Proposed changes to New Zealand's Drinking Water Quality Assurance Rules for supplies that serve 500 or fewer people

How to use this document

This document shares the content of the consultation underway now seeking feedback on proposed changes to New Zealand's Drinking Water Quality Assurance Rules for supplies that serve 500 or fewer people.

This has been provided to enable suppliers to collate feedback from across their organisations.

We ask that this feedback is then input via the **online consultation.**

te-puna-korero.taumataarowai.govt.nz/regulatory/dwqar-small-medium

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Introduction

At Water Services Authority – Taumata Arowai, we're committed to ensuring that safe water obligations for small drinking water suppliers are cost-effective and appropriate to the supply size and level of risk.

We're undertaking a review of the Drinking Water Quality Assurance Rules (the Rules) in two parts. First, we're seeking your feedback on proposed changes to Rules for supplies that serve 500 or fewer people. Second, we plan to consult on proposed changes to Rules for supplies that serve 500 or more people by late-2025.

This Rules review is one of several initiatives we will seek sector input into in the near future, aimed at making compliance more straightforward for drinking water suppliers or network operators.

Why are we proposing these Rule changes now?

We're reviewing the Rules in two parts to make Rules for small and medium-sized suppliers clearer, sooner.

We propose that updated Rules for supplies that serve 500 or fewer people apply from 1 January 2025 to align with the annual drinking water regulation reporting cycle. You'll be invited to provide feedback on this effective date in this consultation.

More specifically, these proposed changes for small and medium-sized suppliers aim to:

- make the Rules more straightforward and streamlined
- reduce overall effort required to demonstrate compliance with Rule requirements.

Suppliers must comply with all Rules relevant to their supply. However, these proposed changes more clearly indicate which Rules suppliers need to, and do not need to, report on to Taumata Arowai.

What can I expect from the consultation?

We've grouped Rule changes for:

- supplies that serve 25 or fewer people (Very Small Communities)
- supplies that serve 26 – 100 people (Small Supplies)
- supplies that serve 101 – 500 people (Medium Supplies)
- communities with changing populations. (Varying Populations)

To help save time, you can have your say on proposed changes to Rules for one or more of these supply types, in line with your preference and interests. Everyone also has the option to provide feedback on reporting Rules and the proposed effective date for Rules to apply. If you start responding to this consultation and want to return to it later, select the 'Save and come back later' option at the bottom of the page to save your progress.

Have your say by Friday, 18 October

This consultation closes at 5pm on Friday, 18 October 2024.

Get started!

Please complete the **online survey** to have your response included in this consultation.

https://te-puna-korero.taumataarowai.govt.nz/regulatory/dwqar-small-medium

Questions?

We ask that you provide all feedback via the online consultation questions. Free text boxes are provided for any individual comments you want to provide. If you have questions about this consultation, please email us at: korero@taumataarowai.govt.nz.

Tell us about yourself

1. What is your name?

First name (Required)

Last name (Required)

2. What is your email address? Your email address will only be used if we need to communicate with you about your submission.

Email

3. Where do you live? (If you are a member of an organisation that is based in more than one region – please select 'National')

(Required)

- ○ Outside New Zealand
- ○ National
- ○ Northland / Te Tai Tokerau
- ○ Auckland / Tāmaki-makau-rau
- ○ Waikato
- ○ Bay of Plenty / Te Moana-a-Toi
- ○ Gisborne / Te Tai Rāwhiti
- ○ Hawke's Bay / Te Matau-a-Māui
- ○ Taranaki
- ○ Manawatū – Whanganui
- ○ Wellington / Te Whanganui-a-Tara
- ○ Tasman / Te Tai-o-Aorere
- ○ Nelson / Whakatū
- ○ Marlborough / Te Tauihu-o-tewaka
- ○ West Coast / Te Tai Poutini
- ○ Canterbury / Waitaha
- ○ Otago / Ōtākou
- ○ Southland / Murihiku

4. Are you providing feedback as an individual or on behalf of an organisation?

(Required)

- ○ As an individual
- ○ On behalf of an organisation or group

If you're providing feedback on behalf of an organisation, please enter the organisation's name and your position/title within the organisation

Organisation (Required)

Position/Title

Which of these options best describes you in the context of this consultation?

(Required)

- ○ Individual water drinker / consumer
- ○ Registered drinking water supplier (excluding marae)
- ○ Unregistered drinking water supplier (excluding marae)
- ○ Other commercial water user
- ○ Stakeholder representative / industry body
- ○ Iwi representative organisation
- ○ Marae
- ○ Health professional
- ○ Laboratory
- ○ Regional Council
- ○ Central government agency
- ○ Local interest group
- ○ Other

If other, please specify

What size population is served by drinking water supply/ies you manage?

(Required)

- ☐ 1 - 25 people
- ☐ 26 - 100 people
- ☐ 101 - 500 people
- ☐ Over 500 people
- ☐ I don't know

Publishing submissions and Official Information Act 1982 requests

Publishing your submission

We're committed to transparency. For this reason, we:

- intend to proactively publish submissions made as part of this consultation on our website but only if we are given permission to do so
- may also publish a summary of submissions; this summary would be aggregated so that individual submitters can't be identified.

Do you give us permission to proactively publish your submission? (Select an option)

[drop down selection follows]

- Yes, you may publish this submission including my personal details (name, organisation, email address).
- Yes, but without details that identify me. You may publish this submission but only after removing my personal details (name, organisation, and email address).
- No. Do not publish this submission.

Official Information Act requests

Your submission will be subject to requests made under the Official Information Act (even if your submission is not published). Please respond to the question below to let us know if you would like your personal details removed from your submission if it is included in any future OIA response.

Do you approve including your personal details in response to any related future Official Information Act requests received by Taumata Arowai?

[drop down selection follows]

- Yes, include my personal details in response to Official Information Act requests.
- No, remove my personal details from responses to Official Information Act requests.

Proposed updates to Rules for supplies that provide drinking water to 1- 25 people

The Government has proposed legislative changes that may impact which supplies are included in this category in the future. Until any legislative changes come into effect, the Rules below for suppliers serving 25 people or fewer continue to apply.

To take an approach that's reasonable for drinking water suppliers and proportionate to the scale of the risk to communities, Rules for these Very Small Communities drinking water supplies (VSC Rules) are intentionally streamlined.

Please note that we haven't included VSC.2 Rule below as it is has not changed.

Take a look at the unchanged VSC.2 Rule

VSC.2 All water samples analysed for *E. coli* and total coliforms must be analysed by a laboratory accredited by IANZ for those tests and samples must be collected according to the requirements provided by the laboratory.

Monitoring for E. coli and total coliforms (VSC.1)

This proposed Rule change provides suppliers with more flexibility as it doesn't require five months between *E. coli* and total coliforms sample dates.

Existing Rule	Proposed change
VSC.1 A sample of water collected from the distribution system of the supply must be analysed for *E. coli* and total coliforms every 6 months. There must be a period of at least 5 months between sample collection dates. *Suppliers do not need to report on this Rule now.*	VSC.1 Water from the supply must be monitored at least every 6 months for *E. coli,* and total coliforms. *Suppliers would not need to report on this Rule.*

Do you agree with this proposed change?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Providing the community with all sampling results

We propose removing the Rule to provide the community with all *E. coli* and total coliform test results.

The Water Services Act 2021 (Sections 21 and 22) require all suppliers to inform the community they serve, and us, if the drinking water they supply is, or may be, unsafe. This proposed Rule change does not alter this responsibility.

Rather it aims to remove a requirement to notify the communities supplied of testing results that confirm drinking water is safe. This proposed change aligns with approaches that apply now for suppliers managing other supply sizes.

Existing Rule	Proposed change
VSC.3 The results of the samples collected and analysed under Rule VSC.1, must be promptly made available to the owners/occupiers of all properties connected to the supply. *Suppliers do not need to report on this Rule now.*	We propose removing this Rule.

Do you agree with this proposed change?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

What to do when the population served by a supply temporarily exceeds 50 people (VSC.3)

If their small community temporarily exceeds 50 people, this change proposes that the supplier tests for *E. coli* and total coliforms:

- one week before the population increases, if you know the population increase will happen
- as previously, continue testing weekly until the population drops below 50 people.

This proposed test a week before your population increases is to ensure drinking water is of an acceptable quality before the number of people using it increases.

Related proposed Rules for 'Very Small Communities' supplies with changing populations

Please note that proposed updates to additional Rules for supplies with changing community populations (Varying Population Rules) would apply to 'Very Small Communities' supplies that serve 25 people or fewer, if the Rules are changed. Under these proposed changes:

- VP.1 would apply if any supply that usually serves 100 people or fewer exceeds 100 people
- VP.2 would apply if any supply that usually serves 100 people or fewer exceeds 500 people.

You can provide feedback on these proposed Rule changes in the 'Rules for supplies with changing community populations' section of this consultation.

Existing Rule	Proposed change
N/A Table 2 - Very small communities category requirements Up to 25 people, or up to 50 people for up to 60 days in any 12 month period. If supplying drinking water to a planned event which increases the total population to more than 50 people - follow the general and temporary drinking water supply Rules for the duration of the planned event. *Suppliers do not need to report on this Rule now.*	**VSC.3** When the population exceeds 50 people, a sample for *E. coli* and total coliforms must be taken from the water supply— (a) in the week prior to the population exceeding 50 people (if the population exceedance is predictable); and (b) weekly until the population reduces to below 50 people. *Suppliers would not need to report on this Rule.*

Do you agree with this proposed change?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Rules for supplies that provide drinking water to 26-100 people

To help make it easier to provide feedback, proposed Rule changes have been categorised by source water, treatment and distribution.

While the Rule changes are generally minor, we have put key changes first. This means some Rules may not be presented in number order.

If you start responding to this consultation and want to return to it later, select 'Save and come back later' to save your answers.

Please note that we haven't included S1.3 Rule below (requiring suppliers to investigate complaints that could relate cyanotoxins) as the content of this Rule has not changed.

Take a look at the unchanged S1.3 Rule

S1.3 Consumer taste or odour complaints, which have the potential to relate to cyanotoxins, must be recorded and investigated to determine the cause.

Rules for source water

Monitoring roof sources (S1.2)

This proposed change:

- consolidates two Rules to help make compliance more straightforward
- removes the requirement to test for benzo[α]pyrene and zinc every three years.

Benzo[α]pyrene is only a risk for roof water supplies that get soot deposited on them from nearby fires. We propose removing this three-yearly reporting Rule because separate Rules (S1.5 and T1.1) require suppliers to identify benzo[α]pyrene if it is a supply risk. They would then be expected to test for it. We also expect that risks from benzo[α]pyrene would be identified and managed in the drinking water safety plans for relevant supplies. This approach is consistent with the Acceptable Solution for Roof Water Supplies, which states that testing for benzo[α]pyrene is only required if there is a chimney or open fire on the property the source water is collected from.

We plan to develop guidance on how to appropriately manage benzo[α]pyrene risk to help support suppliers with related risks.

Zinc impacts how drinking water tastes. However, there is currently no maximum acceptable value (MAV) for zinc in New Zealand's Drinking Water Standards (the Standards). MAVs set out the maximum amounts of metals and other substances that are acceptable in drinking water from a public health perspective.

Because zinc is not included in the Standards, we propose providing guidance related to zinc and drinking water rather than including zinc-related requirements in the Rules. This is intended to help streamline the Rules for suppliers.

Existing Rule	Proposed change
S1.2 Roof water sources must be monitored for the determinands and at the frequency set out in Table 9. - *E. coli* and total coliforms monitored every 3 months. - Cadmium, copper, zinc, lead, benzo [α]pyrene (collected in winter – June, July, or August) monitored every 3 years. **S1.5** Samples must be collected at the source abstraction point or treatment plant (prior to treatment) for surface or groundwater supplies, and at the raw water storage tank outlet for roof water supplies. *Suppliers need to report on Rule S1.2 now, but not S1.5.*	**S1.2** Roof water sources must be monitored— (a) at least every 3 months for— (i) *E. coli*; (ii) total coliforms; and (b) at least every 3 years for — (i) cadmium; (ii) copper; (iii) lead; and (c) samples for (a) and (b) must be collected at the raw water storage tank outlet and prior to any treatment. Suppliers would need to report on this Rule.

Do you agree with the proposed removal of benzo[α]pyrene from the Rules?

[Radio buttons: Yes / No / I don't know]

Do you agree with the proposed removal of zinc from the Rules?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Monitoring surface and groundwater sources (S1.1)

Iron impacts how drinking water looks and tastes. There is currently no maximum acceptable value (MAV) for iron included in New Zealand's Drinking Water Standards (the Standards).

MAVs set out the maximum amount of metals and other substances that are acceptable in drinking water from a public health perspective.

Because iron is not included in the Standards, we propose providing guidance related to iron and drinking water rather than including requirements in the Rules. This is intended to help streamline the Rules for suppliers.

The intent of existing source water Rules is to find out about the quality of each source, not the quality of water at the treatment plant.

However, we understand that some suppliers may currently mix sources and collect a source water sample at the treatment plant to test.

This proposed change clearly states that source water samples for testing must be collected at the abstraction point or treatment plant prior to treatment and/or mixing with other sources. This delivers on the original intent of this Rule, which has always been to understand the quality of each water source.

New guidance will be created to help people understand source water monitoring requirements.

Existing Rule	Proposed change
S1.1 Surface and groundwater sources must be monitored for the determinands and at the frequency set out in Table 8. - *E. coli* and total coliforms monitored every 3 months. - Arsenic, boron, nitrate, iron, manganese monitored every 3 years. **S1.5** Samples must be collected at the source abstraction point or treatment plant (prior to treatment) for surface or groundwater supplies, and at the raw water storage tank outlet for roof water supplies. *Suppliers need to report on S1.1 now, but not S1.5.*	**S1.1** Surface and groundwater sources must be monitored— (a) at least every 3 months for— (i) *E. coli*; (ii) total coliforms; and (b) at least every 3 years for— (i) arsenic; (ii) boron; (iii) nitrate; (iv) manganese; and (c) samples for (a) and (b) must be collected at the abstraction point or treatment plant prior to treatment and/or mixing with other sources. *Suppliers would need to report on this Rule.*

Do you agree with the proposed removal of iron from the Rules?

[Radio buttons: Yes / No / I don't know

Do you agree with the proposed clarification that source water testing samples must be collected at the abstraction point or treatment plant, prior to treatment and/or mixing with other sources, to align with the original intent of related source water Rules?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Monitoring after exceeding 50% of a MAV (S1.5)

Suppliers need to carry out extra monitoring if:

- any chemical creates a supply risk *or*
- 50% of the maximum acceptable value (MAV) for a chemical has been exceeded.

This proposed change reduces how long this extra monitoring needs to be carried out – from six test results under 50% of the MAV to three test results. We see this revised testing approach as reducing overall effort and cost for suppliers while still providing sufficient information about water quality.

New guidance will be created to help people understand source water monitoring requirements.

Existing Rule	Proposed change
Footnote 15 Monitoring must be three monthly for any result that exceeds 50% of the MAV. Can reduce to three yearly when 6 consecutive results are less than 50% of the MAV. *Suppliers need to report on this now.*	**S1.5** Any chemical determinands that are identified as presenting a risk to the supply or are found to exceed 50% of their MAV in source water samples must be monitored at least every 3 months until 3 consecutive results from source water samples are less than the 50% of the MAV. *Suppliers would still need to report on this Rule.*

Do you agree with this proposed change?

[Radio buttons: Yes / No / I don't know]

What do you think a reasonable length of time is to continue monitoring when 50% of the maximum acceptable value (MAV) for a chemical has been exceeded?

[free text box]

Please provide any further comment in the box below:

[free text box]

Monitoring for cyanotoxins (S1.4)

To help make the Rule below easier to understand and follow, we propose some formatting improvements and simplified how it is written.

The requirements of this Rule have not changed.

Existing Rule	Proposed change
S1.4 Each month between October and May (inclusive), the water and area within 50 metres of a surface water intake must be visually inspected for the presence of benthic cyanobacteria mats and planktonic cyanobacterial growth. If there is evidence of cyanobacterial growth, steps must be taken to evaluate the cyanotoxin risk to consumers. If there is a risk of supplying water with cyanotoxins that exceed MAVs, abstraction of water must be discontinued until the risk is no longer present. Suppliers do not need to report on this Rule now.	**S1.4** The following measures must be taken in relation to cyanobacteria and cyanotoxins: (a) each month between October and May (inclusive), the water and area within 50 metres of a surface water intake must be inspected for the presence of benthic cyanobacteria mats and planktonic cyanobacterial growth: (b) if there is evidence of cyanobacterial growth, steps must be taken to evaluate the cyanotoxin risk to consumers: (c) if there is a risk of supplying water with cyanotoxins that exceed MAVs, abstraction of water must be discontinued until the risk is no longer present. Suppliers would not need to report on this Rule.

Does this formatting change make the steps required to check for and address cyanoacteria risks clear?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Rules for treatment

Cartridge filter requirements (T1.3)

Cartridge filters remove particles from the water as it passes through a porous medium. Particles larger than the pores in the filter are trapped on the outside and the smaller particles pass through, just like a tea strainer. Cartridge filters can be an effective way of removing turbidity and particulate material from water.

Currently, suppliers need to filter groundwater abstracted from 0 – 30 metres deep using a cartridge filter.

We are considering changing this Rule, so that a filter is required for groundwater that is abstracted from 0 - 10 metres' deep as the minimum standard, with suppliers adding further filtration as needed to appropriately manage supply risks. This is key as high turbidity can reduce the effectiveness of chlorine and UV (ultraviolet) treatment equipment.

We are seeking feedback on any potential impacts this proposed Rule change would have on supplies.

We consider this proposed Rule change would impact suppliers only when they install new cartridge filter infrastructure.

Note that if this Rule changes, suppliers would not be required to remove filters on bores over 10 metres' deep currently in place.

Existing Rule	Proposed change
T1.2 All water passing through the treatment plant (excluding groundwater abstracted from a depth of >30 metres) must be filtered by a cartridge filter system that includes a 5 micron or smaller pore size. *Suppliers do not need to report on this Rule now.*	**T1.3** All water, except groundwater abstracted from a depth of greater than 10 metres, which passes through the treatment plant, must be filtered by a cartridge filter system that includes a 5 micron or smaller pore size. *Suppliers would not need to report on this Rule.*

Do you agree with this proposed change?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Monitoring water leaving the treatment plant (T1.1)

This proposed Rule consolidates and clarifies related treatment and distribution Rules, and supporting information, to make the Rules for testing treated drinking water easier to understand and follow.

The proposed change maintains the requirement to test for chemicals whenever there is a related supply risk.

Point 'd' in the proposed Rule below reflects common practice for how small suppliers monitor to effectively assess and manage risks relating to determinands (chemicals) identified in their drinking water safety plan. Once three tests for additional determinands (chemicals) come back at under 50% maximum acceptable value (MAV), no further monitoring is required unless a change in risk level warrants this.

Note that although Footnote 18 is being removed to streamline the information provided, it remains normal practice and acceptable to use one sample to test for both *E. coli* and total coliforms. This will be included in related guidance.

We also propose removing references to drinking water safety plans (DWSPs) and source water risk management plans (SWRMPs) throughout the Rules because we don't think it's necessary.

Existing Rule	Proposed change
T1.8 Water leaving the treatment plant must be monitored for the determinands and at the frequencies set out in Table 10. - *E. coli,* total coliforms, and turbidity monitored every 3 months. **Footnote 18** Analysis for both *E. coli* and total coliforms can be undertaken by a laboratory from one water sample. **D1.1 (part of)** Water in the distribution system must be monitored for... and any other determinands identified in the supply's Drinking Water Safety Plan (including its Source Water Risk Management Plan). *Suppliers need to report on these Rules now.*	**T1.1** Water leaving the treatment plant must be monitored at least every 3 months for— (a) *E. coli;* (b) total coliforms; (c) turbidity; and (d) any additional determinand(s) which are identified as presenting a risk to the supply until 3 consecutive results from treated water samples confirm the determinand(s) to be less than 50% of the MAV. *Suppliers would still need to report on this Rule.*

Do the proposed wording and formatting changes make this Rule easier to understand?

[Radio buttons: Yes / No / I don't know]

Do you agree with removing reference to drinking water safety planning from the Rules?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

UV (ultraviolet) treatment (T1.5)

To make it easier to understand and follow the Rules, this proposed change:

- consolidates UV (ultraviolet) treatment-related Rules and information into one Rule
- simplifies the formatting and wording of the Rule.

This proposed change also makes simpler and clearer how UV disinfection units must be installed, maintained, operated and certified. For example, by:

- clarifying the level of UV treatment (required dose) that is needed (40 mJ/cm^2) to inactivate bacteria and protozoa; this is already required under Rule T1
- including additional certification options (e.g., the new DIN standards)
- only allowing a set-point dose approach. (Under the existing Rules, a calculated dose approach was also permitted. As a set-point dose approach is easier and cheaper to use, it's a better fit for smaller supplies.)

This proposed change also confirms that suppliers may use equipment certified to an older standard, where that equipment is already installed.

Existing Rule	Proposed change
T1.5 All water passing through the treatment plant must be disinfected with UV light. **T1.6** UV units must be maintained and operated according to the manufacturer's instructions and must be suitable for the inactivation of bacteria and protozoa. **T1.7** UV units must be certified to (and operate within the specifications of) at least one of the following standards: 1. NSF/ANSI 55 Class A (NSF, ANSI n.d); 2. Ultraviolet Disinfection Guidance Manual (USEPA 2006b); 3. DVGW Technical Standard W294 (DVGW 2006); 4. ÖNORM M 5873-1: 2020 01 01.17 **Footnote 16** UV disinfection units purchased before 1 August 2022 are not required to meet the requirements of this Rule. **Footnote 17** UV reactors installed before 1 January 2020 can be certified to ÖNORM M5873 (Osterreichisches Normungsinstitut 2001) *Suppliers do not need to report on this Rule now.*	**T1.5** All water passing through the treatment plant must be disinfected with UV light and UV units must— (a) deliver at least 40 mJ/cm^2 (or equivalent) reduction equivalent dose (RED) of UV light; and (b) be installed, maintained and operated according to the manufacturer's instructions; and (c) be certified to (and operate within the specifications of) at least one of the following standards unless purchased before 1 August 2022: (i) NSF/ANSI 55 Class A (NSF, ANSI n.d): (ii) Ultraviolet Disinfection Guidance Manual (USEPA 2006b) for set-point dose approach only: (iii) DVGW Technical Standard W294 (DVGW 2006): (iv) ÖNORM M 5873-1: 2020 01 01 or ÖNORM M5873 (Osterreichisches Normungsinstitut 2001): (v) DIN 19294-1:2020-08. *Suppliers would not need to report on this Rule.*

Do you agree with the proposed requirement for a 40 mJ/cm^2 minimum dose of UV light to be made explicit in the Rules and replace Rules T1.5 and T1.6?

[Radio buttons: Yes / No / I don't know]

Do you agree with adding the new DIN standard to this list of applicable standards?

[Radio buttons: Yes / No / I don't know]

Do you agree with adding the older ÖNORM standard to the list of applicable standards?

[Radio buttons: Yes / No / I don't know]

Do you agree with limiting level 1 supplies to using the set-point dose approach?

[Radio buttons: Yes / No / I don't know]

Does consolidating this material into one Rule make it easier to understand UV requirements?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment relating to these questions in the box below:

[free text box]

Making filtration Rules easier to understand (T1.2 and T1.4)

To make the two Rules below easier to understand and follow, we propose formatting improvements and simplifying how they are written.

The requirements of these Rules have not changed.

Existing Rule	Proposed change
T1.1 Water abstracted from a river or stream or other source that has intermittently elevated turbidity, must be either filtered by a back-washable media filter, selectively abstracted, or provided to a raw water tank (minimum 10,000 litres) with a calmed bottom inlet and floating off take, to ensure turbidity is reduced so that it is suitable for further treatment. *Suppliers do not need to report on this Rule now.*	**T1.2** Water abstracted from a river or stream or other source that has intermittently elevated turbidity, must be either— (a) filtered by a back-washable media filter; or (b) selectively abstracted; or (c) provided to a raw water tank (minimum 10,000 litres) with a calmed bottom inlet and floating off take. *Suppliers would not need to report on this Rule.*
T1.3 The flow through any filters must be within the manufacturer's design specifications for the treatment processes 100% of the time. **T1.4** Pumps must not be connected directly to the discharge side of a cartridge filter. After filtration, the filtrate must pass directly to a tank prior to any subsequent pumping. *Suppliers do not need to report on this Rule now.*	**T1.4** Where filtration is used— (a) the flow through any filters must be within the manufacturer's design specifications for the treatment processes at all times; and (b) pumps must not be connected directly to the discharge side of any cartridge filter; and (c) where pumping occurs after filtration, the filtrate must first pass directly to a tank. *Suppliers would not need to report on this Rule.*

Do the proposed wording and formatting changes make these Rules easier to understand?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Rules for distribution

Backflow management (D1.2)

Water networks are designed to move water from the plant to the people who use it. However, problems with pressure loss in the pipes can cause contaminated water, or other liquids, to be sucked into the water network from a tap, hose, trough, or other place where treated water usually flows out. This is called backflow and can create a risk to water quality.

This proposed Rule change introduces strengthened backflow requirements to help protect distribution networks from contamination.

Currently, suppliers must assess their network for backflow risk, keep a record of connections, fittings or other places at risk of backflow, and install backflow prevention devices.

This proposed Rule change strengthens what's required by also clarifying that suppliers are required to:

- maintain a register of all connections where there is a medium to high backflow risk
- every two years, test backflow devices that can be tested to ensure they are operating effectively
- record backflow test results
- repair any faulty backflow prevention devices identified during testing in a reasonable timeframe.

Note that the proposed change removes the explicit statement that cross connections must be identified and removed. However, while not explicitly stated, we see this requirement as maintained under proposed Rules D1.2 (a) and (c).

We'll create guidance to help suppliers understand how to effectively assess and manage backflow risks.

Existing Rule	Proposed change
D1.2 The drinking water supplier must assess the distribution system for backflow risk at least every 2 years and: 1. any point of supply connections, fittings or other places found to be at risk for backflow must be recorded along with the potential hazard(s); and 2. any point of supply connections found to be at risk for backflow must have a suitable backflow prevention device fitted; and 3. any cross connections that are identified must be removed. *Suppliers do not need to report on this Rule now.*	**D1.2** The following measures must be taken in relation to backflow: (a) the distribution system must be assessed for backflow risk at least every two years: (b) a register of all connections where there is a medium or high backflow risk must be maintained; (c) a suitable backflow prevention device must be installed at any connection identified in the register: (d) every testable backflow prevention device must be inspected and tested at least every two years by a suitably trained and qualified person: (e) any faulty backflow prevention device must be remediated as soon as practicable: (f) records of backflow prevention device test results must be retained. *Suppliers would not need to report on this Rule.*

Do you agree with the clarified requirement to maintain a register?

[Radio buttons: Yes / No / I don't know]

Do you agree with the new requirement to test backflow any devices that can be tested at least every two years?

[Radio buttons: Yes / No / I don't know

Is it clear that the proposed Rule would still require suppliers to remove cross-connections that pose a risk to water quality?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Monitoring water in the distribution system (D1.1)

To make the Rule below easier to understand and follow, we propose formatting improvements and simplifying how it is written. The requirements relating to *E. coli* and total coliforms monitoring have not changed.

We also propose removing references to drinking water safety plans (DWSPs) and source water risk management plans (SWRMPs) throughout the Rules because we don't think it's necessary.

Existing Rule	Proposed change
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's Drinking Water Safety Plan (including its Source Water Risk Management Plan). *Suppliers need to report on this Rule now.*	**D1.1** Water in the distribution system must be monitored at least every 3 months for— (a) *E. coli;* (b) total coliforms. *Suppliers would not need to report on this Rule.*

Do the proposed wording and formatting changes make this Rule easier to understand?

[Radio buttons: Yes / No / I don't know]

Do you agree with removing reference to drinking water safety planning from the Rules?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Rules for supplies that provide drinking water to 100-500 people

To help make it easier to provide feedback, proposed Rule changes have been categorised by source water, treatment and distribution.

While the Rule changes are generally minor, we have put key changes first. This means some Rules may not be presented in number order.

If you start responding to this consultation and want to return to it later, select 'Save and come back later' to save your answers.

Rules for source water

Monitoring roof water sources (S2.2)

This proposed change:

- consolidates two Rules to make compliance with related Rules more straightforward
- removes the requirement to test for benzo[α]pyrene and zinc in roof-collected rainwater every three years.

Benzo[α]pyrene is a risk for roof water supplies that have soot deposits from nearby fires. We propose removing this three-yearly reporting Rule because separate Rules (S 1.5 and T 1.1) require suppliers to test for benzo[α]pyrene when there is a related supply risk and we expect that risks from benzo[α]pyrene would be managed up in the supply drinking water safety plan.

We plan to develop guidance on how to appropriately manage benzo[α]pyrene risk to support suppliers with related risks.

Zinc impacts how drinking water tastes. However, there is currently no maximum acceptable value (MAV) for zinc included in New Zealand's Drinking Water Standards (the Standards). MAVs set out the maximum amounts of metals and other substances that are acceptable in drinking water from a public health perspective.

Because zinc is not included in the Standards, we propose providing guidance related to zinc and drinking water rather than including zinc-related requirements in the Rules. This is intended to streamline the Rules for suppliers, without impacting public health.

Existing Rule	Proposed change
S2.2 Roof water sources must be monitored for the determinands and at the frequency set out in Table 13. - *E. coli* and total coliforms monitored every month. - Cadmium, copper, zinc, lead, and benzo[α]pyrene (in winter – June, July, or August) monitored every three years. **S2.7** Samples must be collected at the source abstraction point or treatment plant (prior to treatment) for surface or groundwater supplies, and at the raw water storage tank outlet for roof water supplies. *Suppliers need to report on these Rules now.*	**S2.2** Roof water sources must be monitored— (a) at least every month for— (i) *E. coli*; (ii) total coliforms; and (b) at least every 3 years for— (i) cadmium; (ii) copper; (iii) lead; and (c) samples for (a) and (b) must be collected at the raw water storage tank outlet and prior to any treatment. *Suppliers would still need to report on this Rule.*

Do you agree with the proposed removal of benzo[α]pyrene from the Rules?

[Radio buttons: Yes / No / I don't know]

Do you agree with the proposed removal of zinc from the Rules?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Monitoring surface and groundwater sources (S2.1)

This proposed change helps to lower compliance burden by reducing the required frequency of pH and turbidity testing from every six months to annually.

Testing for pH and turbidity in source water helps provide suppliers with an indication of the characteristics of their source water, and any changes to these, which would inform their treatment approach. Drinking water treatment process should address any related risks or issues. As these are tested more frequently during the treatment and distribution stages, the expectation is that risks related to this would be appropriately managed.

This proposed change would increase the frequency of arsenic and boron testing from every three years to annually. This would bring the monitoring frequency into alignment with other metals. As all metals can be tested for at once, this will help make testing more efficient.

Existing Rule	Proposed change
S2.1 Surface water and groundwater sources must be monitored for the determinands and at the frequency set out in Table 12. - *E. coli* and total coliforms monitored every month. Surface water and groundwater sources must be monitored for the determinands and at the frequency set out in Table 12. - pH and turbidity monitored every 6 months. - Iron, manganese, and nitrate monitored every year. - Arsenic and boron monitored every 3 years. S2.7 Samples must be collected at the source abstraction point or treatment plant (prior to treatment) for surface or groundwater supplies, and at the raw water storage tank outlet for roof water supplies. *Suppliers need to report on Rule S2.1 now, but not S2.7.*	S2.1 Surface and groundwater sources must be monitored— (a) at least every month for— (i) *E. coli*; (ii) total coliforms; and (b) at least annually for— (i) pH; (ii) turbidity; (iii) iron; (iv) manganese; (v) nitrate; (vi) arsenic; (vii) boron; and (c) samples for (a) and (b) must be collected at the abstraction point or treatment plant prior to treatment and/or mixing with other sources. *Suppliers would need to report on this Rule.*

Do you agree with these proposed changes to testing frequencies?

[Radio buttons: Yes / No / I don't know]

Do you agree with the proposed clarification that source water testing samples must be collected at the abstraction point or treatment plant, prior to treatment and/or mixing with other sources, to align with the original intent of related source water Rules?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Monitoring after exceeding 50% of a MAV (S2.3)

Suppliers need to carry out extra monitoring if:

- any chemical creates a supply risk *or*
- 50% of the maximum acceptable value (MAV) for a chemical has been exceeded.

This proposed change reduces the period of time this extra monitoring needs to be carried out for – from six test results under 50% of the MAV to three test results.

We see this revised testing approach as reducing effort and cost for suppliers while continuing to provide a sufficient understanding of source water quality.

Existing Rule	Proposed change
S2.1 Table 12 - Footnote 20 Monitoring must be quarterly if a result exceeds 50% of the MAV, returning	**S2.3** Any chemical determinands that are identified as presenting a risk to the supply or are found to exceed

to annually after 6 consecutive samples are less than 50% of the MAV. **S2.1 Table 12 - Footnote 21** Monitoring must be monthly if any result exceeds 50% of the MAV, returning to 3 yearly after 12 consecutive results are less than 50% of the MAV. **S2.3** Additional monitoring of source water must be undertaken for any determinands which exceed 50% of the MAVs set out in the Drinking Water Standards. *Suppliers need to report on these Rules now.*	50% of their MAV in source water samples must be monitored at least every 3 months until 3 consecutive results from source water samples are less than 50% of the MAV. *Suppliers would still need to report on this Rule.*

Do you agree with this proposed change?

[Radio buttons: Yes / No / I don't know]

What do you think a reasonable length of time is to continue monitoring when 50% of the maximum acceptable value (MAV) for a chemical has been exceeded?

[free text box]

Please provide any further comment in the box below:

[free text box]

Monitoring for cyanotoxins (S2.6)

In recent years, drinking water supplies in parts of New Zealand have experienced an increase in the presence of cyanobacteria in source water. These events have the potential to introduce toxins that can have significant impacts on water quality.

This proposed change would update this Rule to align with clear instruction provided in Level One Rules (for supplies that serve 25-100 people).

Our view is that this additional level of detail would provide suppliers that manage Level Two supplies with certainty about what is expected of them to appropriately consider and manage cyanobacteria and cyanotoxin risks.

Compared to the current S2.5 and S2.6 Rules, this proposed Rule aims to give clearer instruction on how to monitor for cyanobacteria and take action when needed. For example, this might cover stating more clearly that suppliers should:

- visually inspect the water and area within 50 metres of surface water intakes for 8 months every year
- take action to understand cyanotoxin risk if any cyanobacteria is found during these inspections.

For some suppliers, this proposed change may impact their current practices. If you are a drinking water supplier and this is the case for you, please tell us more below.

We have also proposed that suppliers would no longer need to report on this Rule. As in proposed Rule S2.5, since a range of requirements are in place to proactively manage supply risks and appropriately inform us, and the public, of cyanotoxin-related risks, we have proposed removing the additional cyanotoxin reporting requirements linked to this Rule. This would streamline reporting requirements for suppliers.

We plan to develop guidance on how to appropriately manage cyanobacteria and cyanotoxin risk to support suppliers with related risks.

Existing Rule	Proposed change
S2.6 If a drinking water supplier becomes aware of the presence of cyanobacteria in source water, monitoring to determine level of cyanobacteria and/or level (presence/absence) of cyanotoxins must be considered. *Suppliers need to report on this Rule now.*	**S2.6** The following measures must be taken in relation to cyanobacteria and cyanotoxins: (a) each month between October and May (inclusive), the water and area within 50 metres of a surface water intake must be visually inspected for the presence of benthic cyanobacteria mats and planktonic cyanobacterial growth; and (b) if there is evidence of cyanobacterial growth, steps must be taken to evaluate the cyanotoxin risk to consumers; and (c) if there is a risk of supplying water with cyanotoxins that exceed MAVs, abstraction of water must be discontinued until the risk is no longer present. *Suppliers would not need to report on this Rule.*

Do you agree that the proposed requirements will make it easier for suppliers to monitor for cyanobacteria and cyanotoxins?

[Radio buttons: Yes / No / I don't know]

For some suppliers, this proposed change may impact their current cyanobacteria monitoring practices. If you are a drinking water supplier and this is the case for you, please tell us more about this below.

[free text box]

Do you agree that suppliers *should not* report on this Rule?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Managing potential cyanotoxin complaints from consumers (S2.5)

This change is proposed to align with level 1 Rules (for supplies that serve 25-100 people). It must be considered alongside the proposed change to Rule S2.6.

This proposed change would remove the requirement to create a cyanobacteria response plan but maintains the requirement for suppliers to investigate potential cyanobacteria risks. We propose removing the requirement to have a standalone cyanobacteria plan because:

- the proposed change to Rule S2.6 provides more explicit information about how suppliers can appropriately consider and manage cyanobacteria/cyanotoxin risk
- we expect drinking water suppliers to take into account any cyanobacteria/cyanotoxin risks in their drinking water safety plan
- we plan to produce guidance on cyanobacteria/cyanotoxin risk management to support suppliers to effectively manage these risks.

We plan to develop guidance on how to appropriately manage cyanobacteria and cyanotoxin risk to help support suppliers with related risks.

Existing Rule	Proposed change
S2.5 When a water supply source is categorised as medium or high-risk under Rule S2.4, a cyanobacteria/cyanotoxin response plan must be prepared which includes vigilance levels for assessing the presence of cyanobacteria, alert levels related to the presence of cyanotoxins and monitoring for cyanotoxins and the action that will be taken to protect consumers. *Suppliers need to report on this Rule now.*	**S2.5** Consumer taste or odour complaints, which have the potential to relate to cyanotoxins, must be recorded and investigated to determine the cause. *Suppliers would still need to report on this Rule.*

Do you agree with this proposed change?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Categorising cyanobacteria risk (S2.4)

This proposed Rule change adds a new 'no risk' cyanobacteria category. This acknowledges that some sources (e.g., groundwater) aren't at risk from cyanobacteria.

Existing Rule	Proposed change
S2.4 Water sources must be categorised as either low-risk, medium-risk or high-risk for the presence of cyanobacteria. *Suppliers need to report on this Rule now.*	**S2.4** Water sources must be categorised as either no, low, medium or high risk for the presence of cyanobacteria. *Suppliers would still need to report on this Rule.*

Do you agree with this proposed change?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Rules for treatment

UV (ultraviolet) treatment (T2.5)

To help make it more straightforward to understand and follow the Rules, this proposed change:

- consolidates UV (ultraviolet) treatment-related Rules and information into one Rule
- simplifies the formatting of the Rule.

This proposed change also makes the way that UV disinfection units must be installed, maintained, operated and certified simpler and clearer.

- It clarifies the level of UV treatment (required dose) that is needed (40 mJ/cm^2) to inactivate bacteria and protozoa; this is already required under Rule T2.1.
- It includes additional certification options (e.g. the new DIN standards).
- It permits only a set-point dose approach. Under the existing Rules, a calculated dose approach was also permitted. As a set-point dose approach is easier and cheaper to use, it's a better fit for smaller supplies.

This proposed change also confirms that suppliers may use equipment certified to an older standard, where that equipment is already installed. We have also proposed removing the Rule related to continuously monitoring the intensity of the UVI (ultraviolet intensity) or UV dose. However, this safeguard is maintained under proposed Rules because certified UV treatment equipment does this monitoring automatically.

Existing Rule	Proposed change
T2.11 UV units must be certified (and operate within the specifications of) at least one of the following standards: 1. NSF/ANSI 55 Class A (NSF, ANSI n.d.); 2. Ultraviolet Disinfection Guidance Manual (USEPA 2006b); 3. DVGW Technical Standard W294 (DVGW 2006); 4. ÖNORM M 5873-1: 2020 01 01. **Footnote 22** UV reactors installed before 1 January 2020 can be certified to ÖNORM M5873 (Osterreichisches Normungsinstitut 2001). **T2.12** UV intensity (UVI) or UV dose must be monitored continuously and alarmed to indicate if the UVI or dose is outside of the limits specified by the manufacturer. **T2.13** UV transmittance (UVT) of water at the UV unit must not be less than the level specified by the manufacturer. **T2.14** The flow of water through the UV unit must be restricted or monitored so that it does not exceed the flow rate specified by the manufacturer. **T2.1 and Footnote 26** Monitor flow twice a week, but not if flow is restricted according to manufacturer's requirements. **T2.15** Lamp usage must be recorded and manufacturer's recommendations not exceeded. **T2.16** Lamp outage must be alarmed if the UV unit uses more than one lamp. **T2.17** The UVI sensor must be referenced against a new sensor annually and should be replaced if it reads levels different to the new sensor that are outside the manufacturer's recommendation. *Suppliers need to report on these Rules now.*	**T2.5** The following requirements must be met for UV treatment: (a) UV units must disinfect using— (i) a UV dose (RED) greater than 40 mJ/cm2 or equivalent; or (ii) a UVI greater than manufacturer's requirement to achieve bacterial and protozoal disinfection: (b) UV units must be certified to (and operate within the specifications of) at least one of the following standards: (i) NSF/ANSI 55 Class A (NSF, ANSI n.d); (ii) Ultraviolet Disinfection Guidance Manual (USEPA 2006b) for set-point dose approach only; (iii) DVGW Technical Standard W294 (DVGW 2006); (iv) ÖNORM M 5873-1: 2020 01 01; or ÖNORM M5873 (Osterreichisches Normungsinstitut 2001): (v) DIN 19294-1:2020-08; (c) water flowing through the UV unit/s must— (i) meet the limits of UVT specified by the manufacturer; and (ii) be restricted or monitored so that the flow rate does not exceed the flow rate specified by the manufacturer; and (d) lamp usage must— (i) be recorded; and (ii) be alarmed if the UV unit has more than one lamp; and (iii) not exceed manufacturer's recommendations: (e) the duty UVI sensor must— (i) be referenced against a new sensor annually; and (ii) be replaced if the duty sensor reads levels different to the new sensor that are outside the manufacturer's recommendation. *Suppliers would still need to report on this Rule.*

Do you agree with the proposed requirement for a 40 mJ/cm^2 minimum dose of UV light to be made explicit in the Rules and replace Rule T2.1.

[Radio buttons: Yes / No / I don't know]

Do you agree with adding the new DIN standard to this list of applicable standards?

[Radio buttons: Yes / No / I don't know]

Do you agree with including the older ÖNORM standard to the list of applicable standards?

[Radio buttons: Yes / No / I don't know]

Do you agree with limiting level 2 supplies to using the set-point dose approach?

[Radio buttons: Yes / No / I don't know]

Does consolidating all UV Rules together into one and adjusting the formatting make them easier to understand?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment relating to these questions in the box below:

[free text box]

Monitoring water leaving the treatment plant (T2.1)

To make requirements clearer and compliance more straightforward, this proposed Rule change consolidates a large number of Rules and footnotes into a single Rule.

Some proposed changes introduce new requirements to more effectively safeguard water consumers by:

- introducing a new requirement to test for any additional chemicals that are a risk to the supply due to local conditions until three consecutive test results show less than 50% of the MAV
- increasing the requirement for UVT (ultraviolet transmission) monitoring from every three months to every month to make sure the equipment is operating effectively and water quality is appropriately managed.

Some proposed changes remove requirements to give suppliers more flexibility in how they monitor water leaving a drinking water treatment plant by:

- removing days required between taking samples
- removing the requirement to monitor for flow (Table 14 T2) twice a week, as:
    - for smaller supplies, the UV units generally have a flow restrictor installed instead of measuring flow; this is a practical change to reflect these arrangements
    - proposed UV treatment Rule T2.5 (c) includes a requirement to monitor flow to ensure it does not exceed the flow rate specified by the equipment manufacturer.

Existing Rule	Proposed change
T2.1 Water leaving the treatment plant must be monitored for the determinands and at the frequencies set out in Table 14. - *E. coli*, total coliforms, and any chemical used in the treatment process (excluding FAC and fluoride) monitored every month and at least 12 days between samples.	**T2.1** Water leaving the treatment plant must be monitored— (a) at least every month for— (i) *E. coli;* (ii) total coliforms; (iii) UVT; (iv) any chemical used in the treatment process (except FAC and fluoride which follow (b) below);

- UVT and Chlorate (if sodium hypochlorite is used, in water leaving the treatment plant) monitored every 3 months and at least 70 days in between samples. - Turbidity, UVI/UV dose, flow, FAC, pH, and fluoride (if added, in water leaving the treatment plant) monitored twice per week and at least 2 days between samples. **Footnote 24** Over a year, at least 4 different days of the week must be used as sample days, i.e., not all samples should be collected on a Monday. **Footnote 25** May be monitored continuously. **Footnote 26** Not required if flow is restricted according to manufacturer's requirements **Footnote 27** Testing for chlorate is only required if sodium hypochlorite is used as a disinfectant. This requirement does not apply if sodium hypochlorite is generated on-site from a salt brine solution. **T2.2** Water leaving the treatment plant must be tested for *E. coli* and total coliforms each month. **T2.22** Water leaving the treatment plant must be monitored for any chemical or surrogate (does not include chemicals used for cleaning) that is added to water as part of a treatment process. **T2.18** FAC of water leaving the treatment plant must be monitored. **T2.20** pH of water leaving the treatment plant must be monitored. **T2.23** Should the water supplier become aware of an event that may rapidly introduce high concentrations of chemicals into the water at the source or at the treatment plant, the water supplier must carry out event-based monitoring to assess the risk to the water supply. **T2.25** If cyanotoxin levels in the source water exceed 50% of the MAV, water leaving the treatment plant must be monitored for the presence of cyanotoxins. *Suppliers need to report on these Rules now.*	(v) any additional determinands which are identified as presenting a risk to the supply until 3 consecutive results from treated water samples are less than the 50% of the MAV; and (b) at least eight times per month for— (i) turbidity; (ii) FAC; (iii) pH; (iv) UVI or UV Dose; (v) Fluoride (only if added to the water); and (c) at least every 3 months for chlorate, if sodium hypochlorite is used as a disinfectant and this solution is not generated on-site from a salt brine solution; and (d) sample collection for (b) must be: (i) be evenly spread across each month; (ii) use different days of the week within each month. *Suppliers would still need to report on this Rule.*

Does consolidating this material into one Rule make it easier to understand treatment requirements?

[Radio buttons: Yes / No / I don't know]

Do you agree with the proposed new requirement to test for any additional chemicals that are a risk to the supply?

[Radio buttons: Yes / No / I don't know]

Do you agree with increasing the requirement for UVT (ultraviolet transmission) monitoring from every three months to every month?

[Radio buttons: Yes / No / I don't know]

Do you agree with removing the requirement for there to be a specific number of days between taking samples?

[Radio buttons: Yes / No / I don't know]

Do you agree with the removal of the requirement to monitor flow twice a week?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Cartridge filter requirements (T2.4)

Cartridge filters remove particles from the water as they pass through a porous medium. Particles larger than the pores in the filter are trapped on the outside and the smaller particles pass through, just like a tea strainer. Cartridge filters can be an effective way to remove turbidity and particulate material from water.

This proposed change consolidates all cartridge filter Rules and simplifies wording to help make compliance more straightforward.

Existing Rule	Proposed change
T2.4 If a cartridge filter or filters are used, the downstream cartridge must have a pore size of 5 microns (nominal) or less. **T2.5** Rapid pressure fluctuations on either side of the cartridges must be avoided. **T2.6** Pumps must not be connected directly to the discharge side of a cartridge filter. After filtration, the filtrate must pass directly to a tank prior to any subsequent pumping. **T2.7** Differential pressure must be measured across each cartridge filter and must not exceed the cartridge filter manufacturer's specifications. **T2.8** The flow through the cartridge filters must always be within the cartridge filter manufacturer's design specifications. *Suppliers need to report on these Rules now.*	**T2.4** If a cartridge filter or filters are used— (a) the final cartridge must have a pore size of 5 microns or less; and (b) pumps must not be connected directly to the discharge side of any cartridge filter; and (c) where pumping occurs after filtration, the filtrate must first pass directly to a tank; and (d) differential pressure must be measured across each cartridge filter and must not exceed the cartridge filter manufacturer's specifications; and (e) the flow through any filters must be within the manufacturer's design specifications for the treatment processes at all times. *Suppliers would still need to report on this Rule.*

Do the proposed wording and formatting changes make this Rule easier to understand?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Proposing that the dedicated Rule for physico-chemical samples is removed

We've proposed removing this Rule because related requirements are covered under proposed Rule T2.1 and T2.2, which states that treated water must be tested for a range of determinands when leaving the drinking water treatment plant.

Existing Rule	Proposed change
T2.24 All chemical samples for physico-chemical determinands must be taken from a point as close as practicable after the final treatment process. *Suppliers need to report on this Rule now.*	N/A: Rule removed

Do you agree with removing this Rule?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Making the Rules about water passing through or leaving the treatment plant easier to understand (T2.2 and T2.3)

To help make the Rules below easier to understand and follow, we've proposed:

- consolidating Rules
- improving formatting
- simplifying how they are written.

The requirements of these Rules have not changed.

Existing Rule	Proposed change
T2.9 Turbidity of water leaving the treatment plant must not exceed 5 NTU. **T2.19** Water leaving the treatment plant must have a FAC of at least 0.5 mg/L. **T2.21** Water leaving the treatment plant must have a pH of between 6.5 and 8. *Suppliers need to report on these Rules now.*	**T2.2** Water leaving the treatment plant must meet the following limits while the plant is in production: (a) turbidity must be less than 5 NTU; (b) FAC must be greater than 0.5 mg/L; (c) pH must be between 6.5 – 8. *Suppliers would still need to report on this Rule.*

T2.3 All water passing through the treatment plant must be filtered by either a media, membrane, or cartridge filter system. **T2.10** All water passing through the treatment plant must be disinfected with UV light. **Footnote 23** Chlorination and compliance with Rules T2.18 to T2.21 is not required for Self-supplied Buildings which provide water to a single building. *Suppliers need to report on these Rules now.*	**T2.3** All drinking water supplied to consumers must be— (a) filtered by either a media, membrane, or cartridge filter system; and (b) disinfected with UV light; and (c) disinfected with chlorine, unless the supply is a self-supplied building that is a single building. *Suppliers would still need to report on this Rule.*

Do the proposed wording and formatting changes make these Rules easier to understand?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Rules for distribution

Backflow management (D2.3)

Water networks are designed to move water from the plant to the people who use it. However, problems with pressure loss in the pipes can cause contaminated water, or other liquids, to be sucked into the water network from a tap, hose, trough, or other place where treated water usually flows out. This is called backflow and it can create a risk to water quality.

At present, suppliers must assess their network for backflow risk, record any connections, fittings or other places at risk of backflow, install backflow prevention devices, and test backflow devices that can be tested annually to ensure they are operating effectively.

This proposed Rule change strengthens what's required by clarifying that suppliers need to, or requiring suppliers to:

- maintain a register of all connections where there is a medium to high backflow risk
- record backflow test results
- repair any faulty backflow prevention devices identified during testing in a reasonable timeframe.

Note that the proposed change removes the explicit requirement that cross connections must be identified and removed. However, while not explicitly stated, we see this requirement as maintained under proposed Rule D2.3 (a) and (c).

We'll create guidance to help suppliers understand how to effectively assess and manage backflow risks.

Existing Rule	Proposed change
D2.7 An assessment of the distribution system for backflow risk must be performed annually by the drinking water supplier and: 1. any point of supply connections, fittings or other places found to be at risk for backflow must be recorded along with the potential hazard(s); and	**D2.3** The following measures must be taken in relation to backflow: (a) the distribution system must be assessed for backflow risk at least annually: (b) a register of all connections where there is a medium or high backflow risk must be maintained:

2. any point of supply connections found to be at risk for backflow must have a suitable backflow prevention device fitted; and 3. all point of supply testable backflow prevention devices installed to protect the distribution system must be inspected and tested annually by a suitably trained and qualified person and remediated if found to be faulty; and 4. any cross connections that are identified must be removed. *Suppliers need to report on this Rule annually now.*	(c) a suitable backflow prevention device must be installed at any connection identified in the register: (d) every testable backflow prevention device must be inspected and tested annually by a suitably trained and qualified person: (e) any faulty backflow prevention device must be remediated as soon as practicable: (f) records of backflow prevention device test results must be retained. *Suppliers would still need to report on this Rule annually.*

Do you agree with the new requirement to record backflow test results?

[Radio buttons: Yes / No / I don't know]

Do you agree with the clarified requirement to maintain a register?

[Radio buttons: Yes / No / I don't know]

Is it clear that the proposed Rule would still require suppliers to remove cross connections that pose a risk to water quality?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Monitoring water in the distribution system (D2.1)

To help make the Rule below easier to understand and follow, we've proposed:

- consolidating related Rules and information in one Rule
- formatting improvements
- simplifying how the Rule is written.

Zinc impacts how drinking water tastes. However, there is currently no maximum acceptable value (MAV) for zinc included in New Zealand's Drinking Water Standards (the Standards). MAVs set out the maximum amounts of metals and other substances that are acceptable in drinking water from a public health perspective.

Because zinc is not included in the Standards, we propose removing zinc-related requirements in the Rules and, instead, providing guidance related to zinc and drinking water. This is intended to streamline the Rules for suppliers without impacting public health.

This proposed Rule change also provides more detailed requirements for how to test for metals to ensure accurate test results, e.g., by not flaming the tap before taking a sample.

Changes have also been proposed that remove the number of days required between taking samples to provide suppliers with more flexibility in how they monitor, while maintaining the requirement to monitor monthly for key determinands.

Existing Rule	Proposed change
D2.1 Water in the distribution system must be monitored for the determinands and at the frequencies set out in Table 15. – *E. coli* and total coliforms monitored monthly and at least 12 days between samples. – FAC monitored twice per week and at least 2 days between samples. – Antimony, cadmium, chromium, copper, lead, mercury, nickel, and zinc monitored annually **D2.2** Consecutive samples for *E. coli* and total coliforms must not be taken on the same weekday. **D2.3** Over a year, five different days of the week must be used as sampling days for *E. coli* and total coliforms sample collection. **D2.4** Samples for FAC, *E. coli* and total coliforms must be taken at regular sampling points that are representative of the geographical coverage of the distribution system, including some storage reservoirs/tanks and the end points of the system. **D2.5** Samples for metals must be collected from a sampling point near the end point of the system. Sampling taps must be flushed before samples are collected. *Suppliers need to report on these Rules now.*	**D 2.1** Water in the distribution system must be monitored— (a) at least every month for— (i) *E. coli*; (ii) total coliforms; and (b) at least eight times every month and spread evenly across each month for FAC; and (c) at least once a year for— (i) antimony; (ii) cadmium; (iii) chromium; (iv) copper; (v) lead; (vi) mercury; (vii) nickel; and (d) samples for FAC, *E. coli* and total coliforms for (a) and (b) must be taken at regular sampling points that are representative of the geographical coverage of the distribution system and include: (i) exit points of storage reservoirs/tanks; and (ii) end points of the distribution system; and (e) when sampling for metals for (c), sample points must: (i) be flushed immediately prior to obtaining samples; and (ii) not be disinfected, e.g., flamed, immediately prior to sampling for metals; and (iii) be located near the end point of the system. *Suppliers would still need to report on this Rule.*

Do you agree with the proposed removal of zinc from the Rules?

[Radio buttons: Yes / No / I don't know]

Does removing a required number of days between taking FAC, *E. coli* and total coliforms samples make compliance easier for suppliers, while appropriately maintaining water suppliers understanding of water quality?

[Radio buttons: Yes / No / I don't know]

Does more detailed information for how to test for metals make compliance easier?

[Radio buttons: Yes / No / I don't know]

Do the proposed wording and formatting changes make these Rules easier to understand?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Maintaining FAC (free available chlorine) in the distribution system (D2.2)

To help make the Rule below easier to understand and follow, we propose some formatting improvements and simplified how it is written.

The requirements of this Rule has not changed.

Existing Rule	Proposed change
D2.5 A FAC of at least 0.2 mg/L must be maintained in the distribution system in at least 4 of every 5 samples. No sample should be less than 0.1 mg/L. *Suppliers need to report on this Rule quarterly and annually now.*	**D2.2** FAC in the distribution system must be maintained— (a) at least 0.2 mg/L in 80% of samples taken; and (b) greater than 0.1 mg/L at all times. *Suppliers would just need to report on this Rule annually.*

Do the proposed wording and formatting changes make this Rule easier to understand?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Rules for supplies with changing community populations

Rule requirements increase as the number of people a supply serves increases so a supplier can have greater confidence of the water quality when more people are served by a supply.

Specific Rules in this section apply if the population served by a supply temporarily (i.e. for up to 60 days in a year) exceeds a specific number of people. For example, if a supply that usually serves:

- 100 people or fewer temporarily exceeds 100 people
- 100 people or fewer temporarily exceeds 500 people
- 101-500 people temporarily exceeds 500 people.

Having a limited number of Rules apply for temporary population increases makes compliance more straightforward. Rather than having to comply with all Rules that apply for the next population size, a supplier will only have a one or two additional Rules to follow.

Suppliers are not required to report on any of these Rules.

If the number of people provided water by a supply is expected to regularly increase over these thresholds for more than 60 days in a year, the Rules for that increased population size may apply.

This Rule applies if a supply that usually serves 100 people or fewer temporarily exceeds 100 people (VP.1)

This proposed change aims to improve flexibility and practicality.

- It amends the requirement to monitor for *E. coli* and total coliforms the week before the population increases only if the increase is predicted. This takes a pragmatic approach, as an increase won't always be predictable, and would align with VP.2.

- It provides suppliers more flexibility as it doesn't require five days between taking samples for *E. coli* and total coliforms.
- It improves formatting to help make the Rule easier to understand.

A key change is that this proposed Rule would also apply to 'Very Small Communities' (VSC) supplies, which supply drinking water to up to 25 people. For VSCs, requirements are reduced from previous Temporary Drinking Water Supplies Rules, while still appropriately providing information about drinking water quality.

Existing Rule	Proposed change
VP.1 For drinking water supplies demonstrating compliance with level 1 treatment and level 1 distribution zone Rules, when the population exceeds 100 people, a sample for *E. coli* and total coliforms must be taken from water leaving the treatment plant and from the distribution zone in the week prior to the population exceeding 100 people and then weekly (5 days between samples) until the population reduces to below 100 people. *Suppliers need to report on this Rule now.*	**VP.1** When the population of a Very Small Community or a supply following level 1 treatment or level 1 distribution Rules exceeds 100 people, the frequency of monitoring must be increased. In the week prior to the population exceeding 100 people (if the population exceedance is predictable) and continuing every week until the population reduces to below 100 people, — (a) water leaving the treatment plant must be monitored at least weekly for— (i) *E. coli;* (ii) total coliforms; and (b) if the supply has a distribution zone, water from the distribution zone must be monitored at least weekly for— (i) *E. coli;* (ii) total coliforms. *Suppliers would not need to report on this Rule.*

Do you agree with including 'Very Small Communities' supplies in these 'changing population' Rules?

[Radio buttons: Yes / No / I don't know]

Do you agree with the other changes proposed above?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

This Rule applies if a supply that usually serves 100 or fewer people temporarily exceeds 500 people (VP.2)

This proposed change aims to improve flexibility and pragmatism.

- It introduces a new Rule that requires monitoring for *E. coli* and total coliforms to begin the week before the population increases if this increase was predicted. This change would align with VP.1 and aims to help suppliers ensure suppliers have greater confidence of the water quality before more people are served by a supply.
- It provides suppliers more flexibility as it doesn't require three days between taking samples for *E. coli* and total coliforms.
- It improves formatting to help make the Rule easier to understand.

A key change is that this proposed Rule would also apply to 'Very Small Communities' (VSC) supplies, which supply drinking water to up to 25 people. For VSCs, requirements are reduced from previous Temporary Drinking Water Supplies Rules while still appropriately providing information about drinking water quality.

Existing Rule	Proposed change
VP.2 For drinking water supplies demonstrating compliance with level 1 treatment and level 1 distribution zone Rules, when the population exceeds 500 people, samples for *E. coli* and total coliforms must be taken from water leaving the treatment plant and from the distribution zone twice each week (3 days between samples) until the population reduces to below 100 people. *Suppliers need to report on this Rule now.*	**VP.2** When the population of a Very Small Community or a supply following level 1 treatment or level 1 distribution Rules exceeds 500 people, the frequency of monitoring must be increased. Beginning one week prior to the population exceeding 500 people (if the population exceedance is predictable) and continuing every week until the population reduces to below 500 people, — (a) water leaving the treatment plant must be monitored at least twice weekly for— (i) *E. coli;* (ii) total coliforms; and (b) if the supply has a distribution zone, water from the distribution zone must be monitored at least twice weekly for— (i) *E. coli;* (ii) total coliforms; and (c) Suppliers must continue to monitor in accordance with VP.1 where the population reduces below 500 people and remains above 100 people for any period of time. *Suppliers would not need to report on this Rule.*

Do you agree with including 'Very Small Communities' supplies in these 'changing population' Rules?

[Radio buttons: Yes / No / I don't know]

Do you agree with the other changes proposed above?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

These Rules apply if a supply that usually serves 101-500 people temporarily exceeds 500 people

Treatment requirements (VP.3)

This proposed change would apply to the monitoring of water leaving a drinking water treatment plant.

- It provides suppliers more flexibility as it doesn't require:
  - 12 hours between taking samples for both turbidity and FAC (free available chlorine)
  - four days between taking samples for both *E. coli* and total coliforms
- It improves formatting to help make this Rule easier to understand.

Existing Rule	Proposed change

VP.3 For drinking water supplies demonstrating compliance with level 2 Rules, when the population exceeds 500 people, monitoring must be undertaken at the frequencies set out in tables 41 and 42. Table 41 Summary (treatment plant sampling) - Turbidity, FAC, and pH of water leaving the treatment plant monitored daily with 12 hours between samples- *E. coli* and total coliforms in water leaving the treatment plant monitored weekly with 4 days between samples. *Suppliers need to report on this Rule now.*	**VP.3** When the population of a supply following level 2 treatment Rules exceeds 500 people, the frequency of monitoring must be increased. Water leaving the treatment plant must be monitored— (a) at least weekly for— (i) *E. coli;* (ii) total coliforms; and (b) at least daily (unless the supply is a self-supplied building with a single building)for— (i) FAC; (ii) pH; (iii) turbidity. *Suppliers would not need to report on this Rule.*

Do you agree with the changes proposed above?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Distribution requirements (VP.4)

This proposed change would apply to monitoring drinking water in the distribution network.

- It provides suppliers more flexibility as it doesn't require:
  - 12 hours between taking samples for both FAC (free available chlorine)
  - four days between taking samples for both *E. coli* and total coliforms
- It improves formatting to help make this Rule easier to understand.

Existing Rule	Proposed change
VP.3 For drinking water supplies demonstrating compliance with level 2 Rules, when the population exceeds 500 people, monitoring must be undertaken at the frequencies set out in tables 41 and 42. Table 42 Summary (distribution zone sampling) - FAC, daily, 12 hours between samples (Footnote 72) From a range of sites across the distribution zone.) - *E. coli, w*eekly, 4 days between samples - Total coliforms, weekly, 4 days between samples, *Suppliers need to report on this Rule now.*	**VP.4** When the population of a supply following level 2 distribution Rules exceeds 500 people, the frequency of monitoring must be increased. Water in the distribution zone must be monitored— (a) at least weekly for— (i) *E. coli;* (ii) total coliforms; and (b) at least daily for— (i) FAC (unless the supply is a self-supplied building with a single building); and (ii) from a range of sites across the distribution zone. *Suppliers would not need to report on this Rule.*

Do you agree with the changes proposed above?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Proposed updates to general Rules

We're proposing moving general Rules about how to report to us into its own section called 'reporting Rules'.

- The proposed Rule changes aim to consolidate reporting-related Rules and simplify how they are written and formatted.
- They are all classified as 'not reportable' because they just seek to explain how reporting is done. That means suppliers' reporting generally would be informed by these Rules. However, proposed Rules R1.1 and R2.1 and R2.2 themselves would not need to be reported on.

Proposed reporting for supplies that serve 25-100 people (Level One Rules) (R1.1)

The proposed Rule change reduces the reporting frequency for supplies following Level One Rules (for supplies that serve 25 – 100 people) from every 6 months to annually to reduce compliance burden.

We consider this reduction in reporting will not impact Taumata Arowai or supplier understanding the quality of water they provide to communities they serve.

- Although reporting has been reduced, suppliers must continue to meet the requirements of the Rules.
- Section 21 of the Water Services Act 2021 (the Act) continues to require suppliers to inform us if drinking water they supply is, or may be, unsafe.
- Section 22 of the Act continues to require suppliers to inform us if the maximum acceptable value for a determinand is exceeded.
- Section 73 (2) of the Act continues to require laboratories to inform us if the maximum acceptable value for a determinand is exceeded in a sample that they analyse.
- Suppliers must also still appropriately document and manage any supply risks in their drinking water safety planning.

Since these requirements are in place to identify poor water quality and appropriately inform us of related risks, we propose removing this twice-yearly reporting requirement to reduce the overall reporting that suppliers must provide to us.

Existing Rule	Proposed change
G1 Drinking water suppliers demonstrating compliance against level 1 Rules must report to Taumata Arowai the water quality monitoring information set out in table 3. Rules reported on T1.8 and D1.1 **Footnote 8** Report must be provided to Taumata Arowai within 20 working days of the end of June and end of December. **G4** Reporting against Level 1, level 2 and level 3 monitoring Rules that are not included in tables 3, 4, 5, 6, and 7 must be made to Taumata Arowai annually within 40 working days of the end of each calendar year. Section 3.1 Compliance and Reporting	**R1.1** Drinking water suppliers following level 1 monitoring Rules must electronically report— (a) whether they complied with each monitoring requirement; and (b) the number of annual quarters for which a Rule was not complied with during each calendar year; and (c) the supply component ID, sample ID, the sample date, and the test results taken during the year; and (d) that information must be provided to Taumata Arowai— (i) annually; and (ii) within 40 working days of the end of each calendar year; and (iii) in a form approved by the chief executive of Taumata Arowai.

Do you agree with level 1 supplies only reporting annually, instead of every six months?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Proposed reporting for supplies that serve 100-500 people (Level Two Rules) (R2.1 and R2.2)

This proposed change makes reporting-related Rules easier to understand and follow for supplies that serve 100 – 500 people.

- Related Rules and footnotes are consolidated and simplified.
- Formatting is improved.

Related reporting requirements have not changed.

Existing Rule	Proposed change
G2 Drinking water suppliers demonstrating compliance against level 2 Rules must report to Taumata Arowai the water quality monitoring information set out in table 4. Rules reported on include T2.1, T2.2, T2.9, T2.13, T2.18, T2.19, D2.1, D2.5 **Footnote 9** Report must be provided to Taumata Arowai within 20 working days of the end of each quarter. **G4** Reporting against Level 1, level 2 and level 3 monitoring Rules that are not included in tables 3, 4, 5, 6, and 7 must be made to Taumata Arowai annually within 40 working days of the end of each calendar year. **G5** Drinking water suppliers demonstrating compliance with level 2 and level 3 Rules, must report to Taumata Arowai on their performance against all assurance Rules annually within 40 days of the end of each calendar year. Section 3.1 Compliance and Reporting	**R2.1** Drinking water suppliers following level 2 monitoring Rules must electronically report— (a) whether they complied with each monitoring Rule quarterly; and (b) the number of annual quarters for which a Rule was not complied with during each calendar year; and (c) the supply component ID, sample ID, the sample date, and the test results taken during the year; and (d) that information must be provided to Taumata Arowai— (i) quarterly; and (ii) within 20 working days of the end of each quarter; and (iii) in a form approved by the chief executive of Taumata Arowai. **R2.2** Drinking water suppliers following level 2 assurance Rules must electronically report the following information— (a) whether they complied with each assurance Rule during the year; and (b) that information must be provided to Taumata Arowai— (i) annually; and (ii) within 40 working days of the end of the calendar year; and (iii) in a form approved by the chief executive of Taumata Arowai.

Does consolidating and simplifying these Rules make it easier to understand reporting requirements?

[Radio buttons: Yes / No / I don't know]

Please provide any further comment in the box below:

[free text box]

Proposed timeframe for any Rule changes to apply

We're proposing that any updated Drinking Water Quality Assurance Rules (the Rules) for supplies that serve 500 or fewer people would apply from 1 January 2025.

This effective date would make the annual reporting cycle for drinking water regulation reporting more straightforward as the Rules won't change part-way through the reporting year.

If the Rules don't change on 1 January 2025, small suppliers would likely need to wait another year for more straightforward monitoring Rules.

Benefits of the proposed changes

These proposed changes aim to:

- make the Rules easier to follow and understand
- reduce the reporting that suppliers need to provide
- provide greater flexibility on sampling timings
- reduce the requirements that rules place on water suppliers but have limited value in ensuring the quality of drinking water

What would change for suppliers if proposed Rules apply from 1 January 2025?

An effective date of 1 January 2025 is subject to change based on the feedback you provide on proposed changes.

If proposed Rule changes apply from 1 January 2025, this is expected to result in an overall reduction in compliance burden for drinking water suppliers. However, suppliers would be required to consider what the updated Rules mean for their practices and adjust their monitoring and reporting procedures accordingly for the year.

We note that there are some proposed clarifications to the Rules to align with their original intent, which may require some medium-sized supplies to do things they might not have been doing, e.g., keeping a register of backflow protection devices. But these requirements are balanced by the removal of other requirements, e.g., reporting on cyanobacteria Rules.

If 1 January 2025 is confirmed as the effective date for any Rule changes, and what this means for them, in November 2024 we plan to advise relevant suppliers about any changes to the Rules, with a reminder in the new year.

Do you think that the proposed 1 January 2025 effective date is achievable from your perspective?

[Radio buttons: Yes / No / I don't know]

Are there any considerations you would like to share relating to this proposed effective date?

[free text box]

Thank you for your contribution

Thank you providing feedback on proposed improvements to New Zealand's Drinking Water Quality Assurance Rules for supplies that serve 500 or fewer people, aimed at making monitoring more straightforward.

Any further comments?

If there are any general comments you'd like to make about proposed changes to the Rules, please share them with us in the box below.

free text box]

What's next

Note that these planned next steps are subject to change, based on the feedback we receive.

When	What
October 2024	We'll analyse the feedback provided to us.
November 2024	We'll publish the revised Rules and advise all suppliers about the outcome of this consultation and what it means for them.
January 2025	Remind suppliers with supplies that provide water to 500 or fewer people of any Rule changes made.
By late 2025	We plan to consult on proposed Rule changes for supplies that serve 500 or more people.