprehensive
picture of the entire
water system.

Introduction

This report combines the top line results from two technical reports we are required to produce each year.

The Drinking Water Regulation Report (DWRR) — covering the 2023 calendar year, reports on the performance of drinking water suppliers. It focuses on safety measures, multi-barrier protections, notifications, and consumer advisories for supplies who have confirmed their details with us.

The Network Environmental Performance Report (NEPR) — covering July 2022 to June 2023, focuses on the environmental performance of drinking water, wastewater, and stormwater networks run by councils and central government operators (considered to be ‘network operators’). For this first year, the main focus of the NEPR is the environmental performance of our drinking water networks.

The full reports can be found at www.taumataarowai.govt.nz/water-services-insights-and-performance/.

For the first time we can start to build a comprehensive picture of the entire water system. Over time this picture will grow and become clearer with regular information provided by drinking water suppliers and network operators.

These reports create a single source of national-level information about trends and risks in water services, based on sector reporting. This provides an evidence base to inform our work and motivate suppliers to continually improve their operations.

Because water supplies owned or operated by local or central government are the main providers of drinking water to New Zealanders, both reports focus mainly on council and government supplies and networks.

Under the previous drinking water regime, many private and community supplies were not registered with the Ministry of Health | Manatū Hauora. Given the relative newness of the legislation and the establishment of Taumata Arowai as regulator, there is limited information about the quality of the water these suppliers provide and the associated health risks. We are now turning our attention to this group of suppliers.

Who supplies your drinking water?

Local or central government are the main providers of drinking water to New Zealanders. Private and community suppliers (such as marae and mixed-use rural supplies) also own and operate drinking water supplies. Domestic self-supplies are not reported on as they are not considered drinking water supplies under the Act.

Because of different registration requirements prior to the Act, there is no accurate data available on the actual number of unregistered drinking water supplies that are required to register by November 2025. However, we do know that these will mostly be small supplies, each serving a population of less than 100 people.

Up to 84% of New Zealanders drink their water from a registered drinking water supply.



Up to 84% of New Zealanders drink their water from a registered drinking water supply.



Who are your public network operators?

We are required to monitor public drinking water, wastewater and stormwater networks and their operators.






Most New Zealanders are regularly receiving safe drinking water.

Main findings at a glance

- **Most New Zealanders are regularly receiving safe drinking water.**
- **For some supplies there is room for improvement** to ensure key risks are being appropriately managed.
- **We are concerned by the risks posed by pathogens and other contaminants in some supplies.** The number of *E. coli* notifications we received is particularly concerning given this indicates the presence of pathogens that have the potential to cause widespread illness.
- **Most council supplies have protozoa, bacteria barriers, and residual disinfection in place.** However not all do, and there are parts of the population with water supplies that lack full protection. A multi-barrier approach is the single most effective way to avoid people getting sick from their drinking water. We are actively working to ensure council supplies not meeting basic requirements provide a viable plan to install protozoa and bacteria barriers within a reasonable timeframe and proactively manage risks in the interim.
- **Drinking water suppliers' compliance with the minimum requirements of the Rules was highly variable and needs to improve** to provide ongoing assurance to the public that suppliers are taking an effective multi-barrier approach to drinking water safety. We intend to carry out more work to assist suppliers to understand these requirements.
- **The quality of the data (particularly for network performance) and completeness of reporting provided needs to improve** so we fully understand whether risks are being appropriately managed, and that sector performance is improving over time.
- **We are concerned that network operators do not hold good information about their networks.** This will likely impact their ability to properly manage those networks. This may lead to an increase in safety risks and costs because operators are more likely to be undertaking reactive maintenance rather than planning for and investing to make resilient networks.



For healthy drinking water, the health and protection of source water is most important.

Drinking water safety

Risks from water sources

Source water refers to natural water sources (for example rivers, streams, lakes, groundwater, and rainwater). Source water must be treated to make it safe to drink. For healthy drinking water, the health and protection of source water is most important.

As part of a multi-barrier approach, protection of source water through identifying and understanding the risks to drinking water sources should be the first priority. Then these risks must be managed appropriately.

Sampling and testing source water is a new requirement for suppliers. Larger supplies must monitor more frequently than small supplies.

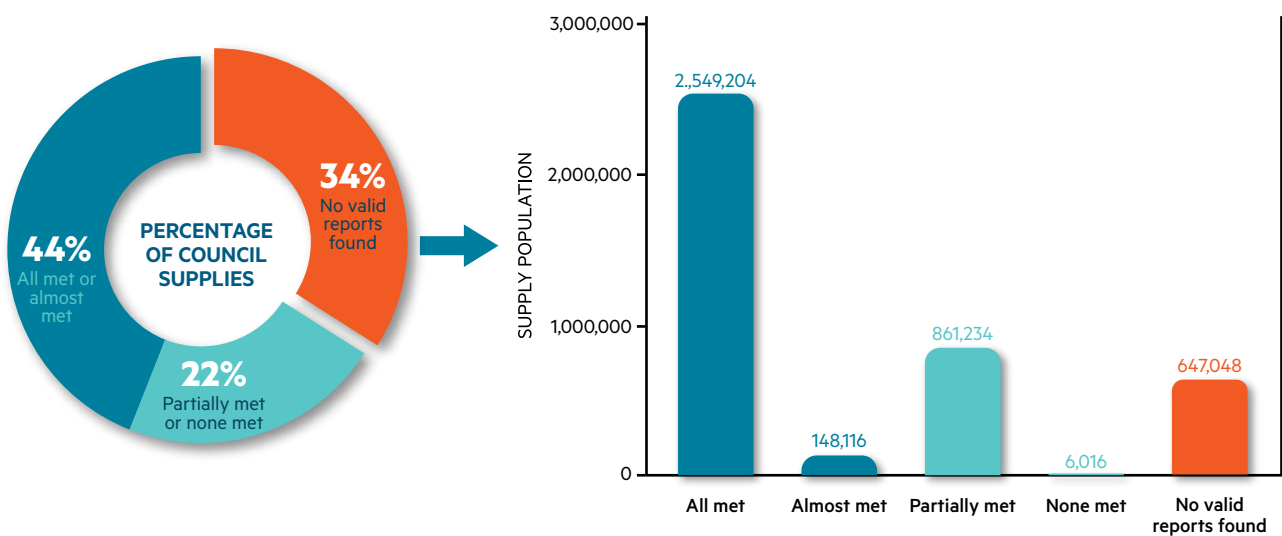
High levels of *E. coli* have been reported in source water samples from surface water. These results reflect that surface water sources, like rivers,

lakes, and streams, have more variability in their water quality and are more susceptible to faecal contamination. This reinforces the need for suppliers to have effective treatment barriers in place.

We are also concerned that there were some reports of *E. coli* in groundwater abstracted from greater than 30 meters deep. We will monitor this closely.

Cyanobacteria are a hazard of potential and emerging concern as the cyanotoxins produced can pose a risk to drinking water that may have immediate and serious health risks. Our data indicates that many suppliers, including councils, are struggling to assess the *cyanobacteria* risk to their source water. We intend to carry out more work to assist suppliers to understand the requirements.

Council supplies meeting source water sampling and testing rules



The main risks to drinking water are microbiological pathogens

The primary risks to drinking water supply are from microbiological pathogens, such as bacteria, protozoa (single cell organisms such as *Cryptosporidium* that live in fresh and sea water as well as soil), and viruses. If water is not treated correctly to kill or inactivate such pathogens, they can cause widespread outbreaks of acute illness.



Queenstown *cryptosporidiosis* outbreak

In September 2023, there was a *cryptosporidiosis* outbreak in Queenstown, in the South Island.

Caused by the protozoa *Cryptosporidium*, the Two Mile water treatment plant did not have a protozoa barrier. There were 94 cases linked to the outbreak (74 confirmed, 20 probable), and 11 affected persons presented at hospital emergency departments, with three admitted to wards for further treatment.

This incident is an example where a lack of an effective multi-barrier approach meant the drinking water supply could not be ruled out as a source of this outbreak, and Te Whatu Ora | Health New Zealand determined the most likely cause of the outbreak was human faecal contamination of the source water, Lake Wakatipu.

We served a compliance order on the Queenstown Lakes District Council due to the immediate risk to public health arising from the lack of a protozoa barrier, and where there was a material risk this was the cause of illness emerging in the community.

This meant the council needed to keep a boil water notice in place until they had installed

treatment for protozoa or were otherwise able to provide safe drinking water to consumers.

By December 2023 the programme of work to meet the compliance order requirements was achieved. This was mainly in relation to the Two Mile water treatment plant and included installing temporary UV disinfection equipment, cleaning all reservoirs, and carrying out flushing across the Two Mile network. As a result of this, the boil water notice for the Two Mile supply was lifted.

Prior to the outbreak, we had undertaken an initial review of the drinking water safety plan for the Queenstown supply which had identified the lack of a protozoa barrier at the Two Mile water treatment plant. The lack of a suitable treatment barrier was the reason why the plant had been implicated in a gastroenteritis outbreak in Queenstown in 1984.

We are continuing to engage with the council as they install a permanent protozoa barrier solution for the Queenstown supply. The council expects this work to be completed by September 2024.

Notifications that drinking water may be unsafe

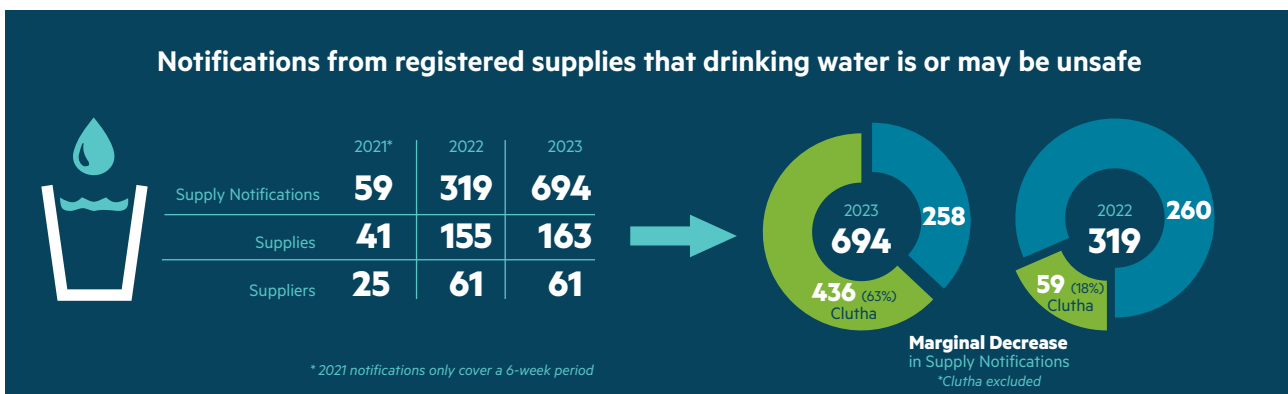
Suppliers must notify us if they consider their drinking water is, or may be unsafe, or if it does not comply with the Drinking Water Standards. We received an average of 108 notifications each month in 2023. Our records indicate that suppliers are generally submitting notifications as required by the Act and taking appropriate action to mitigate any public health risks.

While many suppliers are fulfilling their duty to notify us when drinking water may be unsafe, 24 suppliers did not. Instead, we were made aware of these exceedances only through laboratory notifications. We find this behaviour concerning and expect suppliers to notify us promptly. That way we know that any potential risks to public health are being appropriately addressed.

Drinking water should be completely free of *E. coli* to ensure that it is safe to drink. Common sources of *E. coli* are human wastewater discharges, animal waste, bird droppings, and stormwater run-off. Testing for *E. coli* gives an indication of the general quality of the water.

We received 235 notifications from laboratories where *E. coli* exceeded the MAV¹, up 12% from 210 in 2022. These notifications are represented geographically in the map on the following page. We are also concerned that there were some reports of *E. coli* in groundwater abstracted from greater than 30 meters deep. We will monitor this closely.


In general, chemical exceedances of the MAVs are unlikely to result in an acute illness unless they are at a very high level, with nitrates being an exception. Notifications for aluminium, chlorate, disinfection by-products, lead, manganese, and chlorine have increased year on year since 2021. The most likely reason for the increase is the requirement in the Rules for suppliers to carry out mandatory testing of chemicals in their supplies. Notifications for arsenic have decreased from 2022 to 2023, with most of the arsenic results being at or near the MAV. Council supplies that regularly notified us of arsenic MAV exceedances are either pursuing or have recently completed new treatment barriers to reduce these concentrations. We received no laboratory notifications in 2023 from registered supplies where nitrate exceeded the MAV.



Notifications from registered supplies of safety of drinking water²

¹ MAVs or Maximum Acceptable Value are set by the Drinking Water Standards for a range of substances which can affect the safety and quality of drinking water. The MAVs are based on guideline values set by the World Health Organisation.


² Note that 64% of these notifications were from Clutha District Council and largely related to their ongoing monitoring of aluminium levels in their supplies. If we exclude Clutha, we saw a marginal decrease in these notifications from 260 in 2022 to 258 in 2023.



Suppliers must notify us if they consider their drinking water is, or may be unsafe, or if it does not comply with the Drinking Water Standards.

Notifications of MAV exceedance – *E. coli*





In general, chemical exceedances of the MAVs are unlikely to result in an acute illness unless they are at a very high level, with nitrates being an exception.

Notifications of MAV exceedance – Chemical



We are working with suppliers to face these challenges and find appropriate pathways for them to meet their obligations under the Act.



Consumer advisories

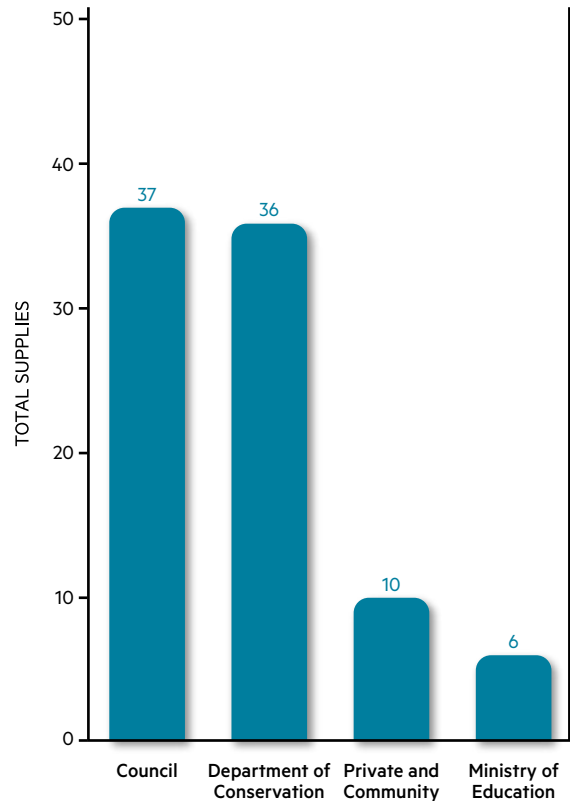
Suppliers issue consumer advisories if they identify issues with their drinking water that significantly increase the risk to consumers. The advisory should stay in place until the water supply is again safe to drink.

By the end of the year, 107 of the temporary advisories issued in 2023 were closed, with nearly two thirds in place for two weeks or less.

Fifty-nine new long-term consumer advisories³ were issued in 2023. This is in addition to the 53 long-term advisories that were in place before 2023. Twenty-three long term advisories were closed during 2023, leaving 89 long-term advisories still in force as at 31 December 2023.

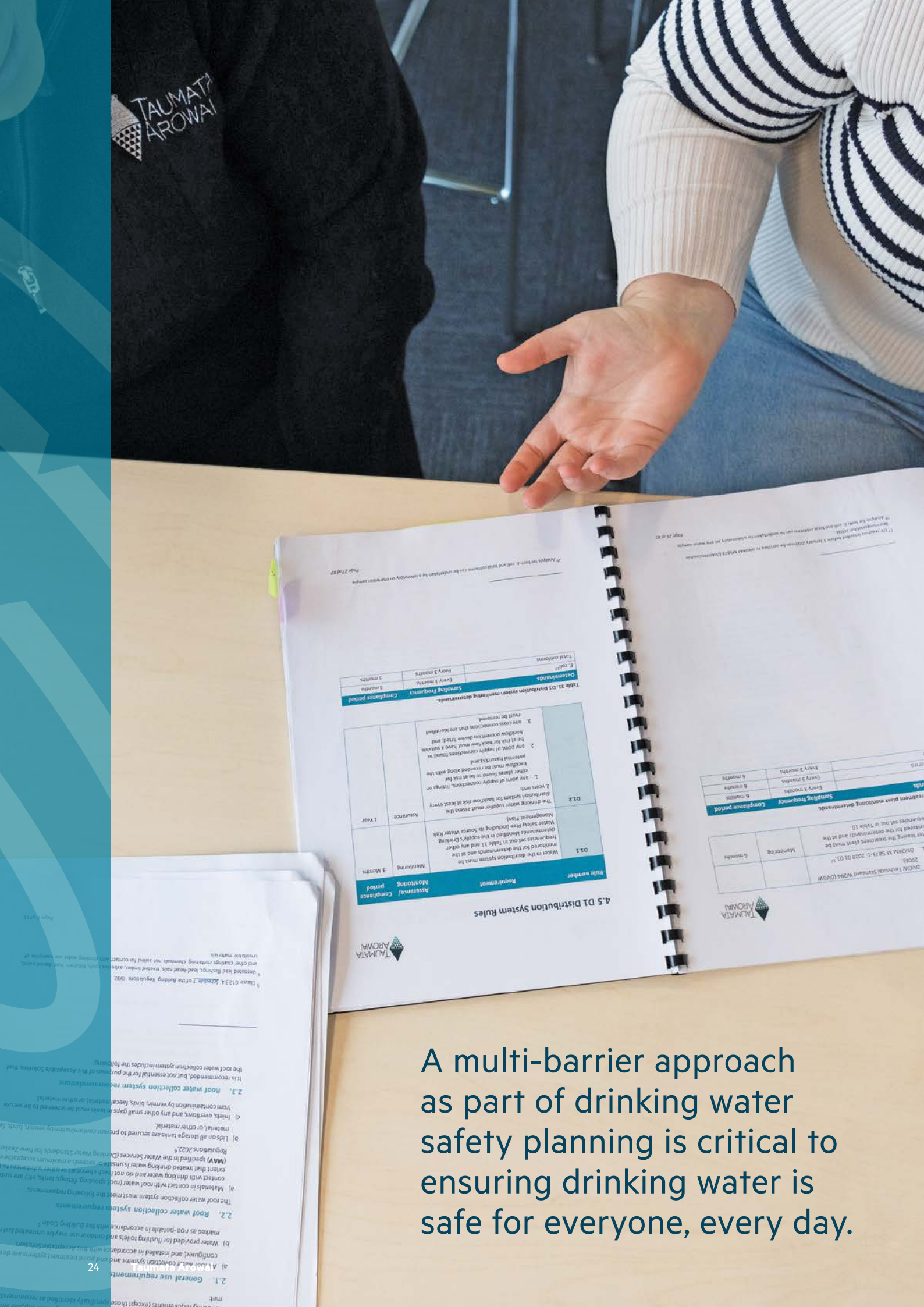
It is not acceptable for any supplies to be on long-term consumer advisories. However, many supplies under long-term consumer advisories face challenges that may not be resolved quickly. We are working with suppliers to face these challenges and find appropriate pathways for them to meet their obligations under the Act.

Supplies with long-term advisories in force as at 31 December 2023



Consumer advisories – 2023				
				
	Boil water	Do not drink	Do not use	All
Long-term	105	7	0	112
Temporary	93	23	2	118
All	198	30	2	230

³ There isn't any specific time threshold associated with a 'long-term' consumer advisory. We use the term to refer to advisories that remain in place for more than a transient period while steps are taken to address the underlying safety issue, depending on the circumstances affecting each supply.



TAUMATA AROAWAI

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Table 11. D1 Distribution system monitoring determinands.

Determinands	Sampling frequency	Compliance period
E. coli	Every 3 months	3 months
Total coliforms	Every 3 months	3 months

Table number	Requirement	Assurance/ Monitoring/ Compliance period
D1.1	Water in the distribution system must be monitored for the determinands and at the frequencies set out in Table 11 and any other determinands identified in the supply 'Drinking Water Safety Plan (including its source water risk management plan)	Monitoring 3 Months
D1.2	The drinking water supplier must assess the distribution system for backflow risk at least every 2 years and: 1. any part of supply connections, fittings or other places that are at risk for backflow must be recorded along with the location of any backflow preventer (BPP) and any part of supply connections found to be at risk for backflow must have a suitable BPP installed; 2. any cross connections that are identified must be removed.	Assurance 1 Year

Table 12. D1 Distribution system monitoring determinands.

Determinands	Sampling frequency	Compliance period
E. coli	Every 3 months	3 months
Total coliforms	Every 3 months	3 months

4.5 D1 Distribution System Rules



A multi-barrier approach as part of drinking water safety planning is critical to ensuring drinking water is safe for everyone, every day.

Drinking water safety plans

Most council-operated supplies, which serve most of the population, have lodged a drinking water safety plan (DWSP) with us. Those who haven't submitted their plan tend to serve populations of less than 500 people and are non-council supplies.

While our review of an initial set of DWSPs has shown many suppliers are undertaking appropriate risk management practices, others have significant

gaps which can lead to unacceptable risks not being properly managed. We are engaging with suppliers about the results of DWSP reviews to ensure appropriate actions are taken to resolve any gaps identified in the plans. We will identify further trends, areas of concern, and opportunities for improvement as we learn more through ongoing reviews.



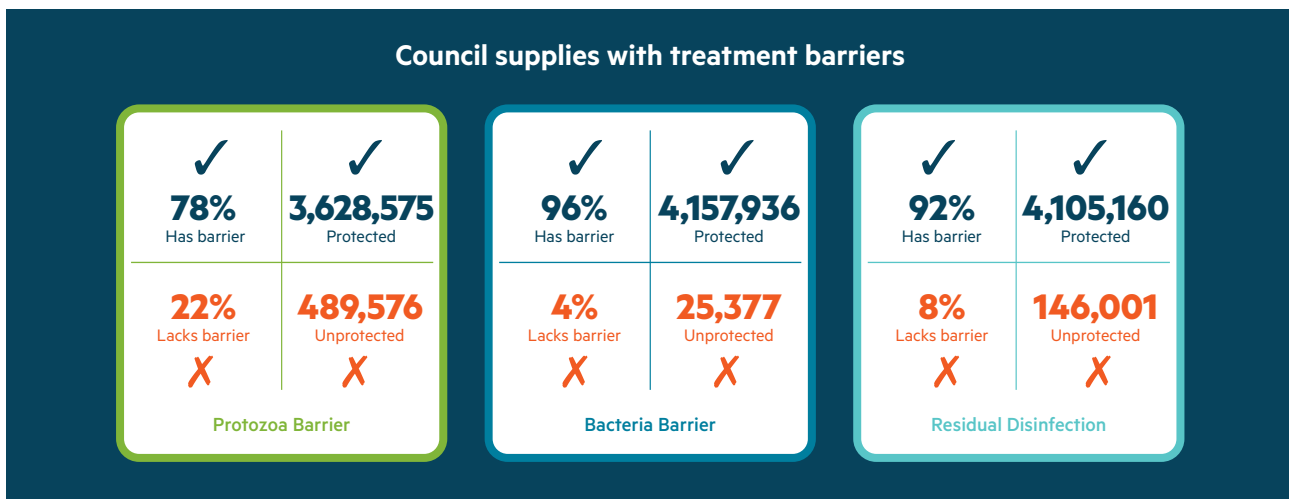
An effective multi-barrier approach is critical for providing safe drinking water

A multi-barrier approach as part of drinking water safety planning is critical to ensuring drinking water is safe for everyone, every day. An effective multi-barrier approach includes:

- effectively operating barriers for all types of contamination, including operating supplies in compliance with the minimum requirements in the Rules
- appropriate monitoring, including monitoring required by the Rules

- well-trained, experienced staff to manage and operate supplies who have the knowledge of good practices, are aware of the kinds of hazards that can be present in a drinking water supply, and how to manage the risks from these hazards.

We are working to ensure that council suppliers without essential barriers in place provided a viable plan to install protozoa and bacteria barriers by a particular date and proactively manage risks in the interim. This is a priority area for us.



Rules reporting


This year's report targets those Rules that demonstrate how suppliers are performing in their duty to take a multi-barrier approach to drinking water safety, and to identify hazards and manage risks.

Council suppliers reported on the Rules at a much higher rate (95%) than government, community and private suppliers (6%) – the exception was the Department of Corrections, which reported on all its supplies. This indicates that councils understand the importance of reporting to us and are committed to being transparent about the performance of their supplies.

However, many councils only reported on some requirements. While most councils reported on the performance of their bacteria treatment and residual disinfection, there were significant gaps in reporting in other areas. These gaps included chemical monitoring, backflow prevention and protozoa treatment. Of those who did report, many councils identified they did not meet requirements such as backflow prevention and drinking water storage in distribution zones.

Registered supplies expected to provide Rules reporting

Supplier Category	Supplies reported on	Supplies requiring reports
Council	463	486
Department of Conservation	2	35
Department of Corrections	3	3
Ministry of Education	-	362
New Zealand Defence Force	-	8
Private and Community	30	175
TOTAL	498	1,069



Compliance action

Through legislation we have regulatory tools and powers to protect and promote drinking water safety and related public health outcomes. This includes the ability to carry out investigations, issue directions, serve compliance orders, and impose statutory management on suppliers. Our preference is to encourage compliance through relationship building and raising awareness, particularly with general supplier engagement.

Sometimes, we need to use our powers when requirements are not being followed, creating a risk to public health. We do so in a proportionate and reasonable manner that considers each specific

circumstance. As of 31 December 2023, we had issued one direction and two compliance orders across New Zealand.

Sector capability

Increased sector capability is urgently needed. Drinking water infrastructure, including treatment plants and distribution networks, carries many safety risks if it's not operated properly. The water sector has identified a lack of capability among suppliers to manage drinking water issues, and this continues to be a concern.

Network environmental performance

Well-maintained and operated drinking water, wastewater, and stormwater networks throughout New Zealand contribute to protecting the health of water, people, and the environment. New Zealanders should be confident that these networks are operated in a way that reduces any negative impacts on the environment and people's health.

This means that drinking water networks should minimise water loss and have planned maintenance and renewal programmes that provide our homes, businesses, and communities with a safe, sufficient and resilient supply of drinking water all year round. Minimising water taken and lost, values the inherent mana (prestige) and mauri (life force) of water.

It also means that wastewater networks should safely remove waste from our homes and businesses in a way that protects receiving environments and the health of people. Network operators were not required to provide data to us this year on wastewater measures. We will be introducing some basic wastewater data in the next report and more detailed information will be included in the following year's report.

Stormwater networks should be designed, maintained and upgraded to protect our homes, businesses, and communities from the effects of surface flooding, while also protecting and enhancing receiving environments through effective management of contaminants and hydrology.

There is currently a lack of good nation-wide information on stormwater networks and therefore there is no overall picture of how such networks and their operators are performing against these requirements. We have begun to turn our minds to future stormwater measures to provide a national picture of these networks.

Key findings from the Network environmental performance report

Below is a summary of key findings from the data, as provided to us.

- **Network operators hold a large number of drinking water network consents under the Resource Management Act 1991 (1,200+).** Each consent includes multiple conditions that must be met. This provides an indication of the complexity and time involved in understanding consent compliance for the consent holder, regional councils and Taumata Arowai.
- **Reported water loss is high.** However, only just over half of network operators provided water loss data and their average confidence in the data was 'less reliable'. This indicates that most network operators do not understand their water loss.
- **The health of the water is not yet central to decision-making.** Initial data showing how networks are giving effect to Te Mana o te Wai, including information about the volume of water taken, used, and lost, indicates that network operators frequently take and treat more water than consumers use. This suggests network operators have more work to do to ensure their actions are having the least possible effect on the waterbodies they are abstracting from.
- **There is limited understanding of the current state of water infrastructure.** There is a lack of information and low confidence in the data regarding the condition of drinking water infrastructure. All but one network operator was able to provide a percentage of pipes that

New Zealanders should be confident that these networks are operated in a way that reduces any negative impacts on the environment and people's health.



have received a condition assessment. The data provided indicates that on average 59% of pipes have been assessed over the lifetime of the network and of those assessed 13% are in a poor or very poor condition. This indicates that the condition of drinking water pipe networks across New Zealand is not well known, and it will be difficult for network operators to prioritise maintenance and renewals to where they are needed most.

- **Most network operators have undertaken an assessment of their critical assets.** We have not collected any data on how these assessments were undertaken, or how network operators identified which assets were 'critical'. We plan to build on this information in future reports.

The information provided indicates network operators face challenges to ensure their networks are managed efficiently and effectively and are likely taking more water than is needed for their communities. This puts pressure on the rivers, streams, lakes, and aquifers that supply our drinking water.

High water loss rates and poor maintenance of assets can mean that our drinking water becomes contaminated from breaks or leaks in pipes. Exposure risk is generally correlated to the quality of the infrastructure, as well as measures such as water loss and pipe age and condition (these are used globally as indicators of a network's condition).

The data quality issues identified in the report suggest network operators do not hold good information about their networks. This is likely to impact their ability to manage those networks effectively and efficiently and may increase their costs because operators are more likely to be undertaking reactive maintenance rather than planning strategically.

The report made three recommendations

Data completeness and quality issues identified in the report limited our ability to make recommendations related to specific aspects of environmental performance. However, we acknowledge the challenges within the sector and the significant capacity constraints that network operators face in providing good data. We reflect these in the following recommendations.

1. **Network operators prioritise resourcing the collection of necessary information.** This will help them understand the performance of their networks and identify risks to human health and the environment. Gaining a better understanding of the condition of assets and any inefficiencies and incorporating this understanding into strategic planning may enable cost savings. Good asset information is essential for informing effective and robust asset management processes and moving from reactive to proactive maintenance.
2. **Network operators prioritise identifying and managing water loss across their networks.** While the quality of the data we collected is affected by the issues identified, water loss issues are well documented and have been for some time. Managing water loss is critical to supplying safe drinking water and minimising environmental impacts.
3. **We will review our data collection and reporting processes.** We recognise that we have a role to play in supporting the sector. By reviewing our data collecting and reporting processes, we can support network operators to provide more complete and accurate data.

Conclusion

Many drinking water suppliers are doing things well. However, there are critical gaps in the treatment that some suppliers have in place to provide reliably safe drinking water to communities, particularly those in more rural, isolated parts of the country.

Council and government suppliers need to focus on the basics and urgently prioritise fully and consistently meeting all minimum requirements to provide ongoing assurance to the public that suppliers are taking an effective multi-barrier approach to drinking water safety.

Meeting minimum requirements should be prioritised and suppliers should strive to go beyond simply meeting the minimum requirements to routinely monitor all risks to their supplies to ensure they are appropriately being managed.

Specifically, drinking water suppliers need to ensure that they:

- meet all the multi-barrier requirements as no single barrier is effective alone against all sources of contamination and any barrier can fail at any time
- regularly monitor their drinking water and source water as contamination is almost always preceded by some kind of change which must not be ignored
- report to us when there may be a problem with the safety of their drinking water so that the appropriate action can be taken to protect the public.

Network operators need to ensure that they:

- prioritise resourcing the collection of necessary information to run their systems efficiently and effectively
- prioritise identifying and managing water loss across their network. Effective management of water loss and any breaks in pipes is critical to supplying safe drinking water and managing any environmental impacts.

We can play our part too by considering how we can better support drinking water suppliers and network operators to make understanding of requirements and reporting easier and clearer.

We also acknowledge that this is the first-time network operators were required to report on the state of network infrastructure and its effects on the environment and public health. Meeting the basic monitoring and reporting requirements for network environmental performance is essential for network operators to know they are operating effectively. It also aids long-term planning and ensures that their operations best support positive environmental and public health outcomes.

We are mindful of the challenges facing the sector and the significant capacity constraints that suppliers face. However, as constraints ease and capacity improve, over the next few years we will together reveal a clearer, detailed picture of our country's networks, supporting the ability of operators to effectively build, manage, and maintain a system that delivers safe water for all New Zealanders.

We are committed to working collaboratively with the sector to build a resilient, safe and high performing water system across New Zealand.



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