# Non-Financial Performance Measures Rules 2024

# Supporting guidance for drinking water

### Introduction to the activity

A reliable supply of water that is safe to drink is essential for good public health. A good quality water supply brings many direct and indirect benefits to communities and the country as a whole by helping to prevent the outbreak and spread of water-borne illnesses.

The performance measures will provide information on local authorities’ levels of service in providing drinking water. Being able to compare the levels of service provided by different local authorities will help communities to assess whether they need a better or lesser level of service.

The performance measures cover the following aspects:

1. Is the water safe to drink?
2. Is the water reticulation network being maintained to a standard that ensures safe water is available to customers?
3. Does the territorial authority responsible for the water service provide a timely response if there is a problem with the water supply?
4. Are customers satisfied with the service provided with both the operation of the service itself and how the territorial authority deals with complaints about the service?
5. Is the water supply system being managed in a way that ensures demand does not outstrip the available capacity?

Please note that where the term **territorial authority** is mentioned in this document, this can be taken to include council-controlled organisations (CCOs) who supply this service.

### Do you need to apply the performance measures?

The performance measures will be used to report on territorial authorities and CCOs who provide drinking water supplies. This is because the measures are meant to provide information on services provided by local government rather than by private suppliers.

For the purposes of the mandatory performance measures, **water supply** uses the definition of drinking water supply set out in section 9 of the Water Services Act 2021. This largely means the infrastructure and processes used to abstract, store, treat, transmit, or transport drinking water for supply to consumers or another drinking water supplier.

Specifically, the following aspects of the supply of water are **excluded**:

* measures relating to resource consent for the water take into the system. This is because there are already legislated requirements, under the Resource Management Act 1991, for the issuing and monitoring of resource consents; and
* malfunctions of privately-owned infrastructure and connections. The measures are intended to provide information to members of the public on the services provided by their territorial authority so only those services for which their territorial authority is responsible should be included.

### Reporting on results

It is good practice to report more than one year’s performance against particular performance measures. This allows ratepayers and other stakeholders to identify trends in the local authority’s performance. Territorial authorities are encouraged to maintain time series data for the performance measures and, where appropriate, graph the results. Where there are significant deviations between a target and the actual result, territorial authorities should include a commentary as to why this is the case. Also, in order to maintain continuity of trend data, local authorities may choose to report against both the new standard measures, and their previous measures for a few years.

In general, territorial authorities should ensure that they have appropriate systems in place to collect the information required to report against the performance measures. The methodology for reporting, including calculations, should also be clearly outlined.

Under the Non-Financial Performance Measures Rules 2024 any calculation, measure, number or percentage set out in the Rules must be calculated for a financial year.

| Performance measure one (safety of drinking water): The extent to which the local authority’s drinking water supply complies with the following parts of the drinking water quality assurance rules: 4.4 T1 Treatment Rules;4.5 D1.1 Distribution System Rule;4.7.1 T2 Treatment Monitoring Rules;4.7.2 T2 Filtration Rules;4.7.3 T2 UV Rules;4.7.4 T2 Chlorine Rules;4.8 D2.1 Distribution System Rule;4.10.1 T3 Bacterial Rules;4.10.2 T3 Protozoal Rules; and4.11.5 D3.29 Microbiological Monitoring Rule. |
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### Introduction to measure

This performance measure informs ratepayers and consumers on whether the water supplied to them is safe to drink.

This measure incorporates the Drinking Water Quality Assurance Rules 2022 (DWQAR), secondary legislation under section 49 of the Water Services Act 2021 implemented by the Water Services Authority - Taumata Arowai (the Water Services Authority). The DWQAR set out the minimum requirements for monitoring and treatment of drinking water supplies in relation to a supply’s abstraction points, treatment plants and distribution zones.

This includes water quality monitoring to ensure the Water Services (Drinking Water Standards for New Zealand) Regulations 2022 are met, and quality assurance measures to ensure systems, processes and monitoring equipment are working effectively.

The DWQAR can be viewed on the Water Services Authority’s website at this link: <https://www.taumataarowai.govt.nz/assets/Drinking-Water-Supplier/Drinking-Water-Quality-Assurance-Rules-2022-Revised-2024.pdf>.

### Guidance for reporting

Where there is more than one water supply in a city or district, these must be reported on separately. The **water supply** extents are to be defined as registered in Hinekōrako, the supplier portal hosted by the Water Services Authority; for example Town one, Town two etc.

In reporting on this measure, local authorities should use methodology and calculations that the Water Services Authority defines in their annual Drinking Water Regulation Report (DWRR). This methodology is provided is the ***DWQAR aggregate compliance rate document.*** This helps align methodologies to ensure consistent reporting on the safety and performance of drinking water supplies.

**The compliance data which local authorities self-report to the Water Services Authority should not be considered an independent assessment of council performance against this performance measure. The Water Services Authority does not audit or assure this data for the purposes of reporting against the non-financial performance measures.**

To assist with the transition to reporting against the revised DWQAR (occurring between 2024 and 2025), it is best practice to report the compliance of each water supply under two ‘groups’ of rules: Bacteriological Compliance and Protozoal Compliance.

We have indicated the key rules and considerations to assess local authority performance against this measure below.

Additional to the mandatory measures, we have also provided guidance for additional information that councils may choose to include when reporting against this non-financial performance measure. This is additional information that we have suggested for councils use to better demonstrate or explain their level of compliance against the Rules. These additional measures relate to the Water Services (Drinking Water Standards for New Zealand) Regulations 2022 (the Standards), and notifications made to the Water Services Authority.

### Supplies serving 26 – 100 people, have the level 1 rules apply:

| **Mandatory Level 1 Bacteriological Measures** | **Mandatory Level 1 Protozoal Measures** |
| --- | --- |
| **(a) T1 Treatment Rules**  **(b) D1.1 Distribution System Rule** | **(a) T1 Treatment Rules** |

Additional information that can be included in the reporting:

| **Recommended Level 1 Bacteriological Measures** | **Recommended Level 1 Protozoal Measures** |
| --- | --- |
| 1. Report on any notifications made to the Water Services Authority related to the supply of unsafe water related to bacteria risk. 2. Report on total number of *E. coli* samples taken in the supply which did not meet the Standards and the response to those non-compliant samples. | 1. Report on any notifications made to the Water Services Authority related to the supply of unsafe water related to protozoa risk. |

Where a supplier has adopted an acceptable solution for a supply, the supply is not required to meet the requirements of the performance measure rules.

### Supplies serving 101 – 500 people, have the level 2 rules apply:

| **Mandatory Level 2 Bacteriological Measures** | **Mandatory Level 2 Protozoal Measures** |
| --- | --- |
| **(c) T2 Treatment Monitoring Rules**   1. **(f) T2 Chlorine Rules** 2. **(g) D2.1 Distribution System Rule** | 1. **(c) T2 Treatment Monitoring Rules** 2. **(d) T2 Filtration Rules** 3. **(e) T2 UV Rules** |

Additional guidance that can be included in the reporting:

| **Recommended Level 2 bacteriological measures** | **Recommended Level 2 protozoal measures** |
| --- | --- |
| 1. Report on any notifications made to the Authority related to the supply of unsafe water related to bacteria risk. 2. Report on total number of *E. coli* samples taken in the supply which did not meet the Standards and the response to those non-compliant samples. | 1. Report on any notifications made to the authority related to the supply of unsafe water related to protozoa risk. |

### Supplies serving >500 people, have the level 3 rules apply:

| **Mandatory Level 3 Bacteriological Measures** | **Mandatory Level 3 Protozoal Measures** |
| --- | --- |
| 1. **(h) T3 Bacterial Rules** 2. **(j) D3.29 Microbiological Monitoring Rule** | 1. **(i) T3 Protozoal Rules** |

Additional guidance that can be included in the reporting:

| **Recommended Level 3 Bacteriological Measures** | **Recommended Level 3 Protozoal Measures** |
| --- | --- |
| 1. Report on any notifications made to the Water Services Authority related to the supply of unsafe water related to bacteria risk. 2. Report on total number of *E. coli* samples taken in the supply which did not meet the Standards and the response to those non-compliant samples. | 1. Report on any notifications made to the Water Services Authority related to the supply of unsafe water related to protozoa risk. |

Local authorities only have to report against the rules that apply to the size of each water supply. However, councils can elect to demonstrate compliance with a higher level of the Rules module if they choose as per the registration in Hinekōrako.

Local authorities should determine the extent to which each of their supplies have met each of the two groups of measures above for each of their supplies.

In their reporting, a territorial authority may estimate the percentage of properties which have implemented end-point treatment. We recommend percentages are represented in plain language and use the following thresholds: “All met” (100%), “Almost met” (95-99%), “Partially met” (1-94%), and “None met” (0%).

***The DWQAR aggregate compliance rate methodology*** should be used in calculating whether the performance measures for bacteriological compliance and protozoal compliance were “***All met***”, “***Almost met***”, “***Partially met***”, or “***None met***”.

To assist with transparency to the community, we recommend that local authorities disclose the size of the supply and the performance measure Rules that compliance is assessed against.

Some examples of how this might be presented is given below. Local authorities may choose to provide further information on the level of compliance achieved, including whether they have a drinking water safety plan and the extent to which the plan is implemented.

If the results for compliance on any of the measures are less than **“All met”**, then a commentary should be included as to why this is the case.

### Worked example

| **Target** | **Actual** |
| --- | --- |
| **Bacteriological Compliance** | |
| **Town One** = All met  Serviced population of 60 people, reporting against:   * (a) T1 Treatment Rules * (b) 4 D1.1 Distribution System Rule | **Town One**  Serviced population of 60 people, reporting against:   * (a) T1 Treatment Rules = All met * (b) D1.1 Distribution System Rule = All met |
| **Town Two** = All met  Serviced population of 300 people, reporting against:   * (c) T2 Treatment Monitoring Rules * (f) T2 Chlorine Rules * (g) D2.1 Distribution System Rule | **Town Two**  Serviced population of 300 people, reporting against:   * (c) T2 Treatment Monitoring Rules = Almost met * (f) T2 Chlorine Rules = All met * (g) D2.1 Distribution System Rule = All met   The team responsible for *E. coli* sampling had some staff turnover and as a result no E. coli sample was taken in October resulting in 1 month non-compliance with T2.1-ecol and T2.2-ecol. All other samples were collected so their overall compliance for Treatment Monitoring was still over 95% |
| **Town Three** = All met  Serviced population of 4000 people, reporting against:   * (h) T3 Bacterial Rules * (j) D3.29 Microbiological Monitoring Rule | **Town Three**  Serviced population of 4000 people, reporting against:   * (h) T3 Bacterial Rules = Partially met * (j) D3.29 Microbiological Monitoring Rule = All met   The supply is reporting against T3.1-6 chlorine disinfection for bacterial treatment compliance and, due to instrumentation issues could not demonstrate contact time for 21 days. Therefore their compliance was calculated as (365-21)/365 = 344/365 = 94.2% |
| **Protozoal Compliance** | |
| **Town One** = All met  Serviced population of 60 people, reporting against:   * (a) T1 Treatment Rules | **Town One**  Serviced population of 60 people, reporting against:   * (a) T1 Treatment Rules = Partially met   The supply did not take a turbiditysample in the first quarter of the reporting period and calculated their overall compliance with these rules as 91.6% |
| **Town Two** = All met  Serviced population of 300 people, reporting against:   * (c) T2 Treatment Monitoring Rules * (d) T2 Filtration Rules * (e) T2 UV Rules | **Town Two**  Serviced population of 300 people, reporting against:   * (c) T2 Treatment Monitoring Rules = All met * (d) T2 Filtration Rules = All met * (e) T2 UV Rules = All met |
| **Town Three** = All met  Serviced population of 4000 people, reporting against:   * (i) T3 Protozoal Rules | **Town Three**  Serviced population of 4000 people, reporting against:   * (i) T3 Protozoal Rules = Almost met   The supply sources water from a source with a log requirement of 4 that is treated with cartridge filtration and UV. Due to a power surge the plant could not provide the requisite UV dose that day, as cartridge filtration alone only provides 2 log credits the supply only provided sufficient log credits for 364/365 days giving a compliance rate of 99.7% |

| Performance measure two (maintenance of the reticulation network) The percentage of real water loss from the local authority’s networked reticulation system (including a description of the methodology used to calculate this). |
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### Introduction to measure

This performance measure provides information on the state and operation of a territorial authority’s water reticulation network infrastructure.

Water loss is a key indicator of the performance of a reticulated water supply. High levels of water loss may indicate that the reticulation network is in poor condition or that it is being operated inefficiently. Water lost from the reticulation network is a cost to communities and wastes a valuable natural resource.

Information provided by this performance measure will help communities and territorial authorities to decide whether improvements are needed to either operational systems or the water network infrastructure.

The performance measure does not directly measure water pressure. Issues with water pressure will be reported through performance measure four, covering customer satisfaction (specifically through the number of complaints about water pressure).

### Guidance for reporting

**Water losses** should be determined using the methodology outlined in the Water Services Authority’s [Network Environmental Performance Measure (NEPM) guidance](https://www.taumataarowai.govt.nz/for-water-suppliers/network-environmental-performance-measures/) for:

* **D-RE1 Estimated total drinking water network water loss (m3/year).**
* **D-EH4 Water supplied to the drinking water network (m3/year)**

Volumes should be separately reported, enabling a percentage of losses to be determined.

The measure can be provided as whole of level district, however is recommended to be provided per network in line with the NEPM.

### Worked example

| **Calculation** | **Target** | **Actual** |
| --- | --- | --- |
| *Please note: the calculation does not have to be reported.*  D-RE1 Estimated total drinking water network water loss = 2842400 m3/year  D-EH4 Water supplied to the drinking water network = 13253000 m3/year  Calculation for water loss is 2842400/13253000 = 0.21% | Target real water loss from the local authority’s networked reticulation system ≤ 20% | Real water loss from network reticulation system = 21% |

| Performance measure three (fault response times): Where the local authority attends a call-out in response to a fault or unplanned interruption to its networked reticulation system, the following median response times are measured:   1. attendance for urgent call-outs: from the time that the local authority receives notification to the time that service personnel reach the site; 2. resolution of urgent call-outs: from the time that the local authority receives notification to the time that service personnel confirm resolution of the fault or interruption; 3. attendance for non-urgent call-outs: from the time that the local authority receives notification to the time that service personnel reach the site; and 4. resolution of non-urgent call-outs: from the time that the local authority receives notification to the time that service personnel confirm resolution of the fault or interruption. |
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### Introduction to measure

This measure shows the speed at which a territorial authority attends to problems with a water supply.

Measuring response time is a way of gauging whether a territorial authority is listening to its customers and providing solutions. An appropriate response to an urgent water supply outage is important because households and businesses require water to function, and without water a building can quickly become insanitary.

### Guidance for reporting

These measures should be reported using definitions provided in the Water Services Authority’s [Network Environmental Performance Measure (NEPM) guidance](https://www.taumataarowai.govt.nz/for-water-suppliers/network-environmental-performance-measures/) for:

* **D-R1 Median hours to attend to an urgent fault (3a)**
* **D-R2 Median hours to attend to a non-urgent fault (3b)**
* **D-R3 median hours to resolve an urgent fault (3c)**
* **D-R4 Median hours to resolve a non-urgent fault (3d)**

### Worked example

| **Target** | **Actual** |
| --- | --- |
| Territorial authority target response to an urgent callout ≤ 1 hour | Median response time to get to site for an urgent callout = 0.9 hours |
| Territorial authority target to resolve an urgent callout ≤ 8 hours | Median time to resolve the problem from an urgent callout = 4.41 hours |
| Territorial authority target to respond to a non-urgent callout ≤ 11 hours | Median response time to get to site for a non-urgent callout = 6.75 hours |
| Territorial authority target to resolve a non-urgent callout ≤ 14 hours | Median time to resolve the problem from a non-urgent callout = 9.16 hours |

| Performance measure four (customer satisfaction): The total number of complaints received by the local authority about any of the following:  (a) drinking water clarity;  (a) drinking water taste;  (b) drinking water odour;  (c) drinking water pressure or flow;  (d) continuity of supply; and  (e) the local authority’s response to any of these issues, expressed per 1000 connections  to the local authority’s networked reticulation system. |
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### Introduction to measure

This measure provides information on issues with a water supply and on how satisfied customers are with the way in which a territorial authority responds to requests to fix problems.

Customer satisfaction is a key measure of the quality of a service. Suppliers need to know whether customers are satisfied with the adequacy and reliability of the service they pay for.

The measure also provides data that highlights problems requiring attention, such as the need for upgraded or new infrastructure.

### Guidance for reporting

This performance measure should be reported as a single, city or district wide assessment (count). Reporting on complaints per town or complaints by type is not required.

The number of water connections may be calculated from the sum of residential and non-residential connections as defined in the Water Services Authority’s [Network Environmental Performance Measure (NEPM) guidance](https://www.taumataarowai.govt.nz/for-water-suppliers/network-environmental-performance-measures/) for:

* **D-EH1 Number of residential connections in the drinking water network**
* **D-EH2 Number of non-residential connections in the drinking water network**

The complaints data will be collected as part of the councils (or CCOs or contracted) RFS processes.

Where there is more than one complaint per event, each complaint is counted separately, not each event or occurrence. This records the public’s response to the event. However, complaints should not be counted if a territorial authority finds, upon inspection, that fixing the issue complained of is the private landowner’s responsibility.

Complaints that relate to planned shutdowns should be counted in the result.

### Worked example

| **Calculation** | **Target** | **Actual** |
| --- | --- | --- |
| *Please note: the calculation does not have to be reported.*  Number of residential connections in the water rated network (D-EH1) = 22,000  Number of non-residential connections in the drinking water network (D-EH2) = 526  Total number of complaints = 308  Calculation for number of complaints per 1000 connections is 308 / ((22,000 + 526)/1000) = 14 (rounded to nearest whole number) | Target number of complaints ≤ 5 complaints per 1000 connections | Number of complaints = 14 per 1000 connections |

| Performance measure five (demand management): The average consumption of drinking water per day per resident within the territorial authority district. |
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### Introduction to measure

This performance measure provides information on whether the water supply system is being managed to ensure demand does not outstrip capacity.

The performance measure will help communities and territorial authorities make informed choices on how they use their water resources. Careful management of the demand for water is an important component of integrated water resources management to ensure that demand does not exceed capacity, that water is allocated efficiently and that productivity is maximised.

A system that treats and transfers less water maximises the value of existing infrastructure. It costs less to construct and maintain, and uses fewer chemicals and less energy. Where there is increasing demand for water, managing demand provides a means for a community to defer investment in new water infrastructure through more efficient use of existing water resources.

### Guidance for reporting

The performance measure should be reported as a single, city or district wide assessment (number).

Consumption is to be expressed as litres per person per day and based on the following fields defined in the Water Services Authority’s [Network Environmental Performance Measure (NEPM) guidance](https://www.taumataarowai.govt.nz/for-water-suppliers/network-environmental-performance-measures/) for:

* **D-EH4 Water supplied to the drinking water network (m3/year)**
* **D-EH7 Non-residential water use (m3/year)**
* **D-EH3 Total population served by the drinking water network**

Compliance should be calculated using the following formula:

*(D-EH4 Water supplied to the drinking water network - D-EH7 Non-residential water use)/ D-EH3 Total population served by the drinking water network / 365 / 1000*

Some territorial authorities may choose to also report a **peak season** metric as population changes may vary significantly, such as beach towns, or ski areas during holiday periods.

### Worked example

| **Calculation** | **Target** | **Actual** |
| --- | --- | --- |
| *Please note: the calculation does not have to be reported.*  Water supplied to the drinking water network (D-EH4)= 8,527,200 m3 / year  Non-residential water use (D-EH7) = 2,800,000m3 /year  Normal population serviced = 61,200  Calculation for normal demand is ((8,527,200 – 2,800,000)\*1000) / 61,200 / 365 = 256 litres/person/day (rounded to nearest whole number) | Target normal demand ≤ 180 litres/person/day | Normal demand = 256 litres/person/day |