Discussion document:
Drinking Water Network Environmental Performance Measures

TAUMATA AROWAI

Contents

1. Introduction

The Water Services Act 2021 (the Act) introduces new requirements to monitor and report on the environmental performance of drinking water, wastewater, and stormwater networks (Part 3, Subpart 8). These requirements are designed to provide greater transparency about the performance of networks and the impacts they have on the environment and public health. They will contribute to the continuous and progressive improvement of the quality of water services in Aotearoa New Zealand. These requirements will also complement the general functions and objectives of Taumata Arowai under the Taumata Arowai–the Water Services Act 2020, including to give effect to Te Mana o te Wai.

Once all provisions of the Act are in force, Taumata Arowai will be able to make:
• environmental performance measures for networks
• environmental performance targets for networks
• wastewater environmental performance standards.

The new requirements only apply to networks and network operators. These terms have very specific definitions under the Act which means that only drinking water, wastewater, and stormwater networks owned by, or operated on behalf of, councils or government departments are captured. For drinking water, this is only a subset of drinking water suppliers.

We are undertaking separate ongoing engagement with the New Zealand Defence Force and the government departments that will be required to monitor environmental performance. It is likely that we will need to take a tailored approach to reflect the scale, complexity, and unique characteristics of their networks.

This discussion document sets out a proposed approach to environmental performance measures for drinking water networks. Environmental performance measures for wastewater and stormwater will be introduced at a later stage. However, we recognise that networks operate as a system and there are inherent interdependencies between drinking water, stormwater, and wastewater networks.

We are consulting on our proposed approach now to test the policy intent that underpins the draft measures. Following public consultation, we will refine the draft measures and corresponding timeframes. Subsequent, targeted engagement in 2022 will provide more detailed information on how data will be collected, our approach to measuring data quality and corresponding penalties for not providing the information required.

How does the environmental performance of networks affect communities?

This change is about protecting the health of our people and environment. Communities are affected because the performance of networks directly impacts the environment and public health. Networks impact the quality of drinking water, the resilience of our freshwater sources, and the safe removal and disposal of the wastewater and stormwater generated by our communities. We all pay for water services through rates and/or water bills and therefore we all have an interest in how that money is spent.

Environmental performance reporting will benefit network operators by building a clear picture of how networks are performing. This can be used as an evidence base for decision-making, for example, to guide investment and support resource consent applications.

Taking a holistic and integrated view of the management of wai (water) as articulated through the concept of Te Mana o te Wai[1] is crucial. Wai is an essential resource that is critical to life and connects us all. Te Mana o te Wai draws on a Te Ao Māori perspective to recognise the whole-of-system approach to protecting wai, from mountains to sea (ki uta ki tai).

Our networks can have significant impacts on our lives and the state of our environment from source (where we abstract water to drink and use in our homes and businesses) to discharge (where we dispose of our wastewater and stormwater and drinking water by-products). The diagram below depicts this cycle and shows how everything is interconnected.
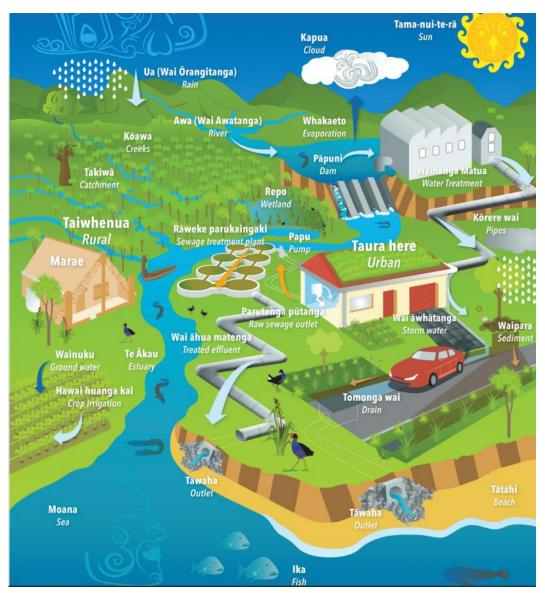

Figure 1: The urban water cycle (Credit: Water New Zealand)

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[1] We refer to the definition set out in the National Policy Statement for Freshwater Management (2020), which is applied in section 5 of the Act. The high-level description of the concept is:

Te Mana o te Wai is 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. It protects the mauri of the wai. Te Mana o te Wai is about restoring and preserving the balance between the water, the wider environment, and the community.

What mechanisms will be used to monitor and report on the environmental performance of networks?

Measures and targets are both important for monitoring the environmental performance of networks. Measures will tell us how networks are performing (now and over time). Targets, which will be introduced at a later stage, will set out how we want networks to perform in the future.

The data we receive on measures and targets will be summarised in a public-facing Network Environmental Performance Annual Report (the Network Report) that we will be required to publish on an annual basis from 2023/24. The report will also contain examples of best practice, specific risks or concerns that relate to network performance or practices, and comparisons of how networks across the country are performing.

We're consulting on the proposed environmental performance measures for drinking water networks now to provide time for network operators to develop the capability to collect data, where they do not already do so.

Our proposed approach

We propose to stagger the introduction of environmental performance measures for drinking water across three timeframes. The first set of measures are broadly based on information already collected through Water New Zealand's National Performance Review, with some additions. We expect most drinking water network operators will be able to provide this data reasonably easily. The other measures identified will be required over longer timeframes to reflect drinking water network operators' existing capability levels and ability to collect the information.

Data collection and reporting will be mandatory[2], with data collection for some environmental performance measures starting in July 2022. There will be penalties for those who do not provide this information, however we intend to work with network operators to make sure they are well placed to fulfil their obligations.

We are interested in your feedback, in particular your views on:

- the proposed scope of 'environmental performance'
- how operators can best give effect to Te Mana o te Wai (in the context of environmental performance measures for networks)
- our relevant vision, principles, and outcomes
- our proposed environmental performance measures for drinking water, including the staging of those measures.

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[2] Sections 142 and 146 in the Act.

2. What does 'Environmental performance' mean?

'Environmental performance' is not defined in the Act. We have developed a working definition, that we think reflects the purpose and intent of relevant provisions in the Act and approaches taken in other relevant legislation.

Environmental performance relates to the effects of networks – including the operation of infrastructure and processes – on the environment.

In this context, *environment* has the meaning given to it by the Resource Management Act 1991. This means environmental performance considers:
- the *impact of a network on any natural receiving environment* (for example, the emissions profile of a drinking water treatment plant).
- the *impact of a network on the social and cultural wellbeing of people and communities* (for example, the resilience of water sources and volume of on-demand treated drinking water).
- the performance of the network infrastructure in so far as it relates to its *impact on ecosystems, people, and communities* (for example, the quality of the pipes in our drinking water network).
- any social, economic, or cultural factors that may *impact on environmental performance*, including the financial position of network operators and progress against any required maintenance or upgrades (for example, asset condition and value).

Any environmental performance measures or targets set by Taumata Arowai will reflect this definition. We consider that this definition incorporates all parts of networks, from source (drinking water catchments and abstraction points) to discharge (the disposal of wastewater, stormwater, and drinking water treatment by-products).

Matters outside the scope of environmental performance measure reporting

Environmental performance data will feed into the Network Report, which will be published by Taumata Arowai.

All drinking water suppliers (including drinking water network operators) will also need to continue collecting and reporting drinking water quality and compliance data. This will feed into the Annual Drinking Water Regulation Report (the Drinking Water Report).

We're currently developing data reporting methods and standards for the Drinking Water Regulation Report. For the 2021/22 report, this will reflect historic data reporting (under the previous Ministry of Health regime). Subsequent reports will reflect the proposed Drinking Water Quality Assurance Rules. The proposed approach will be consulted on through targeted engagement ahead of July 2022 and is not addressed in this discussion document.

How does this relate to Te Mana o te Wai?

Section 14(2) of the Act requires that Taumata Arowai gives effect to Te Mana o te Wai when exercising our functions, powers, and duties under the Act, to the extent that it applies to them.

Te Mana o te Wai introduces a hierarchy of obligations. The first is the health and well-being of wai. The second is the health and well-being of people and the third is the ability of people and communities to provide for their social, economic, and cultural well-being.

The National Policy Statement for Freshwater Management sets out the following six principles for implementing Te Mana o te Wai. These underpin the outcomes and principles that we have developed to guide all our reporting (set out in the following section):

- **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.
- **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 in 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.

We are still refining our approach for giving effect to Te Mana o te Wai through the environmental performance measures and annual reporting, and we welcome any suggestions as part of public consultation. We are particularly interested in whether the initial package of measures clearly incorporates the hierarchy of obligations that underpin Te Mana o te Wai, along with the principles above.

During and following the public consultation period we will be undertaking targeted engagement with Iwi/hapū to ensure perspectives of Te Ao Māori are reflected in the environmental performance measures. Feedback from this targeted engagement will be used to update the proposed measures in consultation with network operators.

3. Monitoring and Reporting: Outcomes and Principles

We have developed a set of draft principles and outcomes to articulate what a successful approach to monitoring and reporting looks like in the long-term. The principles and outcomes will apply across all our reporting, not just the Network Report. These will ensure we are consistent in our approach.

OUTCOMES	
	Mana whakahaere: Building relationships and working together to continually improve insights and build capability in the water services sector.
	Kaitiakitanga: There is a growing awareness of how water services are performing. Everyone understands their role in protecting the health of water, now and for future generations.
	Governance: Accessible, trusted, and timely information drives evidence-based decision-making to improve water services.

The **outcomes** set out the intended impacts of reporting. They reflect the legislative intent of the Water Services Act to build public awareness of how networks are performing. This is expected to drive improvements in environmental impacts and behaviour change.

PRINCIPLES	
	Kāwanatanga: We will collaborate with those who can influence improvements in water services to develop an iterative approach that informs decision-making.
	Manaakitanga: We will consider how our approach aligns with, and can contribute to, the growth of capability in the water services sector and everyone's understanding of water services.
	Kaitiakitanga: We will develop a modern approach that removes barriers to efficiently and effectively sharing the right information with the right people at the right time.

The **principles** articulate how we want to work with network operators and communities, which will guide our approach to reporting and monitoring. We want to work together with key partners and stakeholders to maximise the benefit of the information we collect. We also want to reduce overlaps with other reporting activities.

4. Who will the new requirements apply to and how will they be used?

Who will be required to monitor and report against environmental performance measures?

The new requirements only apply to networks and network operators. A network operator (including a 'drinking water network operator') is defined in the Act as[3]:

- local authorities, council-controlled organisations, or subsidiaries of council-controlled organisations
- government departments (for example, the Department of Conservation or the Ministry of Education)
- the New Zealand Defence Force.

This means that the new requirements only apply to drinking water, wastewater, and stormwater networks owned by, or operated on behalf of councils or government departments.

How will the information provided to Taumata Arowai, benefit network operators and communities?

Taumata Arowai will collate and publish the data provided by network operators annually. We will make the resulting reports available to the public. By comparing metrics such as leakage rates and the long-term reliability of water sources, these reports will be a useful tool for understanding how networks across the country are performing.

Environmental performance reporting will be useful for network operators as an evidence base for investment decisions. The Network Report will provide examples of environmental performance best practice and specific risks or concerns that relate to network performance and practice.

Reporting will also help to build a clear picture of the state of New Zealand's water assets. Over time, we will also set targets to improve network performance and drive better environmental outcomes. These targets may also reflect broader government commitments and recommendations, such as those set by the He Pou a Rangi, the Climate Change Commission.

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[3] Section 140 of the Act.

5. Our proposed approach: draft insights and measures

We have grouped our proposed drinking water environmental performance measures into five areas which correspond to the key insights we want to gain. These measures will be phased in over a period of three years from July 2022. This phased introduction reflects the ability of drinking water network operators to collect the information.

We recognise that all the measures we have initially identified are largely quantitative. We will continue to develop our approach to qualitative data and will engage with Rōpū Māori (our Māori Advisory Group) alongside others, to integrate Mātauranga Māori into the measures and insights.

We recognise that the economic performance of a network effects its ability to meet its environmental and public health obligations. For this reason, we have included economic performance measures. We recognise that some of the measures may overlap with the role of the proposed economic regulator. We will continue to work closely with the relevant agencies to ensure we are collecting this information in the most efficient manner.

With growing populations and climate change, the demand and pressure on existing water infrastructure is likely to increase. For this reason, measures relating to the efficiency of networks will be important. Likewise, the state of preparedness for natural disasters is relevant, as poorly performing infrastructure and network failure directly impacts the wellbeing of communities.

Our five broad insights are as follows:

1. **Is the environment and public health protected?**
   For example, is it safe to swim in my local river? Is my local drinking water treatment plant reducing its carbon footprint?
2. **Are services economically sustainable?**
   For example, how much is my network operator borrowing? Does the revenue they receive cover the costs of managing the network?
3. **Are services reliable?**
   For example, what is the condition of the pipes in my local area? Has my network operator considered the effect of population growth on water demand?
4. **Are resources used efficiently?**
   For example, how much water does the average household in my area use? How much water is lost from leaking pipes before it even gets to my house?
5. **Are services resilient?**
   For example, has my network operator planned for a natural disaster? How long will I not have access to clean drinking water?

These insights have been developed to cover all three waters (drinking water, wastewater, and stormwater). However, initially we are focusing on drinking water environmental performance measures due to the staged commencement of provisions in the Act for wastewater and stormwater environmental performance monitoring.

We will stagger the introduction of measures over three years

We have grouped our proposed drinking water environmental performance measures under the five insights in Table One below. Some of the measures will contribute to more than one insight, so at this stage we have grouped them with the outcome that we consider is most applicable.

The table below provides an indication of where we're heading. We understand that it will take time for network operators to develop the capability, systems, and processes to collect all the applicable data. We also understand that some of the issues covered by the measures may not currently be front of mind for all network operators.

However, we expect that over time all network operators should be able to report on this information as part of their risk management system. For this reason, we are introducing the measures into three phases based on when we want network operators to start providing the data required. We are starting with those measures that most councils already collect data for and introducing later those measures that may require time to establish the systems and processes required.

For some of the measures we need to do more work to understand what data we will need to collect. The phased approach will allow for this. It will also give us time to consider how we can collect the data in a more consistent format.

Data collection will therefore be phased across the following three timeframes:

1. **From 1 July 2022 (highlighted light blue in Table One)**

2. **From 1 July 2023 (highlighted blue in Table One)**

3. **From 1 July 2024 (highlighted dark blue in Table One)**

Table One: Drinking water environmental performance measures

Insights	Performance Measure		
Is the environment and public health protected?	Drinking water service coverage		
	Water abstraction within environmental limits		
	Resource consent compliance		
	Fish passage and screening		
	Drinking water treatment by-products		
	Impact of capital works on ecosystems		
Are services economically sustainable?	Affordability		
	Revenue covers costs		
	Asset depreciation is funded		
	Debt at serviceable levels		
	Actual expenditure aligns with budgeted expenditure		
	Water supply capital investment projects		
Are services reliable?	Customer water use		
	Fault attendance and resolution		
	System interruptions		
	Asset condition		
	Water pressure		
	Water restrictions		
	Capacity to accommodate growth		
Are resources used efficiently?	Network water losses		
	Efficient consumer use of water		
	Alternative water use		
	Energy efficiency		
	Greenhouse gas emissions		
Are services resilient?	Sufficient fire-fighting water availability		
	Return to service post-natural disaster		
	Resilience to electricity/supply chain service disruptions		
	Resilience to cyber threats / terrorist attack		
	Ability to withstand drought		
	Managing climate change risk		

The tables in Appendix One contain a full set of performance measures, with corresponding timeframes and associated data. We expect the individual data requirements for measures with a longer timeframe will continue to be refined.

We are interested in whether we have missed any measures or data which will help us assess the insights identified. We are interested in whether you think some of the data we are asking drinking water network operators to collect is unnecessary, or whether some of the measures and/or data has been included in the wrong time-period. We will use your feedback to inform the phasing of measures.

We are also interested in how qualitative data can be used to build a richer picture of network environmental performance.

6. Alignment with Water New Zealand's National Performance Review

Water New Zealand carries out a National Performance Review (NPR) which collates and compares drinking water, wastewater, and stormwater services across Aotearoa. Information in the NPR is provided by territorial authorities and council-controlled organisations. Participation in the review is voluntary but relatively widespread, with many councils using the findings to inform decision making.

Environmental performance monitoring and reporting under the Act will cover many of the measures addressed in the NPR such as resource efficiency and reliability of water infrastructure. The report will also cover several measures not currently included in the NPR. These measures are necessary to provide us with the insights we require to assess environmental performance.

We have worked closely with Water New Zealand to develop and refine appropriate measures and test what is able to be collected. We will continue to work with Water New Zealand to avoid duplicate reporting processes and to create consistent ways of collecting and analysing data.

Interim approach for network operators

Over the next 18 months we encourage councils and council-controlled organisations to continue to engage with the NPR process. From 1 July 2022 we propose some data related to drinking water network performance will be mandatory. However, for the next few years the data relating to wastewater and stormwater networks will remain voluntary.

Continuing to engage with the NPR for all three waters will benefit network operators by continuing to build a picture of how assets are performing. It will also put them in a good position to comply with our requirements as this data collection becomes mandatory.

We appreciate the assistance of Water New Zealand and consider the NPR to be a useful tool from which we can build our approach. We will continue to work closely with Water New Zealand as we develop our statutory monitoring and reporting approach. We will engage further with the most affected parties early to mid-2022 to develop a road map for the next few years.

7. Next steps

Following public consultation, we will update the measures and timing to reflect feedback and publish a summary of submissions.

We will undertake additional targeted engagement before July 2022

Following public consultation, we'll use targeted engagement to finetune drinking water environmental performance measures ahead of July 2022. We'll use targeted engagement to test:
- data collection frequency, methods, and standards
- our approach to measuring data quality, including how much confidence we can have in the data
- how we approach qualitative data collection (e.g., how network operators provide a narrative to support the data they provide)
- additional, updated or amended measures to incorporate Te Ao Māori perspectives.

Wastewater and stormwater

We expect to begin work on wastewater environmental performance measures and standards in late-2022. Work on Stormwater environmental performance measures will begin after that. In the long-term, the Network Report will provide information about the performance of all three waters.

We will also need to develop targets for drinking water, wastewater, and stormwater and include commentary on how networks are performing against these targets in the Network Report.

8. Links with other Government work

We're considering the links between this work and other Government (existing and planned) initiatives. In particular:

- **Three Waters reform:** the proposed stand-up of the four water entities will not change the role of Taumata Arowai, but it will have an impact on our key stakeholders. For this reason, it will be important for us to work the National Transition Unit. The National Transition Unit has committed to working in a cohesive and joined-up manner with Taumata Arowai to minimise the impact on council operations during the regulatory and service reform process.

- **A future economic and consumer protection regulator for water:** in late-2021 the Ministry of Business, Innovation and Employment (MBIE) consulted on how economic regulation and consumer protection for the future three waters system should be designed. The intent is to introduce regulatory safeguards to ensure that consumers and communities receive efficient and affordable three waters services that meet the needs of current and future generations. There will be various interdependencies between our work and that of the new regulator so it will be important for us to work together to avoid duplication.

- **Resource management reform and freshwater planning processes:** we are engaging with the Ministry for the Environment to ensure we understand the impacts that may arise from the proposed changes to our resource management system or the implementation of the National Policy Statement for Freshwater Management.

We are also aware of other sources of network infrastructure, and state of the environment information. We have identified environmental data reporting sources that may overlap with our environmental performance work:

- **Te Waihanga, the Infrastructure Commission's Infrastructure Pipeline:** this pipeline incorporates information about three waters infrastructure including information collected as part of the NPR process.

- **Land, Air, Water Aotearoa (LAWA):** LAWA is a collaboration between regional councils which aims to connect New Zealanders with the environment by sharing environmental data and information. It provides a connection to our environment by sharing environmental data and information, including whether local spots are safe to swim and water quality trends.

- **State of the Environment Reporting:** The Ministry for the Environment and Statistics New Zealand regularly produce reports which summarise the state of our environment. Every six months they produce a report covering the state of a different attribute of our environment (i.e., freshwater, land, air etc). Every three years they produce a synthesis report which covers the state of our environment as a whole.

We are working with other agencies to align and integrate our reporting approach and contribute to environmental data in New Zealand. To facilitate this, in early 2022, we will prepare and publish an overview of our reporting in relationship to existing environmental and infrastructure reporting in New Zealand.

Appendix One: Summary of measures and data points

Measures to report on from 1 July 2022

We will require drinking water network operators to begin recording the data required for each measure from **1 July 2022**.

Data points that are already collected as part of Water New Zealand's National Performance Review are highlighted in **bold**. Other measures draw on metrics used in a range of sources including the Department of Internal Affair's non-financial performance measures, the Australian National Performance Review, and the Water Industry Commission for Scotland's data collection requirements.

Insight	Performance Measure	Data
Is environmental health protected?	Drinking water service coverage	**% of residential properties connected to drinking water network**
	Water abstractions within environmental limits	Water supply source type
		Volume of water abstracted (m³/year)
		Water abstractions for non-residential use (m³/year)
	Resource consent compliance	Resources consents are held for drinking water networks (e.g., water take consent, discharge consents, etc)
		Expiry dates for resource consents
		Permitted activity rules the network is operating under
Are services economically sustainable?	Affordability	**$/year for a residential household using 200m³ of water**
		$/m³ for a non-residential customer
		Average hours on a minimum wage to pay water bill
	Revenue covers costs	**Revenue/Operating costs, or Operating Surplus (+ve) or deficit (-ve) / Operating Income**
	Asset depreciation funded	**Capital renewal delivered/annual depreciation for the period**
	Debt at serviceable levels	**Net Financial Liabilities/Operating Income**
		Borrowing costs/revenue

	Actual expenditure aligns with budgeted expenditure	**Capital Renewal Planned Budget for a period / Capital Renewal Forecast Outlays warranted for the period**
	Water supply capital investment projects	Details (Name, Location, Start Date, End Date, Status, Budget, % Complete) of any investment projects over $100,000 or a significant change in the network
Are services reliable?	Customer water use	**% of residential customers with water meters**
		% of non-residential customers with water meters
	Fault attendance and resolution	**Average hours to attend to an urgent water supply fault**
		Average hours to attend to a non-urgent water supply fault
		Average hours to resolve to an urgent water supply fault
		Average hours to resolve to a non-urgent water supply fault
	Systems interruption	**Planned interruptions (Number)**
		Third party incidents (Number)
	Asset condition[4]	**% of pipelines that have received a condition grading**
		% of pipelines in poor or very poor condition
		% of above ground assets that have received a condition assessment
		% of above ground assets in poor or very poor condition
	Water pressure	**Average system pressure**
	Water restrictions[5]	**Water restriction days (properties*days)**
Are resources used efficiently?	Network water losses	**Estimated total network water loss (m3/year)**
		Percentage Estimated Total Network Water Loss (%)
		CARL (current annual real loss) (m3/year)
		CARL (current annual real loss) (L/connection/day)

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[4] This information is already collected under the National Performance Review, we want to keep collecting this information but in the medium to long term we want this information to be provided in a consistent manner so we can compare results across network operators.

[5] This information is already collected under the National Performance Review, we want to keep collecting this information but in the medium to long term we want to identify if there is a better way to provide data for this measure.

		CARL (current annual real loss) (m3/km mains/day)
		UARL (unavoidable annual real loss) (m3/year)
		UARL (unavoidable annual real loss) (L/connection/day)
	Efficient consumer use of water	Average residential water consumption (L/person/day)
	Energy efficiency	Energy use (kWh/m3)
		Energy generation (GJ/hours)
Are services resilient?	Sufficient fire-fighting water available[6]	Fire hydrants tested in the previous five years (%)

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[6] This information is already collected under the National Performance Review, we want to keep collecting this information but in the medium to long term we want to identify if there is a better way to provide data for this measure.

Measures to be reported on from 1 July 2023

We expect drinking water networks to start recording the data required from **1 July 2023**. We think these measures are important, but we know it will take some time to set up the systems to start collecting this information and/or we need to do more work to understand what data we will need to assess this measure.

Insights	Performance Measure	Potential Types of Data
Is environmental health protected?	Drinking water treatment by-products	Volume (sludge, backwash water, overflows)
		Disposal route
	Fish passage and screening	Is fish passage impeded or potentially impeded?
		Are all intakes screened appropriately?
	Resource consent compliance	Compliance with resource consent conditions
Are services economically sustainable	Affordability	Number of non-payments of water bills
Are services reliable?	Systems interruptions	Number of water main breaks, bursts, and leaks (/10km)
		Number of customers >1 burst for x days
		Total number of properties affected by unplanned interruptions
		Average hours unavailable per customer per year
	Water pressure	Properties below reference level of flow at end of year
Are resources used efficiently?	Network losses	Leakage ration day/night flows
	Alternative water use	Volume of recycled water supplied to residential customers
		Volume of recycled water supplied to non-residential customers
		Volume of recycled water supplied to managed aquifer recharge
		Volume of urban stormwater supplied to residential customer
Are services resilient?	Return to service post natural disaster	Days to connect to post disaster service levels
		Days taken to return to normal levels of service post disaster

Measures to be reported on from 1 July 2024

We expect drinking water networks to start recording the data required for each measure from **1 July 2024**. The specific data needed for these measures is likely to be more difficult to start collecting, particularly for smaller networks and/or we need to do the work to understand what data we will need to assess this measure.

Insights	Performance Measure	Potential Types of Data
Is environmental health protected?	Impact of capital works on ecosystems	Construction impacts from capital works including reinstatement/realignment of assets
	Water abstractions within environmental limits	Sufficient environmental flows
Are services reliable?	Capacity to accommodate growth	Population projections
		Network capacity
Are resources used efficiently?	Greenhouse gas emissions	Greenhouse gas capital emissions (tonnes/m3)
		Greenhouse gas operational emissions (tonnes/m3)
Are services resilient?	Return to service post natural disaster	Level of service during disaster
		Level of service post disaster
	Resilience to electricity/supply chain service disruptions	Outage allowance (allowance to cover temporary or short-term losses to supply)
	Resilience to cyber threats / terrorist attack	Processes in place to address cyber threats / terrorist attack
	Ability to withstand drought	Target headroom (minimum buffer between supply and demand)
	Managing climate change risk	Mitigations/planning to manage risks associated with increases in extreme events

Appendix Two: Timeline

	2022 Jan — Dec	2023 Jan — Dec	2024 Jan — Dec	2025 Jan
▲ Consultation	Public consultation Jan-Mar 2022 / Targeted consultation Apr-May 2022			
2021/22 ▲ Report		Report writing and publication — Water New Zealand's National Performance Review		
2022/23 ▲ Report		Data collection period 1 Jul 22 – 30 Jun 23 Data requirements for 2022 DW measures	Report writing and publication — Report against 2022 measures	
2023/24 ▲ Report			Data collection period 1 Jul 23 – 30 Jun 24 Data requirements for 2022 and 2023 DW measures	Report writing and publication — Report against 2023 measures
2024/25 ▲ Report				Data collection period 1 Jul 24 – 30 Jun 25 Data requirements for 2022, 2023, and 2024 DW measures — Report against 2024 measures