

# D - Drinking Water Standards



## Tell us a bit about yourself

Question	Possible responses
<p>Full name</p> <p>Email address - this will only be used if we need to communicate with you about your submission, or if you indicate below that you would like to be contacted in the future in relation to drinking water issues</p> <p><b>Note</b> you are not required to provide your email address</p>	<p>Toni Goodlass</p> <p><a href="mailto:toni.goodlass@napier.govt.nz">toni.goodlass@napier.govt.nz</a></p>
<p>Are you providing feedback:</p>	<p>Select option</p> <ol style="list-style-type: none"> <li>1. <del>As an individual</del></li> <li>2. On behalf of an organisation or group               <ol style="list-style-type: none"> <li>a. organisation or group name: <b>Napier City Council, Hastings District Council, Wairoa District Council and Central Hawke's Bay District Council</b></li> <li>b. position/ title within the organisation: <b>Regional Programme Director – Hawke's Bay Five Councils</b></li> </ol> </li> </ol>



Question	Possible responses
<p>Where do you live/reside?</p> <p>If your organisation has presence in more than one region – select ‘National’</p>	<p>Select option</p> <ol style="list-style-type: none"> <li><del>1. Outside New Zealand</del></li> <li><del>2. National</del></li> <li><del>3. Northland / Te Tai Tokerau</del></li> <li><del>4. Auckland / Tāmaki makau rau</del></li> <li><del>5. Waikato</del></li> <li><del>6. Bay of Plenty / Te Moana-a-Toi</del></li> <li><del>7. Gisborne / Te Tai Rāwhiti</del></li> <li><del>8. Hawke’s Bay / Te Matau-a-Māui</del></li> <li><del>9. Taranaki</del></li> <li><del>10. Manawatū – Whanganui</del></li> <li><del>11. Wellington / Te Whanganui-a-Tara</del></li> <li><del>12. Tasman / Te Tai o Aorere</del></li> <li><del>13. Nelson / Whakatū</del></li> <li><del>14. Marlborough / Te Taihu o tewaka</del></li> <li><del>15. West Coast / Te Tai Poutini</del></li> <li><del>16. Canterbury / Waitaha</del></li> <li><del>17. Otago / Ōtākou</del></li> <li><del>18. Southland / Murihiku</del></li> </ol>
<p>Which of the below options best describes you in the context of this consultation?</p>	<p>Select option</p> <ol style="list-style-type: none"> <li><del>1. Individual water drinker / consumer</del></li> <li><del>2. Registered drinking water supplier (excl marae) – either under the Health Act 1956 or the Water Services Act 2021</del></li> <li><del>3. Unregistered drinking water supplier (excl marae)</del></li> <li><del>4. Other commercial user of water</del></li> <li><del>5. Stakeholder representative / industry body</del></li> <li><del>6. Iwi representative organisation</del></li> <li><del>7. Marae</del></li> <li><del>8. Health professional</del></li> <li><del>9. Laboratory</del></li> <li><del>10. Local authority or Council Controlled Organisation</del></li> <li><del>11. Regional Council</del></li> <li><del>12. Central government agency</del></li> <li><del>13. Local interest group</del></li> <li><del>14. Other</del></li> </ol>



Question	Possible responses
<p>If you selected 'Registered water supplier (excl Marae)' – are you</p> <p>If you have multiple supplies, please select your largest supply type.</p> <p>For a definition of each supply type refer to this document – <a href="#">Supply type</a>.</p>	<p>Select option</p> <ol style="list-style-type: none"> <li><del>1. On-demand Networked Drinking Water Supplies – &lt; 50 (Very Small Supplies).</del></li> <li><del>2. On-demand Networked Drinking Water Supplies – 50 – 500 (Small Supplies).</del></li> <li>3. On-demand Networked Drinking Water Supplies – &gt;500 (Large Supplies).</li> <li><del>4. On-demand Networked Drinking Water Supplies – Varying Population Size Supplies.</del></li> <li><del>5. Trickle Feed Water Supplies.</del></li> <li><del>6. Self-supplied Building Drinking Water Supplies.</del></li> <li><del>7. Water Carrier Services.</del></li> <li><del>8. Planned Event Temporary Drinking Water Supplies.</del></li> <li><del>9. Community Drinking Water Stations/Water Carrier Supplies –</del></li> </ol>
<p>If you selected 'Unregistered water supplier (excl Marae)' – are you</p>	<p>Select option</p> <ol style="list-style-type: none"> <li><del>1. School</del></li> <li><del>2. Café</del></li> <li>3. Camping grounds</li> <li>4. Recreational facilities</li> <li>5. Community halls and other local community facilities</li> <li><del>6. Water supplied under an easement</del></li> <li><del>7. Small commercial water supply networks</del></li> <li><del>8. rural drinking water networks (also providing irrigation and water for livestock)</del></li> <li>9. Other</li> </ol>
<p>If you selected 'Other commercial user of water' – are you</p>	<p>Specify your commercial activity (example 'food manufacturer' 'bottled water supplier' etc)</p>
<p>If you selected 'Stakeholder representative / industry body'</p>	<p>Specify your area of interest or industry</p>



Question	Possible responses
If you selected 'Marae' – are you	Select option <ol style="list-style-type: none"> <li>1. Registered water supplier – either under the Health Act 1956 or the Water Services Act 2021</li> <li>2. Unregistered water supplier</li> </ol>
If you selected 'Health professional' – are you	Select option <ol style="list-style-type: none"> <li>1. District Health Board</li> <li>2. Māori health provider</li> <li>3. Private health provider</li> <li>4. residential care provider</li> <li>5. Other</li> </ol>
If you selected 'Laboratory' – are you	Select option <ol style="list-style-type: none"> <li>1. <del>IANZ accredited drinking water laboratory</del></li> <li>2. IANZ - Level 2 Recognised Laboratory (transitional)</li> <li>3. <del>Other IANZ accredited laboratory (non-drinking water)</del></li> <li>4. <del>Other – non IANZ accredited laboratory</del></li> </ol>
If you selected 'Local interest group'	Specify your interest
If you would like to be contacted in the future by Taumata Arowai in relation to drinking water issues, please select the option.	Select an option <ol style="list-style-type: none"> <li>1. Yes, I would like to be contacted in the future by Taumata Arowai in relation to drinking water issues on the email provided above.</li> <li>2. <del>No, I do not want to be contacted in the future by Taumata Arowai in relation to drinking water issues</del></li> </ol>

## Publishing submissions and Official Information Act 1982 requests

### Publishing your submission

We intend to proactively publish the submissions made as part of this consultation on our website, but only if we are given permission to do so.



We may publish a summary of submissions. The summary will be aggregated to a level so that individual submission cannot be identified.

**Official Information Act requests**

Your submission may be subject to requests made under the Official Information Act 1982 (even if it hasn't been published). We must make your submission available in response to such a request, unless we have a good reason or other administrative grounds for withholding it.

Question	Possible response
Do you give us permission to proactively publish your submission?	<p>(Required response)</p> <p>Select an option:</p> <ol style="list-style-type: none"> <li>1. Yes. You may publish this submission, including my personal details (name, organisation and email address)</li> <li><del>2. Yes, but without details that identify me. You may publish this submission but only after removing my personal details (name, organisation, and email address)</del></li> <li><del>3. No. Do not publish this submission</del></li> </ol>



Question	Possible response
<p>Official Information Act requests</p> <p>Your submission may be subject to requests made under the Official Information Act (OIA), even if it hasn't been published. Your preference about the release of your submission, including your contact details, will be relevant to our decision on each request. We may be legally required to make your submission available, even if you indicate that you would prefer us not to release it</p>	<p>(Required response)</p> <p>Select an option:</p> <ol style="list-style-type: none"> <li>1. Yes. You may make my submission available in response to requests made under the OIA, including my personal details (name, organisation, email)</li> <li><del>2. Yes, but without details that identify me. I would prefer that you make my submission available with my personal details removed or redacted</del></li> <li><del>3. Yes, but without the information indicated below</del></li> <li><del>4. No, I would prefer that you do not make my submission available in response to requests made under the OIA</del></li> </ol>
<p>If you have asked us to withhold your submission, your personal details, or any other information in your submission, please outline the reasons why you would prefer that information not be made available</p> <p>Reasons for withholding might include that it's commercially sensitive or it's personal information.</p> <p>Any decision Taumata Arowai makes to withhold information requested under the OIA can be reviewed by the Ombudsman, who may instruct Taumata Arowai to release the withheld information.</p>	<p>Please specify what information in your submission you believe should be withheld, and why.</p>

## Summary of proposed Drinking Water Standards

### Drinking Water Standards

Drinking water standards are established to ensure that drinking water suppliers provide safe drinking water to consumers.



Drinking water standards relate to drinking water composition and the outcomes of the treatment of drinking water. Drinking water standards is a technical document covering minimum or maximum amounts of substances that may be present in drinking water, and the minimum or maximum acceptable values for chemical, radiological, microbiological, and other characteristics of drinking water.

The proposed Drinking Water Standards replaces the existing standards in the *Drinking-water Standards for New Zealand 2005 (revised 2018)*.

The proposed Drinking Water Standards set limits for the concentration of determinands (a constituent or property of the water that is determined, or estimated, in a sample) in drinking water. The determinands limits are referred to as maximum acceptable values (MAV). The MAV for any determinand should not be exceeded at any time.

Drinking standards apply to all drinking water supplies, except domestic self-supplies, regardless of the nature of the source water and the number of people served by the supply. All consumers on a supply should receive water that meets these standards; therefore, the standards must be met at all points in a water system after treatment.

While the proposed Drinking Water Standards establish limits on the composition of the drinking water all consumers should receive, it does not specify the monitoring required to show, to an acceptable level of confidence, that they are being met. The monitoring requirements and other compliance criteria are contained in *Drinking Water Quality Assurance Rules* which Taumata Arowai which is currently consulting on.

The development process of the proposed Drinking Water Standards included review of drinking water MAVs by ESR to ensure they were aligned with any changes that the World Health Organisation (WHO) have made to their guideline MAVs.<sup>1</sup> Most of the MAVs are based on WHO guideline values which are calculated for a 60kg adult. The MAVs have been recalculated on for a 70kg adult, a weight closer to the average body weight of adults in New Zealand. For some MAVs this results in a small change to the MAV though for others it doesn't make a difference as the results are rounded. ESR also considered whether MAVs were required for determinands that have never been detected in water in New Zealand. The Cawthron Institute was engaged to review the MAVs for cyanotoxins as this is one of their areas of expertise. The development process then included external technical input and review by reference groups established by Taumata Arowai. The reference groups included representatives from small water suppliers, Māori communities and local authorities water suppliers. The revised draft standards were then reviewed by the Ministry of Health.

The proposed changes to the MAVs in the drinking water standards are detailed below. Note the tables only reflect the proposed changes to MAVs. The tables do not reflect the full list of determinands and associated MAVs.

### **Maximum acceptable values (MAV) for inorganic determinands of health significance**

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<sup>1</sup> Institute of Environmental Science and Research Limited.



Name	Existing Standards MAV	Proposed Standards MAV	Remarks
Aluminium	No MAV listed	1 (mg/L)	WHO does not provide a guideline value (GV). The MAV is based on the WHO health-based value.
Barium	0.7 (mg/L)	1.5 (mg/L)	MAV is based on WHO GV of 1.3mg/L for 60kg adult but adjusted for a 70kg adult.
Boron	1.4 (mg/L)	2.4 (mg/L)	Adjusted to be the same as the revised WHO GV.
Molybdenum	0.07 (mg/L)	No MAV is proposed	Removed from MAVs as WHO does not provide a GV.
Nitrite, long term	0.2 (mg/L)	No MAV is proposed	WHO had a provisional MAV but have suspended this due to uncertainty about its accuracy.
Perchlorate	No MAV listed	0.08 (mg/L)	Based on WHO GV but adjusted for a 70kg adult.
Selenium	0.01 (mg/L)	0.04 (mg/L)	Now the same as the WHO GV.
Uranium	0.02 (mg/L)	0.03 (mg/L)	Now the same as the WHO GV.

### Maximum acceptable values (MAV) for organic determinands of health significance

Name	Existing Standards MAV	Proposed Standards MAV	Remarks
Anatoxins - a	0.006 (mg/L)	MAV is proposed for Anatoxins as a group	Anatoxins now combined.
Anatoxins – a(s)	0.001 (mg/L)	MAV is proposed for Anatoxins as a group	Anatoxins now combined.
Anatoxins	No MAV listed	0.006 (m/L)	Anatoxins now combined after advice

Name	Existing Standards MAV	Proposed Standards MAV	Remarks
			from Cawthron Institute.
Atrazine	0.002 (mg/L)	0.1 (mg/L)	Based on WHO GV.
Azinphos methyl	0.004 (mg/L)	0.1 (mg/L)	No WHO GV. ESR determined the MAV in 2000 and has updated their advice on the level.
Cylindrospermopsins	0.001 (mg/L)	0.0008 (mg/L)	Adjusted on advice from Cawthron Institute.
Homoanatoxin-a	0.002 (mg/L)	No MAV is proposed	Removed on advice from Cawthron Institute.
Hydroxytriazine	No MAV listed	0.3 (mg/L)	Atrazine metabolite, based on WHO GV but adjusted for 70kg bodyweight.
MCPA	0.002 (mg/L)	0.8 (mg/L)	Based on WHO GV but adjusted for 70kg bodyweight.
Metalaxyl	0.1 (mg/L)	0.3 (mg/L)	No WHO GV. ESR determined the provisional MAV in 2000 and has updated their advice on the level.
N-nitrosodimethylamine (NDMA)	No MAV listed	0.0001 (mg/L)	Based on WHO GV.
PFHxS + PFOS	No MAV listed	0.00007 (mg/L)	No WHO GV. MAV has been adopted from the Australian Drinking Water Guidelines.

Name	Existing Standards MAV	Proposed Standards MAV	Remarks
PFOA	No MAV listed	0.00056 (mg/L)	No WHO GV. MAV has been adopted from the Australian Drinking Water Guidelines.
Sodium dichloroisocyanurate (as cyanuric acid)	No MAV listed	40 (mg/L)	Based on WHO GV.
Trichloroethene	0.02 (mg/L)	0.03 (mg/L)	Based on WHO GV but adjusted for 70 kg bodyweight.
1080	Long term MAV of 0.0035 (mg/L) retained	0.035 (mg/L) short term MAV	Short term MAV added.

#### Maximum acceptable values (MAV) for radiological determinands

Name	Existing Standards MAV	Proposed Standards MAV	Remarks
Total alpha activity	1	0.5	Adjusted to be the same as the revised WHO GV.
Total beta activity	0.5	1	Adjusted to be the same as the revised WHO GV.

Questions	Possible response
<p><b>Process used to review MAVs</b></p> <p>The development process of the proposed Drinking Water Standards included a review of drinking water MAVs by ESR to ensure they were aligned with any changes that the World Health Organisation (WHO) have made to their guideline MAVs. Most of the MAVs are based on WHO guideline values which are calculated for a 60kg adult. The MAVs have been recalculated on for a 70kg adult, a weight closer to the average body weight of adults in New Zealand. For some MAVs this results in a small change to the MAV though for others it doesn't make a difference as the results are rounded.</p> <p>ESR also considered whether MAVs were required for determinands that have never been detected in water in New Zealand. The Cawthron Institute was engaged to review the MAVs for cyanotoxins as this is one of their areas of expertise. The development process then included external technical input and review by reference groups established by Taumata Arowai. The reference groups included representatives from small water suppliers, Māori communities and local authorities water suppliers. The revised draft standards were then reviewed by the Ministry of Health.</p> <p>Do you agree that the process used to review the MAVs for drinking water standards was appropriate?</p>	<p>1. Yes</p> <p>2. <del>No</del></p> <p>3. <del>Don't know</del></p> <p>Add a comment if relevant -</p>
<p>Do you agree that the proposed MAVs will support the objective of ensuring that drinking water suppliers provide safe drinking water to consumers?</p>	<p>1. Yes and I <b>do not</b> want to comment on each MAV</p> <p>2. <del>Yes and I <b>want</b> to comment on each MAV that is proposed to change</del></p> <p>3. <del>No and I <b>do not</b> want to comment on each MAV</del></p> <p>4. <del>No and I <b>want to</b> comment on each MAV that is proposed to change</del></p> <p>5. <del>Don't know and I <b>do not</b> want to comment on each MAV</del></p> <p>6. <del>Don't know and I <b>want to</b> comment on each MAV that is proposed to change</del></p> <p>Add a comment if relevant -</p>



Questions	Possible response
<b>Open the following list if “2, 4, or 6” is ticked</b>	
Do you agree with the proposed MAV for Aluminium?  Existing MAV - No MAV exists Proposed MAV - 1 (mg/L)	1. Yes 2. No 3. Don't know  Add a comment if relevant -
Do you agree with the proposed MAV for Barium?  Existing MAV - 0.7 (mg/L) Proposed MAV - 1.5 (mg/L)	1. Yes 2. No 3. Don't know  Add a comment if relevant -
Do you agree with the proposed MAV for Boron?  Existing MAV - 1.4 (mg/L) Proposed MAV - 2.4 (mg/L)	1. Yes 2. No 3. Don't know  Add a comment if relevant -
Do you agree with the proposed MAV for Molybdenum?  Existing MAV - 0.07 (mg/L) Proposed MAV – No MAV is proposed	1. Yes 2. No 3. Don't know  Add a comment if relevant -
Do you agree with the proposed MAV for Nitrite, long term?  Existing MAV - 0.2 (mg/L) Proposed MAV – No MAV is proposed	1. Yes 2. No 3. Don't know  Add a comment if relevant -
Do you agree with the proposed MAV for Perchlorate?  Existing MAV - No MAV listed Proposed MAV – 0.08 (mg/L)	1. Yes 2. No 3. Don't know  Add a comment if relevant -
Do you agree with the proposed MAV for Selenium?  Existing MAV - 0.01 (mg/L) Proposed MAV - 0.04 (mg/L)	1. Yes 2. No 3. Don't know  Add a comment if relevant -

Questions	Possible response
<p>Do you agree with the proposed MAV for Uranium?</p> <p>Existing MAV - 0.02 (mg/L) Proposed MAV - 0.03 (mg/L)</p>	<p>1. Yes 2. No 3. Don't know</p> <p>Add a comment if relevant -</p>
<p>Do you agree with the proposed MAV for Anatoxins?</p> <p>Existing MAV</p> <ol style="list-style-type: none"> <li>1. Anatoxins - a 0.006 (mg/L)</li> <li>2. Anatoxins – a(s) 0.001 (mg/L)</li> </ol> <p>Proposed MAV - 0.006 (m/L)</p>	<p>1. Yes 2. No 3. Don't know</p> <p>Add a comment if relevant -</p>
<p>Do you agree with the proposed MAV for Atrazine?</p> <p>Existing MAV - 0.002 (mg/L) Proposed MAV - 0.1 (mg/L)</p>	<p>1. Yes 2. No 3. Don't know</p> <p>Add a comment if relevant -</p>
<p>Do you agree with the proposed MAV for Azinphos-methyl?</p> <p>Existing MAV - 0.004 (mg/L) Proposed MAV - 0.1 (mg/L)</p>	<p>1. Yes 2. No 3. Don't know</p> <p>Add a comment if relevant -</p>
<p>Do you agree with the proposed MAV for Cylindrospermopsins?</p> <p>Existing MAV - 0.001 (mg/L) Proposed MAV - 0.0008 (mg/L)</p>	<p>1. Yes 2. No 3. Don't know</p> <p>Add a comment if relevant -</p>
<p>Do you agree with the proposed MAV for Homoanatoxin-a?</p> <p>Existing MAV - 0.002 (mg/L) Proposed MAV – No MAV is proposed</p>	<p>1. Yes 2. No 3. Don't know</p> <p>Add a comment if relevant -</p>
<p>Do you agree with the proposed MAV for Hydroxytrazine?</p> <p>Existing MAV – No MAV exists Proposed MAV - 0.3 (mg/L)</p>	<p>1. Yes 2. No 3. Don't know</p> <p>Add a comment if relevant -</p>

Questions	Possible response
<p>Do you agree with the proposed MAV for MCPA?</p> <p>Existing MAV - 0.002 (mg/L) Proposed MAV - 0.8 (mg/L)</p>	<p>1. Yes 2. No 3. Don't know</p> <p>Add a comment if relevant -</p>
<p>Do you agree with the proposed MAV for Metalaxyl?</p> <p>Existing MAV - 0.1 (mg/L) Proposed MAV - 0.3 (mg/L)</p>	<p>1. Yes 2. No 3. Don't know</p> <p>Add a comment if relevant -</p>
<p>Do you agree with the proposed MAV for N-nitrosodimethylamine?</p> <p>Existing MAV - No MAV exists Proposed MAV - 0.0001 (mg/L)</p>	<p>1. Yes 2. No 3. Don't know</p> <p>Add a comment if relevant -</p>
<p>Do you agree with the proposed MAV for PFHxS + PFOS?</p> <p>Existing MAV – No MAV exists Proposed MAV - 0.00007 (mg/L)</p>	<p>1. Yes 2. No 3. Don't know</p> <p>Add a comment if relevant -</p>
<p>Do you agree with the proposed MAV for PFOA?</p> <p>Existing MAV – No MAV exists Proposed MAV - 0.00056 (mg/L)</p>	<p>1. Yes 2. No 3. Don't know</p> <p>Add a comment if relevant -</p>
<p>Do you agree with the proposed MAV for Sodium dichloroisocyanurate (as cyanuric acid)?</p> <p>Existing MAV – No MAV exists Proposed MAV - 40 (mg/L)</p>	<p>1. Yes 2. No 3. Don't know</p> <p>Add a comment if relevant -</p>
<p>Do you agree with the proposed MAV for Trichloroethene?</p> <p>Existing MAV - 0.02 (mg/L) Proposed MAV - 0.03 (mg/L)</p>	<p>1. Yes 2. No 3. Don't know</p> <p>Add a comment if relevant -</p>

Questions	Possible response
Do you agree with the proposed MAV for 1080?  Existing MAV – Long term MAV of 0.0035 (mg/L) Proposed MAV – Short term MAV 0.035 (mg/L)	1. Yes 2. No 3. Don't know  Add a comment if relevant -
Do you agree with the proposed MAV for Total alpha activity?  Existing MAV – 1.0 Proposed MAV - 0.5	1. Yes 2. No 3. Don't know  Add a comment if relevant -
Do you agree with the proposed MAV for Total beta activity?  Existing MAV -0.5 Proposed MAV – 1.0	1. Yes 2. No 3. Don't know  Add a comment if relevant -

If you want to provide any additional feedback on any MAV please provide this here:

Additional feedback on any MAV:

*In regards to the proposed MAV for Perchlorate?*

- *We have been unable to find any laboratory in NZ that is currently offering this testing for Drinking Water.*

If you want to provide any feedback on transition issues from the Drinking-water Standards for New Zealand 2005 (revised 2018) to the proposed Drinking Water Standards, please provide this here:

Feedback on transition issues:

- *Need to ensure appropriate access to certified laboratories is available to enable testing of substances and that there are enough labs appropriately located to meet the additional demands and timeliness requirements.*

If you want to provide any additional feedback, please provide this here:

Additional feedback:

*Drinking Water Aesthetic Values*



- *We would like further guidance as to how the rules would be pragmatically applied to meet the legal duty of a water supplier under the WSA to take all reasonably practicable steps to ensure that they provide their consumers with aesthetically acceptable water.*



# E- Drinking Water Quality Assurance Rules



## Tell us a bit about yourself

Question	Possible responses
Full name	Toni Goodlass
<p>Email address - this will only be used if we need to communicate with you about your submission, or if you indicate below that you would like to be contacted in the future in relation to drinking water issues</p> <p><b>Note</b> you are not required to provide your email address</p>	<p><a href="mailto:toni.goodlass@napier.govt.nz">toni.goodlass@napier.govt.nz</a></p>
Are you providing feedback:	<p>Select option</p> <ol style="list-style-type: none"> <li>1. <del>As an individual</del></li> <li>2. On behalf of an organisation or group               <ol style="list-style-type: none"> <li>a. organisation or group name: <b>Napier City Council, Hastings District Council, Wairoa District Council and Central Hawke's Bay District Council</b></li> <li>b. position/ title within the organisation: <b>Regional Programme Director – Hawke's Bay Five Councils</b></li> </ol> </li> </ol>



Question	Possible responses
<p>Where do you live/reside?</p> <p>If your organisation has presence in more than one region – select 'National'</p>	<p>Select option</p> <ol style="list-style-type: none"> <li><del>1. Outside New Zealand</del></li> <li><del>2. National</del></li> <li><del>3. Northland / Te Tai Tokerau</del></li> <li><del>4. Auckland / Tāmaki-makau-rau</del></li> <li><del>5. Waikato</del></li> <li><del>6. Bay of Plenty / Te Moana-a-Toi</del></li> <li><del>7. Gisborne / Te Tai Rāwhiti</del></li> <li><del>8. Hawke's Bay / Te Matau-a-Māui</del></li> <li><del>9. Taranaki</del></li> <li><del>10. Manawatū – Whanganui</del></li> <li><del>11. Wellington / Te Whanganui-a-Tara</del></li> <li><del>12. Tasman / Te Tai-o-Aorere</del></li> <li><del>13. Nelson / Whakatū</del></li> <li><del>14. Marlborough / Te Taihu-o-tewaka</del></li> <li><del>15. West Coast / Te Tai Poutini</del></li> <li><del>16. Canterbury / Waitaha</del></li> <li><del>17. Otago / Ōtākou</del></li> <li><del>18. Southland / Murihiku</del></li> </ol>
<p>Which of the below options best describes you in the context of this consultation?</p>	<p>Select option</p> <ol style="list-style-type: none"> <li><del>1. Individual water drinker / consumer</del></li> <li><del>2. Registered drinking water supplier (excl marae) – either under the Health Act 1956 or the Water Services Act 2021</del></li> <li><del>3. Unregistered drinking water supplier (excl marae)</del></li> <li><del>4. Other commercial user of water</del></li> <li><del>5. Stakeholder representative / industry body</del></li> <li><del>6. Iwi representative organisation</del></li> <li><del>7. Marae</del></li> <li><del>8. Health professional</del></li> <li><del>9. Laboratory</del></li> <li><del>10. Local authority or Council Controlled Organisation</del></li> <li><del>11. Regional Council</del></li> <li><del>12. Central government agency</del></li> <li><del>13. Local interest group</del></li> <li><del>14. Other</del></li> </ol>

Question	Possible responses
<p>If you selected 'Registered water supplier (excl Marae)' – are you</p> <p>If you have multiple supplies, please select your largest supply type.</p> <p>For a definition of each supply type refer to this document – <a href="#">Supply type</a>.</p>	<p>Select option</p> <ol style="list-style-type: none"> <li><del>1. On-demand Networked Drinking Water Supplies – &lt; 50 (Very Small Supplies).</del></li> <li><del>2. On-demand Networked Drinking Water Supplies – 50 – 500 (Small Supplies).</del></li> <li><del>3. On-demand Networked Drinking Water Supplies – &gt;500 (Large Supplies).</del></li> <li><del>4. On-demand Networked Drinking Water Supplies – Varying Population Size Supplies.</del></li> <li><del>5. Trickle Feed Water Supplies.</del></li> <li><del>6. Self-supplied Building Drinking Water Supplies.</del></li> <li><del>7. Water Carrier Services.</del></li> <li><del>8. Planned Event Temporary Drinking Water Supplies.</del></li> <li><del>9. Community Drinking Water Stations/Water Carrier Supplies –</del></li> </ol>
<p>If you selected 'Unregistered water supplier (excl Marae)' – are you</p>	<p>Select option</p> <ol style="list-style-type: none"> <li><del>1. School</del></li> <li><del>2. Café</del></li> <li><del>3. Camping grounds</del></li> <li><del>4. Recreational facilities</del></li> <li><del>5. Community halls and other local community facilities</del></li> <li><del>6. Water supplied under an easement</del></li> <li><del>7. Small commercial water supply networks</del></li> <li><del>8. rural drinking water networks (also providing irrigation and water for livestock)</del></li> <li><del>9. Other</del></li> </ol>
<p>If you selected 'Other commercial user of water' – are you</p>	<p>Specify your commercial activity (example 'food manufacturer' 'bottled water supplier' etc)</p>
<p>If you selected 'Stakeholder representative / industry body'</p>	<p>Specify your area of interest or industry</p>
<p>If you selected 'Marae' – are you</p>	<p>Select option</p> <ol style="list-style-type: none"> <li>1. Registered water supplier – either under the Health Act 1956 or the Water Services Act 2021</li> <li>2. Unregistered water supplier</li> </ol>

Question	Possible responses
If you selected 'Health professional' – are you	Select option <ol style="list-style-type: none"> <li>1. District Health Board</li> <li>2. Māori health provider</li> <li>3. Private health provider</li> <li>4. residential care provider</li> <li>5. Other</li> </ol>
If you selected 'Laboratory' – are you	Select option <ol style="list-style-type: none"> <li><del>1. IANZ accredited drinking water laboratory</del></li> <li>2. IANZ - Level 2 Recognised Laboratory (transitional) (Wairoa)</li> <li><del>3. Other IANZ accredited laboratory (non-drinking water)</del></li> <li><del>4. Other – non IANZ accredited laboratory</del></li> </ol>
If you selected 'Local interest group'	Specify your interest
If you would like to be contacted in the future by Taumata Arowai in relation to drinking water issues, please select the option.	Select an option <ol style="list-style-type: none"> <li>1. Yes, I would like to be contacted in the future by Taumata Arowai in relation to drinking water issues on the email provided above.</li> <li><del>2. No, I do not want to be contacted in the future by Taumata Arowai in relation to drinking water issues</del></li> </ol>

## Publishing submissions and Official Information Act 1982 requests

### Publishing your submission

We intend to proactively publish the submissions made as part of this consultation on our website, but only if we are given permission to do so.

We may publish a summary of submissions. The summary will be aggregated to a level so that individual submissions cannot be identified.

### Official Information Act requests

Your submission may be subject to requests made under the Official Information Act 1982 (even if it hasn't been published). We must make your submission available in response to such a request, unless we have a good reason or other administrative grounds for withholding it.

Question	Possible response
<p>Do you give us permission to proactively publish your submission?</p>	<p>(Required response)</p> <p>Select an option:</p> <ol style="list-style-type: none"> <li>1. Yes. You may publish this submission, including my personal details (name, organisation and email address)</li> <li><del>2. Yes, but without details that identify me. You may publish this submission but only after removing my personal details (name, organisation, and email address)</del></li> <li><del>3. No. Do not publish this submission</del></li> </ol>
<p>Official Information Act requests</p> <p>Your submission may be subject to requests made under the Official Information Act (OIA), even if it hasn't been published. Your preference about the release of your submission, including your contact details, will be relevant to our decision on each request. We may be legally required to make your submission available, even if you indicate that you would prefer us not to release it</p>	<p>(Required response)</p> <p>Select an option:</p> <ol style="list-style-type: none"> <li>1. Yes. You may make my submission available in response to requests made under the OIA, including my personal details (name, organisation, email)</li> <li><del>2. Yes, but without details that identify me. I would prefer that you make my submission available with my personal details removed or redacted</del></li> <li><del>3. Yes, but without the information indicated below</del></li> <li><del>4. No, I would prefer that you do not make my submission available in response to requests made under the OIA</del></li> </ol>

Question	Possible response
<p>If you have asked us to withhold your submission, your personal details, or any other information in your submission, please outline the reasons why you would prefer that information not be made available</p> <p>Reasons for withholding might include that it's commercially sensitive or it's personal information.</p> <p>Any decision Taumata Arowai makes to withhold information requested under the OIA can be reviewed by the Ombudsman, who may instruct Taumata Arowai to release the withheld information.</p>	<p>Please specify what information in your submission you believe should be withheld, and why</p>

## Key Technical Comments on Draft Drinking Water Quality Assurance Rules

The key technical comments that the Hawke's Bay councils wish to make on the Rules are:

- Reconsider the population groups and rules applied to enable a more pragmatic risk based approach. One option could be to redefine the groupings (eg <25 very light touch minimal requirements, 25-100 very small, 100-500 small – or something similar), alternatively an option could be combine the categories for Very Small and Small Water Supplies (up to 500 people) into a single category which uses the draft Rules for Very Small Supplies.
- Small Water Supplies, Self-Supplying Building Water Supplies and Planned Temporary Event Water Supplies should not be required to chlorinate their supplies.
- For Small Water Supplies the extent and frequency of monitoring should be reviewed, considering the risk profile and ability to practically achieve at this current time. If the current groupings are used we suggest a reduction of testing requirements.
- Source water monitoring requirements should be able to be amended through the source water risk management plan and drinking water safety planning processes.
- Where the Rules require a certain period of monitoring before monitoring frequency reduces, this should allow for historical monitoring to be used.
- The Rules should allow for reduced monitoring frequency where water quality is demonstrated as consistent or well characterised and the risks are well understood.
- Online monitoring in the distribution system should be permitted for Small Water Supplies, as an alternative to grab samples.

- Cyanobacteria monitoring requirements require further consideration. It is a technical field and the expertise is limited. There could be an argument for a greater role of regional councils in this space, but a water supplier also needs to assure that it is supplying safe water. The source water risk management plans create a place for some of these discussions to occur, but our view is further consideration and national direction in this space is required to find a workable solution. In regards to small private suppliers there is very limited ability for them to manage these potential risks.
- Calibration and verification requirements should be in accordance with the instrument manufacturer's specified procedures and frequency, rather than at a frequency specified in the Rules.
- The Rules should be consistent with respect to cartridge filtration and treated water turbidity requirements.
- A rule should be added to require that that treated water storage tanks in Small Water Supplies are secure from vermin and faecal contamination.
- The Rules for Varying Population Water Supplies should be reviewed so that they are consistent with the Rules water supplies serving the same sized population.

#### *1.1.1 Reconsider the population bands and rules that apply*

Option 1: Combine the categories for Very Small and Small Water Supplies (up to 500 people) which uses the draft Rules for Very Small Supplies

Option 2: Redefine the population categories and rules:, e.g. <25 (Neighbourhood supply) - minimal requirements), 25-100 very small supply grouping, 100-500 small supply grouping.

The requirements for small supplies are a significant change from that required in section 10 of DWSNZ, particularly with respect to water quality monitoring requirements and chlorination. It is recommended that the Very Small and Small Water Supply categories are combined, the rules for Small Water Supplies are deleted and the rules for Very Small Supplies (<50 people) are used for this combined category (up to 500 people). This would enable these suppliers to more easily comply with the rules while still taking a risk-based approach through their drinking water safety plans.

Please see below for further suggestions on how the Rules for Small Water Supplies could be improved and refer to the main body of the Hawke's Bay Councils submission for recommendations in relation to private water supplies serving <25.

Our view is that part of the challenge of the proposed changes is that the requirements may not be justifiable across the full range of the population / risk of each of the groupings. Also the proposal is not enabling a pragmatic and implementable approach. The overall risk of a supply at 51 people is not the same as the population risk of a supply servicing 480 people, however the proposal requires the same provision which is resulting in requirements which may not be justified or achievable, especially by small private suppliers.

### 1.1.1 Chlorination

Requiring Small Water Supplies to chlorinate will introduce Health & Safety and environmental risks (plus potential public health risks from overdosing or disinfection by-products) which potentially outweigh the public health risk being managed by requiring residual disinfection.

Small Water Supplies, Self-Supplying Building Water Supplies and Planned Temporary Event Water Supplies should not be required to chlorinate their supplies.

Chlorination is required for self-supplying buildings under the Rules, despite having no network. It is unclear why Planned Temporary Event Water Supplies would need to chlorinate their supplies.

### 1.1.2 Water Quality Monitoring Rules

Small supplies (serving 50-500 people) are currently covered by section 10 of the Drinking-water Standards for New Zealand (2005, revised 2018, DWSNZ). This requires the water supplier to prepare a water safety plan, treat the water (typically with cartridge filtration and UV) and monitor E. coli in the treated water quarterly.

The proposed Rules for small supplies are a significant step change from the current requirements in section 10 of DWSNZ. It is proposed that many more parameters are monitored, with eight to be monitored daily. The number of samples increases from 4 per year to 3,040 per year. It is estimated that the annual monitoring cost will increase by \$15,000 for each small supply, plus further costs for travel and additional staff who would need to be recruited and trained to undertake this monitoring. Alternatively continuous online monitoring equipment could be installed to measure parameters that need to be monitored daily; however the estimated cost of this is \$40,000. While Councils may be able to absorb/spread the increase of costs, this is likely prohibitive for small private supplies.

While we agree that monitoring may need to increase to improve the safety of small supplies, our view is that the monitoring proposed in the draft Rules is excessive and overly prescriptive, particularly for private water supplies, and that the frequency of monitoring should be reduced and focus on the areas of greatest risk. The monitoring requirements should be risk-based and determined through the drinking water safety plan and source water risk management plan.

Councils have undertaken extensive monitoring of their water supplies over the years. Where the Rules require a certain period of monitoring before monitoring frequency reduces (e.g. disinfection by-products), this should allow for historical monitoring to be used.

Where the water quality is robustly demonstrated as consistent or well-characterised, there should be provisions in the Rules for the monitoring frequency to reduce. For example, if a water supplier knows that their water source is high in iron or manganese and has treatment steps in place to remove it, there is little value in continuing to monitor these parameters frequently in the source water.

The Councils would like the option of using online monitoring in their distribution networks for their Small Water Supplies, as this would be more cost effective and result in lower demands on workforce requirements, as well as lower carbon emissions than the scenario of having a staff member or contractor driving around all supplies on a daily basis to take water quality samples.

The extent and frequency of monitoring should be reduced for Small Water Supplies.

Source water monitoring requirements should be able to be amended through the source water risk management plan and drinking water safety plan process.

Where the Rules require a certain period of monitoring before monitoring frequency reduces, this should allow for historical monitoring to be used.

The Rules should allow for reduced monitoring frequency where water quality is robustly demonstrated as consistent or well characterised.

Online monitoring in the distribution system should be permitted for Small Water Supplies, as an alternative to grab samples.

### 1.1.3 *Cyanobacteria Monitoring*

It is difficult to see how a very small water supplier would know whether an algal mat in their surface water source is a benthic cyanobacteria mat or a planktonic cyanobacterial growth? Even very experienced water suppliers are unable to determine this. This can only be determined by an expert. Cyanotoxin monitoring is very expensive (\$350 - \$400 per test) and would be unaffordable for small private water supplies. Cyanobacteria monitoring is already undertaken by regional councils (although not in all water bodies) and so potentially they may be better placed to undertake this monitoring. However we also recognise that the water supplier has a duty to ensure they provide safe water. The source water risk management plans should play a key role to potentially coordinate roles and risk controls. However our recommendation is that further work in this area is required to more holistically consider and define how this monitoring can be effectively and efficiently performed.

Cyanobacteria monitoring requirements requires further consideration to define how and who is best placed to deliver the monitoring

### 1.1.4 *Calibration and Verification Requirements*

Calibration and verification requirements should be in accordance with the instrument manufacturer's specified procedures and frequency, rather than at a frequency specified in the Rules.

Calibration and verification requirements should be in accordance with the instrument manufacturer's specified procedures and frequency, rather than at a frequency specified in the Rules. This should be consistent throughout the Rules.

### 1.1.5 *Cartridge Filtration and Turbidity Rules*

It is important that the Rules are consistent for different categories of supply and with the acceptable solutions, as far as possible. We recommend that the requirements are checked for consistency and that the filtration requirements are set to meet the treatment requirements.

The treated water turbidity for small supplies needs to be 0.5 NTU, whereas it is 5 NTU for a short period for large supplies. We note that there needs to be an ability to consider the operating ranges of equipment in setting of the thresholds. Ie if a UV disinfection process is validated at a higher normal operating range then the rules should be able to enable this

The Rules should be consistent with respect to cartridge filtration and treated water turbidity requirements.

#### 1.1.6 Varying Population Size Water Supplies

Twice daily monitoring for Varying Population Size Water Supplies which have a normal population of more than 500 is inconsistent with the Rules for Large supplies. The Water safety planning should consider what changes in risk may occur as demand changes, and provide for mitigations and controls of those risks.

The Rules for Varying Population Water Supplies should be changed so that they are consistent with the Rules water supplies serving the same sized population.

Do you have any comments on the transition time required to adopt the proposed rules?

Comment on transition time required:

The Hawke’s Bay Councils are committed to providing safe water for their communities. However, the reality is that it will not be possible for all Council water supplies to comply with the Rules when they come into effect. This is due to the time required to upgrade infrastructure (which must be planned, consulted, funded, designed, consented, procured, installed and commissioned) and supply chain issues if over 1000 registered supplies are upgrading their systems at the same time. It will be even more challenging for registered private water supplies, who have fewer resources (budget and staff) to undertake the necessary work.

It is recommended that that transitional provisions are added to the Rules to allow time for registered suppliers to undertake upgrades, implement systems and processes, and undertake training. This could be linked to the timeframes in a water supplier’s drinking water safety plan, with those timeframes to be agreed and monitored over time with Taumata Arowai.

It is also unclear whether Taumata Arowai has considered the resourcing and laboratory testing capacity available across New Zealand to fulfil the new requirements, therefore transitional approaches may also be required in this specific area as well.

If you want to provide any additional feedback, please provide this here:

Additional feedback:

# Responses to Questions

Question	Possible Response	Recommendation
<p>The proposed Drinking Water Quality Assurance Rules have been prepared for the following water supply categories:</p> <ul style="list-style-type: none"> <li>On-demand Networked Drinking Water Supplies With the following population sizes: <ul style="list-style-type: none"> <li>&lt; 50 (Very Small Supplies)</li> <li>50 – 500 (Small Supplies)</li> <li>&gt;500 (Large Supplies)</li> <li>Varying Population Size Supplies</li> </ul> </li> <li>Trickle Feed Water Supplies</li> <li>Self-supplied Building Drinking Water Supplies</li> <li>Water Carrier Services</li> <li>Planned Event Temporary Drinking Water Supplies</li> <li>Community Drinking Water Stations/Water Carrier Supplies</li> </ul> <p>Do you agree that these categories are appropriate?</p> <p>Reference to the consultation document – section 1.3, p.7-8.</p>	<p><del>1. Yes</del> 2. No <del>3. Don't know</del></p> <p>Add a comment if relevant -</p> <ul style="list-style-type: none"> <li>The requirements for small supplies are a significant change from that required in section 10 of DWSNZ. It is recommended that this category is deleted and the rules for very small supplies (&lt;50 people) are also used for small supplies (50-500 people). This would enable these suppliers to more easily comply with the rules while still taking a risk-based approach through the drinking water safety plan.</li> <li>Public taps or container filling stations that are connected to a network supply (e.g. community taps that provide water which is chlorinated and then de-chlorinated) are not considered to be community drinking water stations. So what category of supply are these? If they are considered to be an on-demand networked supply, how can a water supplier provide dechlorinated water at these filling stations and meet the requirement for all water in the network to have a FACE concentration of at least 0.2 mg/L?</li> <li>The guidance to determine drinking water population says that the Planned Event Temporary Drinking Water Supplies category also includes unplanned events such as hui or tangi held at marae or gatherings at a community hall. To avoid confusion, the word planned should be removed from the name of this type of supply.</li> </ul>	<ul style="list-style-type: none"> <li>Amend the on demand categories to read either: <ul style="list-style-type: none"> <li>On-demand Networked Drinking Water Supplies With the following population sizes: <ul style="list-style-type: none"> <li><del>&lt; 50 (Very Small Supplies)</del></li> <li><del>50 – 500 (Small Supplies)</del></li> <li>&lt;500 people (Small Supplies)</li> <li>&gt;500 people (Large Supplies)</li> <li>Varying Population Size Supplies</li> </ul> </li> </ul> </li> <li>Or as an alternative to above <ul style="list-style-type: none"> <li>On-demand Networked Drinking Water Supplies With the following population sizes: <ul style="list-style-type: none"> <li>&lt; 25 (Neighbourhood Supplies)</li> <li>25-100 ( Very Small Supplies)</li> <li>101-500 (Small Supplies)</li> <li>&gt; 500 (Large Supplies)</li> <li>Varying Population size Supplies</li> </ul> </li> </ul> </li> <li>Amend the rules to allow for provision of dechlorinated water at filling stations connected to an on-demand networked supply.</li> <li>Amend the category “Planned Event Temporary Drinking Water Supplies” to be “Temporary Event Drinking Water Supplies” throughout the rules.</li> </ul>
<p>There is an option of having the general drinking water quality assurance rules associated with Planned Event Temporary Drinking Water Supply either recorded in the Drinking Water Quality Assurance Rules, with modifications as required in a particular permit, or have all the drinking water quality assurance requirements detailed in the temporary event permit that is issued.</p> <p>Do you agree that the general drinking water quality assurance rules associated with a Planned Event Temporary Drinking Water Supply should be recorded in the Rules as reflected in the consultation document? The alternative is that the drinking water quality</p>	<p><del>1. Yes</del> <del>2. No</del> 3. Don't know</p> <p>Add a comment if relevant -</p> <p>It is difficult to comment on this as it is unclear what would be required to obtain a permit. Some events are unplanned (e.g. tangi) so how would a permit work in these situations? Would a water supplier need to apply for a permit for each separate event, or could they apply for a general permit that would cover multiple events? The latter would be more practical. Perhaps Temporary Event Drinking Water Supplies could be given both options (complying with the rules or obtaining a permit).</p> <p>Further consideration should also be given to the fees and charges for planned temporary events for the range of supply types.</p>	

Question	Possible Response	Recommendation
assurance rules would be detailed as a condition on each permit.		
<p>The proposed Drinking Water Quality Assurance Rules are structured as ‘modules’ for source water, treatment systems and distribution systems. There are different rules depending on the level of complexity for each module.</p> <p>Do you agree with the proposed Drinking Water Quality Assurance Rules being structured in this manner?</p> <p>Reference to the consultation document – section 1.4, p.8 to 9.</p>	<p>1. Yes  <del>2. No</del>  <del>3. Don't know</del>  <del>4. —</del>  <del>5. Add a comment if relevant</del></p> <p>Add a comment if relevant -</p> <ul style="list-style-type: none"> <li>The use of modules is helpful.</li> </ul>	
<p>The proposed Drinking Water Quality Assurance Rules allocate to each class of supplier the modules that they must demonstrate compliance against.</p> <p>Do you agree with the allocation of modules to On Demand Network Drinking Water Supplier – <b>Very Small Drinking Water Supplies</b> (namely <b>G + S1 + T1 + D1</b>)?</p> <p>Reference to the consultation document – section 4.1, p.16, table 2.</p>	<p>1. Yes  <del>2. No</del>  <del>3. Don't know</del></p> <p>Add a comment if relevant -</p> <ul style="list-style-type: none"> <li>The rules for very small supplies (serving &lt;50 people) are generally reasonable. The proposed requirements which don't impose unreasonable additional requirements or significant costs, while still taking a risk-based approach through the drinking water safety plan.</li> </ul>	
<p>The proposed Drinking Water Quality Assurance Rules allocate to each class of supplier the modules that they must demonstrate compliance against.</p> <p>Do you agree with the allocation of modules to On Demand Network Drinking Water Supplier – <b>Small Drinking Water Supplies</b> (namely <b>G + S2 + T2 + D2</b>)?</p> <p>Reference to the consultation document – section 4.2, p.16, table 2</p>	<p><del>1. Yes</del>  2. No  <del>3. Don't know</del></p> <p>Add a comment if relevant -</p> <ul style="list-style-type: none"> <li>The rules for small supplies (50-500 people) impose more significant requirements and we understand the reasons for this are in the interests of improving the public health outcomes for these communities.</li> <li>We recognise that these new requirements will result in a significant step change from the current requirements in section 10 of the Drinking-water Standards for New Zealand (2005, revised 2018, DWSNZ) for supplies of this size.</li> <li>The increased monitoring requirements are estimated to increase the monitoring costs by up to \$15,000 for each small supply, plus the cost of travel and additional staff would need to be recruited to undertake this monitoring.</li> <li>Alternatives could include continuous online monitoring equipment at a cost of around \$40,000.</li> </ul>	<ul style="list-style-type: none"> <li>It is recommended that either <ul style="list-style-type: none"> <li>the rules for very small supplies – which are much more akin to those in section 10 of DWSNZ – should also be used for small supplies, or</li> <li>The population groupings are altered to alter the size of the supplies that the rules will apply to.</li> </ul> </li> </ul>

Question	Possible Response	Recommendation								
	<ul style="list-style-type: none"> <li>While these extra costs are able to be borne by council supplies, this will be cost prohibitive for many private water supplies.</li> </ul>									
<p>The proposed Drinking Water Quality Assurance Rules allocate to each class of supplier the modules that they must demonstrate compliance against.</p> <p>Do you agree with the allocation of modules to On Demand Network Drinking Water Supplier – <b>Large Drinking Water Supplies (namely G + S3 + T3 + D3)?</b></p> <p>Reference to the consultation document – section 4.3, p.16 to 17, table 2.</p>	<ol style="list-style-type: none"> <li>Yes</li> <li><del>No</del></li> <li><del>Don't know</del></li> </ol> <p>Add a comment if relevant -</p>									
<p>The proposed Drinking Water Quality Assurance Rules allocate to each class of supplier the modules that they must demonstrate compliance against.</p> <p>Do you agree with the allocation of modules to On Demand Network Drinking Water Supplier – <b>Varying Population Size Drinking Water Supplies (less than 500 people) (namely G + S2 + T2 + D2)?</b></p> <p>Reference to the consultation document – section 4.4, p.17, table 2.</p>	<ol style="list-style-type: none"> <li>Yes</li> <li>No</li> <li>Don't know</li> </ol> <p>Add a comment if relevant -</p> <ul style="list-style-type: none"> <li>The requirement for varying population size to meet the Tier 2 requirements, even when their populations are less than 50 people most or all of the time, is onerous, particularly the monitoring requirements. This would have a major impact on marae which hold meetings and host tangi from time to time, event centres, community halls, woolsheds and campgrounds which are largely unused for most of the year but have a large number of campers for two weeks over Christmas/New Year. There should just be increased monitoring when the population exceeds 50 people.</li> <li>It should also be clear that Rule E1 needs to be complied with, by including it in the list of modules.</li> </ul>	<ul style="list-style-type: none"> <li>Amend the rules for varying population size to be: <ul style="list-style-type: none"> <li>When the population is less than 50 people: <del>G + S2 + T2 + D2</del> <u>G + S1 + T1 + D1</u></li> <li>Additional monitoring requirements when the population exceeds 50 people</li> <li>Amend the trickle feed water supplies to be: <ul style="list-style-type: none"> <li>Any population size: <u>G + S2 + T2 + D2</u></li> <li>a) <u>&lt; 50 people: G + S1 + T1 + D1 + E1</u></li> <li>b) <u>&gt; 50 people: G + S2 + T2 + D2 + E1</u></li> </ul> </li> </ul> </li> <li>Amend Table 2 to read: <table border="1" data-bbox="1590 1146 2792 1266"> <tr> <td>d) Varying Population Size</td> <td></td> </tr> <tr> <td>a. Normal population &lt; 50 people</td> <td><u>G + S1 + T1 + D1 + E1</u></td> </tr> <tr> <td>b. Normal population &gt; 50 people</td> <td><u>G + S2 + T2 + D2 + E1</u></td> </tr> </table> </li> </ul>	d) Varying Population Size		a. Normal population < 50 people	<u>G + S1 + T1 + D1 + E1</u>	b. Normal population > 50 people	<u>G + S2 + T2 + D2 + E1</u>		
d) Varying Population Size										
a. Normal population < 50 people	<u>G + S1 + T1 + D1 + E1</u>									
b. Normal population > 50 people	<u>G + S2 + T2 + D2 + E1</u>									
<p>Do you agree that On Demand Network Drinking Water Supplier – <b>Varying Population Size Drinking Water Supplies (less than 500 people)</b> must comply with Rule E1 in addition to modules <b>G + S2 + T2 + D2?</b></p> <p>Reference to the consultation document – section 4.4, p.17.</p> <p>Rule E1 - When the population exceeds 500 people, increased daily and weekly monitoring must be undertaken at the frequencies set out</p>	<ol style="list-style-type: none"> <li><del>Yes</del></li> <li>No</li> <li><del>Don't know</del></li> </ol> <p>Add a comment if relevant -</p> <ul style="list-style-type: none"> <li>The requirement to monitor water quality twice daily with at least six hours between samples when the population exceeds 500 is onerous, especially for remote rural supplies such as campgrounds. For consistency, the monitoring frequency should be the same as for other supplies of that size in the applicable distribution rules.</li> </ul>	<p>Amend the first paragraph of section 4.4 to read:</p> <p>The following rules apply to drinking water supplies that provide <del>networked</del> drinking water to a population which does not change significantly for most of a year but increases at specific times during the year.</p> <p><u>Varying Population Size Drinking Water Supplies that have a base population of less than 50 people must demonstrate compliance with the following rule modules: G + S1 + T1 + D1 + EX</u></p> <p><u>Varying Population Size Drinking Water Supplies that have a base population of less than 500 people must demonstrate compliance with Rule E1 and the following rule modules: G + S2 + T2 + D2 + E1</u></p> <table border="1" data-bbox="1590 1707 2792 1860"> <thead> <tr> <th>Rule Number</th> <th>Requirement</th> <th>Assurance/Monitoring</th> <th>Compliance Period</th> </tr> </thead> <tbody> <tr> <td>EX</td> <td><u>When the population exceeds 50 people, increased daily and weekly monitoring must be undertaken at the</u></td> <td><u>Monitoring</u></td> <td><u>1 Day</u> Or</td> </tr> </tbody> </table>	Rule Number	Requirement	Assurance/Monitoring	Compliance Period	EX	<u>When the population exceeds 50 people, increased daily and weekly monitoring must be undertaken at the</u>	<u>Monitoring</u>	<u>1 Day</u> Or
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Question	Possible Response	Recommendation											
<p>in Table 3 for the day or week that the population increase occurs.</p>		<table border="1" data-bbox="1590 226 2792 596"> <tr> <td data-bbox="1590 226 1715 436"></td> <td data-bbox="1715 226 2332 436"> <p>frequencies set out in the D2 rules for the day or week that the population increase occurs. When the population exceeds 500 people, increased daily and weekly monitoring must be undertaken at the frequencies set out in the D3 rules for the day or week that the population increase occurs.</p> </td> <td data-bbox="2332 226 2510 436"></td> <td data-bbox="2510 226 2792 436"> <p>1 Week as set out in Table 3</p> </td> </tr> <tr> <td data-bbox="1590 436 1715 596">E1</td> <td data-bbox="1715 436 2332 596"> <p>When the population exceeds 500 people, increased daily and weekly monitoring must be undertaken at the frequencies set out in <del>Table 3</del> the D3 rules for the day or week that the population increase occurs.</p> </td> <td data-bbox="2332 436 2510 596">Monitoring</td> <td data-bbox="2510 436 2792 596"> <p>1 Day Or 1 Week as set out in Table 3</p> </td> </tr> </table> <p>Table 3 should be deleted. If it is to be retained, the monitoring frequencies should be reduced to no more than once a day.</p>					<p>frequencies set out in the D2 rules for the day or week that the population increase occurs. When the population exceeds 500 people, increased daily and weekly monitoring must be undertaken at the frequencies set out in the D3 rules for the day or week that the population increase occurs.</p>		<p>1 Week as set out in Table 3</p>	E1	<p>When the population exceeds 500 people, increased daily and weekly monitoring must be undertaken at the frequencies set out in <del>Table 3</del> the D3 rules for the day or week that the population increase occurs.</p>	Monitoring	<p>1 Day Or 1 Week as set out in Table 3</p>
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<p>The proposed Drinking Water Quality Assurance Rules allocate to each class of supplier the modules that they must demonstrate compliance against.</p> <p>Do you agree with the allocation of modules to On Demand Network Drinking Water Supplier – <b>Varying Population Size Drinking Water Supplies</b> (more than 500 people) (namely G + S3 + T3 + D3)?</p> <p>Reference to the consultation document – section 4.4, p.17, table 2.</p>	<ul style="list-style-type: none"> <li>• <del>Yes</del></li> <li>• No</li> <li>• <del>Don't know</del></li> </ul> <p>Add a comment if relevant -</p> <ul style="list-style-type: none"> <li>• The rules that apply for large water supplies already adequately cover this type of supply.</li> </ul>	<p>Delete the section that refers to Varying Population Size Drinking Water Supplies (more than 500 people).</p>											
<p>Do you agree that On Demand Network Drinking Water Supplier – <b>Varying Population Size Drinking Water Supplies</b> (more than 500 people) that the distribution system monitoring requirements must increase according to the frequencies set out in the D3 rules for the periods that the population is increased above the base population</p> <p>Reference to the consultation document – section 4.4, p.17 to 19, table 3.</p>	<ol style="list-style-type: none"> <li>1. <del>Yes</del></li> <li>2. No</li> <li>3. <del>Don't know</del></li> </ol> <p>Add a comment if relevant -</p> <p>The rules that apply for large water supplies already adequately cover this type of supply. There is no need to increase the frequency of monitoring to twice daily just because a town is a holiday destination. Table 35 already provides for increased monitoring if the population increases substantially. The Councils do recognise though that large population changes should be considered in the water safety planning processes.</p>	<p>Amend Rule E1 to read:</p> <table border="1" data-bbox="1590 1245 2792 1476"> <thead> <tr> <th data-bbox="1590 1245 1715 1318">Rule Number</th> <th data-bbox="1715 1245 2332 1318">Requirement</th> <th data-bbox="2332 1245 2510 1318">Assurance/Monitoring</th> <th data-bbox="2510 1245 2792 1318">Compliance Period</th> </tr> </thead> <tbody> <tr> <td data-bbox="1590 1318 1715 1476">E1</td> <td data-bbox="1715 1318 2332 1476"> <p>When the population exceeds 500 people, increased daily and weekly monitoring must be undertaken at the frequencies set out in <del>Table 3</del> the D3 rules for the day or week that the population increase occurs.</p> </td> <td data-bbox="2332 1318 2510 1476">Monitoring</td> <td data-bbox="2510 1318 2792 1476"> <p>1 Day Or 1 Week as set out in Table 3</p> </td> </tr> </tbody> </table>				Rule Number	Requirement	Assurance/Monitoring	Compliance Period	E1	<p>When the population exceeds 500 people, increased daily and weekly monitoring must be undertaken at the frequencies set out in <del>Table 3</del> the D3 rules for the day or week that the population increase occurs.</p>	Monitoring	<p>1 Day Or 1 Week as set out in Table 3</p>
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Question	Possible Response	Recommendation
<p>Do you agree with the allocation of modules to <b>Trickle Feed Water Supplies (namely G + S2 + T2 + D2)?</b></p> <p>Reference to the consultation document – section 5, p.20.</p>	<p>2 requirements, when they are at no more risk than an on demand supply. The increased monitoring requirements in particular would have a major impact on rural supplies.</p>	
<p>Do you agree that <b>Trickle Feed Water Supplies</b> (must comply with Rule F1 in addition to modules <b>G + S2 + T2 + D2</b>)?</p> <p>Reference to the consultation document – section 5, p.20.</p> <p>Rule F1 - Water supply into the on-site storage tank must be via an air-gap, the tank overflow must be below the discharge point of the inlet and the overflow diameter must be larger than the inlet diameter.</p>	<p>1. Yes  <del>2. No</del>  <del>3. Don't know</del></p> <p>Add a comment if relevant -</p> <ul style="list-style-type: none"> <li>Maintaining an air gap in the on-property storage tank is important to prevent backflow into the network.</li> <li>F1 should be listed in the modules that these supplies need to comply with.</li> </ul>	<p>See recommendation in above row.</p>
<p>The proposed Drinking Water Quality Assurance Rules allocate to each class of supplier the modules that they must demonstrate compliance against.</p> <p>Do you agree with the allocation of modules to <b>Self-Supplied Building Drinking Water Supplies</b> (suppliers serving less than 50 people) (namely <b>G + S1 + T1</b>)?</p> <p>Reference to the consultation document – section 6, p.21.</p>	<ul style="list-style-type: none"> <li>Yes</li> <li><del>No</del></li> <li><del>Don't know</del></li> </ul> <p>Add a comment if relevant -</p>	
<p>The proposed Drinking Water Quality Assurance Rules allocate to each class of supplier the modules that they must demonstrate compliance against.</p> <p>Do you agree with the allocation of modules to <b>Self-Supplied Building Drinking Water Supplies</b> (suppliers serving <u>between 50 and 500 people</u>) (namely <b>G + S2 + T2</b>)?</p> <p>Reference to the consultation document – section 6, p.21.</p>	<p><del>1. Yes</del>  2. No  <del>3. Don't know</del></p> <p>Add a comment if relevant -</p> <ul style="list-style-type: none"> <li>By definition, self-supplied buildings have no distribution system, so should not be required to chlorinate their supply.</li> <li>Water suppliers are allowed to use more than one acceptable solution.</li> </ul>	<ul style="list-style-type: none"> <li>Amend third paragraph of section 6 to read: <ul style="list-style-type: none"> <li>Supplies serving between 50 and 500 people: G + S2 + T2 (<u>the rules for chlorination do not apply</u>)</li> </ul> </li> <li>Amend the last paragraph of section 6 to read: <ul style="list-style-type: none"> <li>Self-Supplied Building Drinking Water suppliers have the option of adopting the Drinking Water Acceptable Solution for Roof Water Supplies if they use roof water as a water source <u>and/or</u> the Drinking Water Acceptable Solution for Spring and Bore Drinking Water Supplies if they use bore or spring water as a source, as an alternative to demonstrating compliance against the Self-Supplied Building Drinking Water Supplies Rules.</li> </ul> </li> </ul>
<p>The proposed Drinking Water Quality Assurance Rules allocate to each class of supplier the</p>	<p>1. Yes  <del>2. No</del>  <del>3. Don't know</del></p>	

Question	Possible Response	Recommendation
<p>modules that they must demonstrate compliance against.</p> <p>Do you agree with the allocation of modules to <b>Water Carrier Services</b> (namely <b>G + WC</b>)?</p> <p>Reference to the consultation document – section 7, p.22.</p>	<p>Add a comment if relevant -</p>	
<p>The proposed Drinking Water Quality Assurance Rules allocate to each class of supplier the modules that they must demonstrate compliance against.</p> <p>Do you agree with the allocation of modules to <b>Planned Event Temporary Drinking Water Supplies</b> (namely <b>G + PTE</b>)?</p> <p>Reference to the consultation document – section 8, p.23.</p>	<p>1. Yes  <del>2. No</del>  <del>3. Don't know</del></p> <p>Add a comment if relevant -</p>	
<p>The proposed Drinking Water Quality Assurance Rules allocate to each class of supplier the modules that they must demonstrate compliance against.</p> <p>Do you agree with the allocation of modules to <b>Community Drinking Water Stations and Water Carrier Supplies</b> (namely <b>G + S2 + T2</b> (excluding the T2 rules for chlorine disinfection))?</p> <p>Reference to the consultation document – section 9, p.24.</p>	<p>1. Yes  <del>2. No</del>  <del>3. Don't know</del></p> <p>Add a comment if relevant -</p>	
<p>Section 10 of the proposed Drinking Water Quality Assurance Rules covers the Compliance Rule Modules.</p> <p>Do you agree with the proposed Drinking Water Quality Assurance Rules in section 10?</p>	<ul style="list-style-type: none"> <li>• <del>Yes – and I <b>do not</b> want to comment on each rule</del></li> <li>• Yes – and I <b>want</b> to comment on each rule that is proposed to change</li> <li>• <del>No – and I <b>do not</b> want to comment on each rule</del></li> <li>• <del>No – and I <b>want to</b> comment on each rule that is proposed to change</del></li> <li>• <del>Don't know – and I <b>do not</b> want to comment on each rule</del></li> <li>• <del>Don't know – and I <b>want to</b> comment on each rule that is proposed to change</del></li> </ul> <p>Add a comment if relevant -</p>	
<p><b>Open the following list if “2, 4, or 6” is ticked</b></p>	<ul style="list-style-type: none"> <li>•</li> </ul>	
<p>Section 10 of the proposed Drinking Water Quality Assurance Rules covers the Compliance Rule Modules.</p>	<ul style="list-style-type: none"> <li>• <del>Yes</del></li> <li>• No</li> <li>• <del>Don't know</del></li> </ul>	<p>Amend Rules G4 and G8 to read:</p>

Question	Possible Response	Recommendation																
<p>Section 10.1 provides the General Rules.</p> <p>Do you agree with the proposed General Rules?</p> <p>Reference to the consultation document – section 10.1, p.25 to 27.</p>	<p>Add a comment if relevant -</p> <ul style="list-style-type: none"> <li>• Rule G1 requires reporting to Taumata Arowai within 10 working days. This is very short and allows little time for review and approval processes. A month would be more appropriate.</li> <li>• Rule G4 should be clear that the container holding the sample is to be less than 6 degrees Celsius.</li> <li>• Rule G8 requires the water supplier to have calibration of on-line monitoring equipment verified weekly. This is onerous, especially for remote rural supplies. Calibration should just be in accordance with the manufacturer’s specified frequency, rather than monthly.</li> <li>• Rule G8: It is not clear what is meant by “have calibration verified”. Should this be verified instead? Doing this weekly is onerous, especially for remote rural supplies. It should just be in accordance with the manufacturer’s specified frequency.</li> <li>• It is unclear why reporting on S3 rules is not required.</li> <li>• It is unclear which part of the supply the E. coli and total coliforms reporting for Tier 3 supplies applies to, as the first column is blank.</li> </ul>	<table border="1" data-bbox="1590 233 2792 758"> <tr> <td data-bbox="1590 233 1679 348">G1</td> <td data-bbox="1679 233 2792 348">All water suppliers (excluding Water Carrier Services) must report water quality monitoring information to Taumata Arowai withing <del>10 working days</del> <u>one month</u> of the timeframes set out in Table 4</td> </tr> <tr> <td data-bbox="1590 348 1679 516">G4</td> <td data-bbox="1679 348 2792 516">All water samples for E. coli, total coliforms or other micro-biological contaminants must be delivered to a laboratory within 24 hours of the sample being collected and must be transported <u>in a container which has an internal at a temperature of less than 6 degrees Celsius</u> <u>It is unclear from the rule whether the 24 hours also includes the sample being tested.</u></td> </tr> <tr> <td data-bbox="1590 516 1679 758">G8</td> <td data-bbox="1679 516 2792 758">Continuous on-line monitoring equipment used to demonstrate compliance with any rule must be:  Calibrated in accordance with the instrument manufacturer’s specified procedures and frequency <del>or monthly whichever is more frequent.</del>  Have calibration verified in accordance with the instrument manufacturer’s specified procedures <u>weekly and frequency.</u></td> </tr> </table> <p>Consider adding reporting on S3 rules to Table 4.</p> <p>Complete Table 5 for E. coli and total coliforms reporting for Tier 3 supplies.</p>	G1	All water suppliers (excluding Water Carrier Services) must report water quality monitoring information to Taumata Arowai withing <del>10 working days</del> <u>one month</u> of the timeframes set out in Table 4	G4	All water samples for E. coli, total coliforms or other micro-biological contaminants must be delivered to a laboratory within 24 hours of the sample being collected and must be transported <u>in a container which has an internal at a temperature of less than 6 degrees Celsius</u> <u>It is unclear from the rule whether the 24 hours also includes the sample being tested.</u>	G8	Continuous on-line monitoring equipment used to demonstrate compliance with any rule must be:  Calibrated in accordance with the instrument manufacturer’s specified procedures and frequency <del>or monthly whichever is more frequent.</del>  Have calibration verified in accordance with the instrument manufacturer’s specified procedures <u>weekly and frequency.</u>										
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<p>Section 10 of the proposed Drinking Water Quality Assurance Rules covers the Compliance Rule Modules.</p> <p>Section 10.2 provides the Source Water Rules for the S1 module.</p> <p>Do you agree with the proposed Source Water Rules for the S1 module?</p> <p>Reference to the consultation document – section 10.2, p.28 to 29.</p>	<p>1. <del>Yes</del> 2. No 3. <del>Don't know</del></p> <p>Add a comment if relevant -</p> <ul style="list-style-type: none"> <li>• The Councils agree that the water supplier (especially for non-private supplies) has a role to regularly inspect the surface water body in the vicinity of the intake. The difficulty comes in the assessment beyond this general inspection.</li> <li>• Would be difficult for a very small water supplier know whether an algal mat in their surface water source is a benthic cyanobacteria mat or a planktonic cyanobacterial growth? Even very experienced water suppliers are unable to determine this. This can only be determined by an expert. This is a complex area and further consideration is required to provide a practical and appropriate pathway to manage this risk. Consideration of the role of Regional Councils should be part of this review. This comment applies throughout the rules.</li> <li>• Cyanotoxin monitoring is very expensive (\$350 - \$400 per test) and will be unaffordable for many small private water supplies. The monitoring and the cost of it may need to be borne by the regional council?.</li> <li>• Table 6 (S1 Source Water Monitoring Determinands for Surface Water and Surface Water) should be limited to determinands that are listed in the drinking water standards, aesthetic values or those that impact cartridge filtration and/or UV. Bromide is only an issue if ozone is used for treatment, as this can result in disinfection by-products forming. Ozone treatment is not an</li> </ul>	<p>Amend the S1 rules in regards to cyanobacteria and cynotoxin monitoring after reconsideration of approach, including the roles and responsibilities of different parties:</p> <p>One potential approach might be for water suppliers to monitor/inspect for cyanobacterial growth (does require the need for the supplier to have either skilled, certified, or experienced staff to ensure they can recognise the growth) and if noticed they should notify regional council who would be required to sample, test and cover the costs and monitor going forward. This way regional council would only react on suppliers' call-outs/notifications and not applying an overarching predetermined sampling program to address this risk.</p> <p>Amend the list of physico-chemical determinands in Table 6 to read:</p> <table border="1" data-bbox="1590 1287 2792 1482"> <thead> <tr> <th>Contaminant Group</th> <th>Determinands/<del>Parameters</del></th> <th>Sampling Frequency</th> <th>Compliance Period</th> </tr> </thead> <tbody> <tr> <td>Chemical</td> <td>arsenic, boron, <del>calcium,</del> <del>magnesium</del> hardness, nitrate, <del>potassium, bromide,</del> iron, manganese, <del>total organic carbon.</del></td> <td>Every three years</td> <td><del>1 Year</del> <u>3 Years</u></td> </tr> </tbody> </table> <p>Amend the list of chemical determinands in Table 7 to read:</p> <table border="1" data-bbox="1590 1566 2792 1749"> <thead> <tr> <th>Contaminant Group</th> <th>Determinands/<del>Parameters</del></th> <th>Sampling Frequency</th> <th>Compliance Period</th> </tr> </thead> <tbody> <tr> <td>Chemical</td> <td>cadmium, copper, zinc, lead. <u>If there is a chimney on the property benzo [a] pyrene is to be measured in winter – June, July or August.</u></td> <td>Every three years</td> <td><del>1 Year</del> <u>3 Years</u></td> </tr> </tbody> </table>	Contaminant Group	Determinands/ <del>Parameters</del>	Sampling Frequency	Compliance Period	Chemical	arsenic, boron, <del>calcium,</del> <del>magnesium</del> hardness, nitrate, <del>potassium, bromide,</del> iron, manganese, <del>total organic carbon.</del>	Every three years	<del>1 Year</del> <u>3 Years</u>	Contaminant Group	Determinands/ <del>Parameters</del>	Sampling Frequency	Compliance Period	Chemical	cadmium, copper, zinc, lead. <u>If there is a chimney on the property benzo [a] pyrene is to be measured in winter – June, July or August.</u>	Every three years	<del>1 Year</del> <u>3 Years</u>
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	<p>option under the T1 rules, so testing for bromide in source water is not warranted.</p> <ul style="list-style-type: none"> <li>• Table 7 (S1 Source Water Monitoring Determinands for Roof Water): benzo[a]pyrene should only need to be monitored if there is a chimney on the property.</li> <li>• Reporting annually on testing which is only undertaken 3-yearly is unnecessarily bureaucratic. A 3-year compliance period should be provided for.</li> <li>• Determinands should be the term that is consistently used throughout the document.</li> </ul>											
<p>Section 10 of the proposed Drinking Water Quality Assurance Rules covers the Compliance Rule Modules.</p> <p>Section 10.3 provides the Treatment Rules for the T1 module.</p> <p>Do you agree with the proposed Treatment Rules for the T1 module?</p> <p>Reference to the consultation document – section 10.3, p.30.</p>	<ul style="list-style-type: none"> <li>• Yes</li> <li>• <del>No</del></li> <li>• <del>Don't know</del></li> </ul> <p>Add a comment if relevant -</p>											
<p>Section 10 of the proposed Drinking Water Quality Assurance Rules covers the Compliance Rule Modules.</p> <p>Section 10.4 provides the Distribution System Rules for the D1 module.</p> <p>Do you agree with the proposed Distribution System Rules for the D1 module?</p> <p>Reference to the consultation document – section 10.4, p.31.</p>	<ul style="list-style-type: none"> <li>• <del>Yes</del></li> <li>• No</li> <li>• <del>Don't know</del></li> </ul> <p>Add a comment if relevant -</p> <ul style="list-style-type: none"> <li>• There is no mention of the need for all storage tanks to be secure from contamination by vermin or faecal material. Vermin can be a major source of contamination and are a significant risk to water supplies. Align requirements from D3.13 to D1 and D2 rules</li> </ul>	<p>Apply D3.13 to both D1 and D2 rules</p>										
<p>Section 10 of the proposed Drinking Water Quality Assurance Rules covers the Compliance Rule Modules.</p> <p>Section 10.5 provides the Source Water Rules for the S2 module.</p> <p>Do you agree with the proposed Source Water Rules for the S2 module?</p> <p>Reference to the consultation document – section 10.5, p.32 to 33.</p>	<ul style="list-style-type: none"> <li>• <del>Yes</del></li> <li>• No</li> <li>• <del>Don't know</del></li> </ul> <p>Add a comment if relevant -</p> <ul style="list-style-type: none"> <li>• Rule S2.4: The additional monitoring required if any contaminant exceeds 50% of the MAV should be limited to those Determinands which the treatment plant is not designed to remove. For example, most surface water supplies will have E. coli in the water and so will exceed the MAV. More frequent monitoring of E. coli is likely unnecessary and costly. If the desire is to also monitor the ability of the treatment process to treat the source water then understanding if the source</li> </ul>	<p>Amend the S2 rules to read:</p> <table border="1" data-bbox="1590 1419 2754 1797"> <tbody> <tr> <td data-bbox="1590 1419 1715 1528">S2.4</td> <td data-bbox="1715 1419 2754 1528">Additional monitoring of source water must be undertaken for any <u>chemical</u> contaminants which exceed 50% of the MAVs set out in the New Zealand Drinking Water Standards 202X (to be determined).</td> </tr> <tr> <td data-bbox="1590 1528 1715 1570">S2.6</td> <td data-bbox="1715 1528 2754 1570">Update post review of approach</td> </tr> <tr> <td data-bbox="1590 1570 1715 1612">S2.7</td> <td data-bbox="1715 1570 2754 1612">Update post review of approach</td> </tr> <tr> <td data-bbox="1590 1612 1715 1692">S2.8</td> <td data-bbox="1715 1612 2754 1692">Samples must be collected at the source abstraction point or treatment plant (prior to treatment) for surface or groundwater supplies and at the <u>untreated water</u> tank outlet for roof water supplies.</td> </tr> <tr> <td data-bbox="1590 1692 1715 1797">S2.9</td> <td data-bbox="1715 1692 2754 1797">Source water quality monitoring data must be reviewed annually for trends and signals of changes in parameters that might indicate an <del>unrecognized</del> change to the characteristics and quality of the source water and possible challenges to the level of treatment provided.</td> </tr> </tbody> </table> <p>Change the compliance period in Table 10 to 5 years.</p>	S2.4	Additional monitoring of source water must be undertaken for any <u>chemical</u> contaminants which exceed 50% of the MAVs set out in the New Zealand Drinking Water Standards 202X (to be determined).	S2.6	Update post review of approach	S2.7	Update post review of approach	S2.8	Samples must be collected at the source abstraction point or treatment plant (prior to treatment) for surface or groundwater supplies and at the <u>untreated water</u> tank outlet for roof water supplies.	S2.9	Source water quality monitoring data must be reviewed annually for trends and signals of changes in parameters that might indicate an <del>unrecognized</del> change to the characteristics and quality of the source water and possible challenges to the level of treatment provided.
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	<p>condition is close to the treatment plants design limit maybe an alternative approach to triggering additional monitoring.</p> <ul style="list-style-type: none"> <li>• More guidance around the expected frequency of such monitoring is recommended. As the compliance period is monthly, does that mean monitoring should also be monthly?</li> <li>• Rule S2.6 and S2.7 for cyanotoxins will be difficult and for small water suppliers to comply with (refer to comments on Section 10.2 S1. Source Water Rules).</li> <li>• Table 9 (S2 Source Water Monitoring Determinands for Surface Water and Ground Water) should be limited to determinands that are listed in the drinking water standards and aesthetic values. Monitoring E. coli and total coliforms and the timing of wider comprehensive testing suite of the source water needs to consider the source water risk management plan and supply treatment capabilities. As a backstop a full suite is recommended every 3 years to ensure changes are not missed.</li> <li>• Table 10 (S2 Additional Source Water Monitoring Determinands for Ground Water (Spring and Bore): Reporting annually on radiological testing which is only undertaken 5-yearly is unnecessary. A 5-year reporting period should be provided for.</li> </ul>	<p>Amend the list of chemical determinands in Table 11 to read:</p> <table border="1" data-bbox="1590 306 2757 491"> <thead> <tr> <th>Determinands/Parameters</th> <th>Sampling Frequency</th> <th>Compliance Period</th> </tr> </thead> <tbody> <tr> <td>cadmium, copper, zinc, lead. <u>If there is a chimney on the property benzo [a] pyrene is to be measured in winter – June, July or August.</u></td> <td>Every three years</td> <td><del>1 Year</del> <u>3 Years</u></td> </tr> </tbody> </table>	Determinands/Parameters	Sampling Frequency	Compliance Period	cadmium, copper, zinc, lead. <u>If there is a chimney on the property benzo [a] pyrene is to be measured in winter – June, July or August.</u>	Every three years	<del>1 Year</del> <u>3 Years</u>				
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<p>Section 10 of the proposed Drinking Water Quality Assurance Rules covers the Compliance Rule Modules.</p> <p>Section 10.6 provides the Treatment Rules for the T2 module.</p> <p>Do you agree with the proposed Treatment Rules for the T2 module?</p> <p>Reference to the consultation document – section 10.6, p.34 to 38.</p>	<ul style="list-style-type: none"> <li>• <del>Yes</del></li> <li>• No</li> <li>• <del>Don't know</del></li> </ul> <p>Add a comment if relevant -</p> <ul style="list-style-type: none"> <li>• Chlorination should not be required for self-supplying buildings.</li> <li>• The requirements to take treated water samples on different days of the week is potentially unnecessarily prescriptive. The treatment plant is indifferent to the day of the week. Not all Laboratories are staffed over the weekend, and a number currently do not accept microbiological samples on a Friday as they cannot process them. The day's sampled need to consider the use profile of a supply.</li> <li>• The cartridge filters should be specified to deliver the treatment requirements. Also the quality control of the filters needs to be assured.</li> <li>• Table 12 T2 Treated Water Monitoring Requirements:</li> <li>• The treated water monitoring required of small supplies is onerous and expensive. The current DWSNZ only require E. coli to be measured once every three months for small supplies, so this is a massive step change. It is recommended that the monitoring requirements should be the same as for T1 supplies.</li> <li>• Consideration of UV capabilities to treat water at higher turbidity levels should be possible. We do note that if using continuous monitoring there is an ability to operate up to 5 NTU for a short period. As above, the treated water turbidity</li> </ul>	<p>Amend the first paragraph in section 10.6 to read:</p> <p>T2 rules require drinking water supplies to include filtration, UV disinfection and chlorination treatment steps (<u>except for self-supplying buildings, for which chlorination is not required</u>). The rules include requirements for demonstrating compliance for each of those treatment steps.</p> <p>Amend Rules T2.3 and T2.5 to read:</p> <table border="1" data-bbox="1590 1167 2757 1276"> <tbody> <tr> <td>T2.3</td> <td>There must be no more than 45 days between E. coli samples <del>and consecutive samples must not be taken on the same day of the week and over a year, five different days of the week must be used as sampling days.</del></td> </tr> </tbody> </table> <p>Amend footnote 15 to read:</p> <p>Not applicable to Community Water Stations/Water Carrier Supplies <u>or Self-Supplying Buildings</u></p> <p>Amend Table 12 so that it is consistent with the treated water quality monitoring requirements in the acceptable solution for spring and bore water supplies (as amended in Table 2 of this submission) and insert a new table of alternative water treated water quality monitoring.</p> <p>Key message is to be consistent. We also note that if the population thresholds of the the groupings change (ie small supply changed from 50 to 500, to say 100-500) then the sampling frequency remaining as proposed may then be suitable, or preferably via continuous monitoring.</p> <table border="1" data-bbox="1590 1724 2757 1839"> <thead> <tr> <th>Determinands/Parameters</th> <th>Limits</th> <th>Sampling Frequency</th> <th>Compliance Period</th> </tr> </thead> <tbody> <tr> <td>Turbidity (post filter)</td> <td>0.5 NTU</td> <td><del>Daily</del> <u>Weekly</u></td> <td><del>1 Day</del> <u>1 Week</u></td> </tr> </tbody> </table>	T2.3	There must be no more than 45 days between E. coli samples <del>and consecutive samples must not be taken on the same day of the week and over a year, five different days of the week must be used as sampling days.</del>	Determinands/Parameters	Limits	Sampling Frequency	Compliance Period	Turbidity (post filter)	0.5 NTU	<del>Daily</del> <u>Weekly</u>	<del>1 Day</del> <u>1 Week</u>
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	<p>limit should be consistent across the rules and acceptable solutions.</p> <ul style="list-style-type: none"> <li>There is no need to measure flow if there is a flow restrictor which limits flow through the treatment plant so that its capacity is not exceeded.</li> <li>There should be provision to use continuous online water quality monitoring, as is the case for the Tier 3 rules.</li> </ul>	UV transmittance	Not less than <del>80%</del> the lowest validated range	<del>Daily</del> Monthly	<del>1 Day</del> 1 Month								
		UV intensity or UV dose	As determined by UV unit manufacturer	Daily	1 Day								
		Flow (unless a flow restrictor is installed which limits flow to no more than the capacity of the UV unit)	As determined by UV unit manufacturer	Daily Weekly	<del>1 Day</del> 1 Week								
		FAC	Not less than 0.5 mg/L and not more than 5 mg/L	Daily Weekly	<del>1 Day</del> 1 Week								
		pH	Between 6.5 and 8	Daily Weekly	<del>1 Day</del> 1 Week								
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		Any chemical used in the treatment process	Must not exceed a MAV	Monthly (excluding fluoride and chlorine)	1 Month								
		Chlorate	0.7 mg/L	Monthly	1 Month								
		Fluoride (if added)	Must not exceed MAV	<del>Weekly</del> Monthly	<del>1 Week</del> 1 Month								
<p>Section 10 of the proposed Drinking Water Quality Assurance Rules covers the Compliance Rule Modules.</p> <p>Section 10.7 provides the Distribution System Rules for the D2 module.</p> <p>Do you agree with the proposed Distribution System Rules for the D2 module?</p> <p>Reference to the consultation document – section 10.7, p.39 to 40.</p>	<ul style="list-style-type: none"> <li><del>Yes</del></li> <li>No</li> <li><del>Don't know</del></li> </ul> <p>Add a comment if relevant -</p> <ul style="list-style-type: none"> <li>The requirement to take treated water samples on different days of the week is potentially over prescriptive. The distribution system is indifferent to the day of the week.</li> <li>Storage tanks are a major risk when it comes to contamination in the network. There is no mention of the need for all storage tanks to be secure from contamination by vermin or faecal material. Vermin can be a major source of contamination and are a significant risk to water supplies. It is recommended a rule</li> </ul>	<p>Delete Rules D2.3 and D2.4:</p> <table border="1" data-bbox="1590 1409 2754 1562"> <tr> <td data-bbox="1590 1409 1715 1482">D2.3</td> <td data-bbox="1715 1409 2754 1482">Consecutive samples for E. coli and total coliform must not be taken consistently on the same weekday.</td> </tr> <tr> <td data-bbox="1590 1482 1715 1562">D2.4</td> <td data-bbox="1715 1482 2754 1562">Over a year, five different days of the week must be used as sampling days for E. coli and total coliform sample collection.</td> </tr> </table> <p>Add new rules D2.X and D2.Y:</p> <table border="1" data-bbox="1590 1640 2754 1780"> <tr> <td data-bbox="1590 1640 1715 1703">D2.X</td> <td data-bbox="1715 1640 2754 1703">Align with D3.13</td> </tr> <tr> <td data-bbox="1590 1703 1715 1780">D2.Y</td> <td data-bbox="1715 1703 2754 1780">Water suppliers may choose to continuously monitor FAC and pH in the distribution zone in accordance with Rules D3.26 and D3.27.</td> </tr> </table>				D2.3	Consecutive samples for E. coli and total coliform must not be taken consistently on the same weekday.	D2.4	Over a year, five different days of the week must be used as sampling days for E. coli and total coliform sample collection.	D2.X	Align with D3.13	D2.Y	Water suppliers may choose to continuously monitor FAC and pH in the distribution zone in accordance with Rules D3.26 and D3.27.
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	<p>is added that requires these to be checked. Suggest aligning D3.13 to D2 rules</p> <ul style="list-style-type: none"> <li>If the population bands are not altered (ie minimum 100 rather than 50) then daily monitoring of FAC and pH will be onerous and expensive for the small supplies. To carry out these daily checks at these remote small water supplies would require staff or private suppliers to travel long distances each day including weekends and public holidays, or local people would need to be employed to carry out these daily checks adding another huge cost to operations overtime. It is recommended that the frequency is reduced to monthly and that online monitoring is allowed.</li> </ul>	<p>Amend Table 13 so that it is consistent with the distribution system monitoring requirements in the acceptable solution for spring and bore water supplies (as amended in Table 2 of this submission) We also note that if the population thresholds of the groupings change (i.e. small supply changed from 50 to 500, to say 100-500) then the sampling frequency remaining as proposed may then be suitable, or preferably via continuous monitoring. :</p> <table border="1" data-bbox="1590 384 2757 835"> <thead> <tr> <th>Determinands/ Parameters</th> <th>Limits</th> <th>Sampling Frequency</th> <th>Compliance Period</th> </tr> </thead> <tbody> <tr> <td>E. coli</td> <td>&lt;del&gt;1/100mls&lt;/del&gt; <u>Less than 1 in 100 mL of sample</u></td> <td>Monthly</td> <td>1 Month</td> </tr> <tr> <td>Total coliforms</td> <td>No limit</td> <td>Monthly</td> <td>1 Month</td> </tr> <tr> <td>FAC</td> <td>Not less than 0.2 mg/L and not more than 5 mg/L</td> <td><del>Daily</del> <u>Weekly</u></td> <td><del>1 Day</del> <u>1 Week</u></td> </tr> <tr> <td>pH</td> <td>Between 6.5 and 8</td> <td><del>Daily</del> <u>Weekly</u></td> <td><del>1 Day</del> <u>1 Week</u></td> </tr> <tr> <td>antimony, cadmium, chromium, copper, lead, mercury, nickel, zinc</td> <td>Must not exceed MAV</td> <td>Annually</td> <td>1 year</td> </tr> </tbody> </table>	Determinands/ Parameters	Limits	Sampling Frequency	Compliance Period	E. coli	<del>1/100mls</del> <u>Less than 1 in 100 mL of sample</u>	Monthly	1 Month	Total coliforms	No limit	Monthly	1 Month	FAC	Not less than 0.2 mg/L and not more than 5 mg/L	<del>Daily</del> <u>Weekly</u>	<del>1 Day</del> <u>1 Week</u>	pH	Between 6.5 and 8	<del>Daily</del> <u>Weekly</u>	<del>1 Day</del> <u>1 Week</u>	antimony, cadmium, chromium, copper, lead, mercury, nickel, zinc	Must not exceed MAV	Annually	1 year
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	<p>required to supply <u>all</u> test results to ensure all information is used in this consideration, rather than risk an assessment being against a selected sample of results. There is also no consideration for the bore being offline (e.g. not in use or offline for maintenance).</p> <ul style="list-style-type: none"> <li>• There does not appear to be a criteria that limits how long/how often a supply resides as interim Class 1.</li> <li>• There is no Class 4, so this should be deleted.</li> <li>• The sanitary bore head requirements should require the air vent to be 0.5 m above the 100 year flood level, rather than 0.5 m above ground</li> <li>• Please refer to the main submission for the Council's differing views about source water monitoring rules and Class 1 bore rules</li> <li>• The Councils hold different views on source water monitoring for large supplies. Please refer to our main submission.</li> <li>• Table 14. S3 Source Water Monitoring Determinands/Parameters: <ul style="list-style-type: none"> <li>○ There could be little benefit and significant cost in measuring E. coli and total coliforms in the source water on a weekly basis in some situation. The Wairoa water treatment plant draws water from the Wairoa River, which has high concentrations of E. coli and total coliforms and high turbidity, and the treatment plant is designed accordingly.</li> <li>○ The focus should be on determinands that have a MAV or aesthetic value.</li> <li>○ If the water is of consistently good quality with respect to aesthetic values, there should be no requirement for ongoing monitoring at the same frequency. To confirm this event based monitoring would need to be considered to ensure the quality is consistent for a wide range of conditions.</li> <li>○ If the treatment plant is designed to remove a determinand because the water is known to have high concentrations, there should be no requirement for ongoing monitoring.</li> <li>○ Radiological testing should only be required for groundwater, not surface water or shallow groundwater (e.g. shallow bores or infiltration galleries near rivers)</li> <li>○ Only one footnote needs to say that sampling must be monthly if the determinand exceeds 50% of the MAV</li> </ul> </li> </ul>	<table border="1"> <tr> <td></td> <td>process, and in consideration of the source water risk management plan)</td> </tr> <tr> <td><i>Pre-cursors to health-significant determinands:</i> Bromide Bromate <del>total organic carbon</del></td> <td>Monthly 5 samples</td> </tr> <tr> <td><i>Determinands of aesthetic concern (if there is no treatment to remove these):</i> Iron, Manganese</td> <td>Monthly 5 samples (Hastings DC notes the 5 samples would need to be reflective of seasonal variation as far as possible)</td> </tr> <tr> <td>Non-metallic determinands with MAVs: Arsenic, Barium, Boron, Fluoride, Nitrate, Potassium</td> <td>Annually</td> </tr> <tr> <td><i>Metallic determinands with MAVs:</i> Antimony, Cadmium, Chromium, Copper, Lead, Mercury, Nickel</td> <td>Annually</td> </tr> <tr> <td>Major water components: Alkalinity, Calcium, Chloride, Chlorite, Fluoride, Hardness Magnesium, Sulphate, Sodium.</td> <td>Annually</td> </tr> <tr> <td>Radiological (for groundwater only): Gross alpha activity Gross beta activity</td> <td>Every five years</td> </tr> </table>		process, and in consideration of the source water risk management plan)	<i>Pre-cursors to health-significant determinands:</i> Bromide Bromate <del>total organic carbon</del>	Monthly 5 samples	<i>Determinands of aesthetic concern (if there is no treatment to remove these):</i> Iron, Manganese	Monthly 5 samples (Hastings DC notes the 5 samples would need to be reflective of seasonal variation as far as possible)	Non-metallic determinands with MAVs: Arsenic, Barium, Boron, Fluoride, Nitrate, Potassium	Annually	<i>Metallic determinands with MAVs:</i> Antimony, Cadmium, Chromium, Copper, Lead, Mercury, Nickel	Annually	Major water components: Alkalinity, Calcium, Chloride, Chlorite, Fluoride, Hardness Magnesium, Sulphate, Sodium.	Annually	Radiological (for groundwater only): Gross alpha activity Gross beta activity	Every five years	
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		<p>Amend Table 14 to read:</p> <table border="1"> <thead> <tr> <th data-bbox="1590 989 2249 1062">Parameters Determinands monitored in raw water from each source or combined sources</th> <th data-bbox="2249 989 2754 1062">Sampling Frequency</th> </tr> </thead> <tbody> <tr> <td data-bbox="1590 1062 2249 1209">Key parameters: Conductivity, pH, Turbidity. <u>If chlorine is the only chemical used in the treatment process, treated water pH may be monitored instead of raw water pH.</u></td> <td data-bbox="2249 1062 2754 1209">Continuous <u>or</u> weekly</td> </tr> </tbody> </table>		Parameters Determinands monitored in raw water from each source or combined sources	Sampling Frequency	Key parameters: Conductivity, pH, Turbidity. <u>If chlorine is the only chemical used in the treatment process, treated water pH may be monitored instead of raw water pH.</u>	Continuous <u>or</u> weekly										
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	<ul style="list-style-type: none"> <li>Table 15. S3 Raw Water Monitoring Parameters: continuous monitoring of conductivity, pH and turbidity in the raw water is could be onerous, especially for the smaller supplies (could require significant investment by water suppliers, with each instrument costing around \$15,000 each).</li> <li>Hastings DC note that they have identified conductivity, turbidity, and UVT as indicators to monitor for change.</li> <li>If chlorine is the only chemical added during the treatment process, it is only necessary to monitor treated water pH, rather than both raw water and treated water pH.</li> </ul>																													
<p>Section 10 of the proposed Drinking Water Quality Assurance Rules covers the Compliance Rule Modules.</p> <p>Section 10.9 provides the Treatment Rules for the T3 module.</p> <p>Do you agree with the proposed Treatment Rules for the T3 module?</p> <p>Reference to the consultation document – section 10.9, p.46 to 73.</p>	<ul style="list-style-type: none"> <li>Yes</li> <li>No</li> <li>Don't know</li> </ul> <p>Add a comment if relevant -</p> <ul style="list-style-type: none"> <li>Rule T3.7 for Water Disinfected with Chlorine Dioxide: the compliance period for C.t should be 1 day not 1 year, as it is continuously monitored.</li> <li>Table 19: T3 Requirements for UV Disinfection: The Wairoa UV system clearly states on its öNORM validation certificate the UV transmittance monitoring is not required during its operation (see attached). UVT monitors just add another cost with no real benefit as the correlation between UV intensity and UV transmittance go hand in hand i.e. if UV transmittance decreases so does the UV intensity. UVT should only need to be monitored if required by the manufacturer of the UV unit</li> <li>UVT monitors should be calibrated in accordance with the manufacturer's frequency, not weekly</li> <li>Rules T3.16 – T3.20 appear twice (pages 51, 54 and 55)</li> <li>Rule T3.89: the compliance period should be 1 day not 1 week as this parameter is measured continuously.</li> <li>T3 Coagulation, flocculation and Sedimentation without Filtration Rules [0.5-Log]: The second Rule T3.17 (page 51) requires a 70% reduction in raw turbidity each day. This may be unreasonable if the water source is normally clear but suffers from high turbidity during rainfall events.</li> <li>T3 Cartridge Filtration Rules: T3.68 and footnote – Cartridge Filtration differential turbidity. Exceedances of 2% are still not fit for purpose when the source water has very low turbidity. HDC has included a 0.1NTU offset to the control logic in current water treatment plants.</li> <li>T3 turbidity limits: The turbidity limits seem very strict and may not be achievable.</li> </ul>	<p>Amend the T3 rules to read:</p> <table border="1" data-bbox="1590 653 2772 1858"> <thead> <tr> <th>Rule Number</th> <th>Requirement</th> <th>Assurance/Monitoring</th> <th>Compliance Period</th> </tr> </thead> <tbody> <tr> <td>T3.7</td> <td>Treated water must achieve a chlorine C.t value of at least 15 min.mg/L for at least 95 % of the day.</td> <td>Assurance</td> <td><del>1 Year</del> 1 Day</td> </tr> <tr> <td>T3.17</td> <td><del>The sedimentation process must achieve at least a 70% reduction in raw water turbidity each day, based on the arithmetic mean of the turbidity of the raw water and the water leaving the sedimentation process. The turbidity of the water leaving the sedimentation process must be equal to or less than the turbidity of raw water.</del></td> <td>Monitoring</td> <td>1 Day</td> </tr> <tr> <td>T3.85</td> <td>All of the requirements for UV disinfection in Table <del>29</del> <u>19</u> must be met</td> <td>Assurance</td> <td>1 Year</td> </tr> <tr> <td>T3.86</td> <td>Values for determinands in treated water that exceeded 50% of their MAV in the source water, are added or formed in the treatment process (as well as impurities in treatment chemicals) including the determinands set out in table 31, must be identified by the collection and analyses of 15 samples over a 12-month period (with no more than two samples collected in any calendar month). <u>If at least 15 samples have been taken historically for a determinand in the past 5 years either Post Treatment or both in the source water and distribution that show no significant change in the determinand following treatment, these results may be used.</u></td> <td>Assurance</td> <td>1 Year</td> </tr> <tr> <td>T3.88</td> <td>If sodium hypochlorite is used as a disinfectant, chlorate and perchlorate must be sampled weekly. <i>NOTE: need to confirm availability of laboratory testing in NZ of perchlorate</i></td> <td>Monitoring</td> <td>1 Week</td> </tr> <tr> <td>T3.89</td> <td>If fluoride is added to treated water, it must be continuously monitored.</td> <td>Monitoring</td> <td><del>1 Week</del> 1 day</td> </tr> </tbody> </table>	Rule Number	Requirement	Assurance/Monitoring	Compliance Period	T3.7	Treated water must achieve a chlorine C.t value of at least 15 min.mg/L for at least 95 % of the day.	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	<ul style="list-style-type: none"> <li>Table 29: Refer to comments on Table 19. This table is almost identical to Table 19 so it could be deleted and have Rule 3.85 refer to Table 19 instead of Table 29. If Table 29 is to be retained, the headings for the two tables should refer to up to 3-log and up to 4-log respectively and reference to 3-log validation standards should be removed from Table 29.</li> <li>Section 10.9.3 Chemical Rules <ul style="list-style-type: none"> <li>Historical sampling for chemicals should be explicitly incorporated. It is recommended that Rule T3.86 is amended to allow for this.</li> <li>T3.88 requires perchlorate to be monitored weekly if using sodium hypochlorite. We have been unable to find any laboratory in New Zealand that is currently offering this testing for drinking water.</li> <li>Table 30 (T3 Treatment Chemical Determinand Minimum Sampling Frequencies) needs to specify a monitoring frequency if a chemical MAV is exceeded.</li> <li>FAC is already being continuously monitored in the treated water if chlorine is being used; there is no need to require additional testing in Table 31 (T3 Treatment Chemical Determinand Monitoring).</li> </ul> </li> </ul>	<p>Amend T3.68 to account for water supplies with very low turbidity (e.g. including a 0.1 NTU offset).</p> <p>Amend Table 19 to read:</p> <p><b>Table 19. T3 Requirements for UV disinfection [up to 3-log]</b></p> <table border="1" data-bbox="1590 415 2849 783"> <tr> <td data-bbox="1590 415 2148 600">Parameters that need to be continuously monitored and where they need to be monitored:</td> <td data-bbox="2148 415 2849 600">Parameters: UV transmittance Where it needs to be monitored: Water entering or leaving the UV reactor(s) <u>unless the UV manufacturer advises that UV transmittance does not need to be monitored</u></td> </tr> <tr> <td data-bbox="1590 600 2148 783">UVT monitor calibration/verification:</td> <td data-bbox="2148 600 2849 783">UVT monitors used to demonstrate compliance with this rule must be: <ul style="list-style-type: none"> <li>Calibrated in accordance with the instrument manufacturer's specified procedures and frequency <del>or</del> <b>weekly whichever is more frequent.</b></li> </ul> </td> </tr> </table> <p>Amend Table 29 to read:</p> <p><b>Table 29. 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		<ul style="list-style-type: none"> <li>○ In the first 12 months of monitoring, 15 samples must be taken over a 12-month period (with no more than two samples collected in any calendar month) to determine the range of values for chemical determinands in water leaving a treatment plant. <u>If at least 15 samples have been taken historically for a determinand in the past 5 years, these results may be used.</u></li> <li>● Add a sampling frequency to Table 30 if the MAV is exceeded.</li> <li>● Delete the requirements to monitor FAC from Table 31, T3 Treatment Chemical Determinand Monitoring.</li> </ul>																
<p>Section 10 of the proposed Drinking Water Quality Assurance Rules covers the Compliance Rule Modules.</p> <p>Section 10.10 provides the Distribution System Rules for the D3 module.</p> <p>Do you agree with the proposed Distribution System Rules for the D3 module?</p> <p>Reference to the consultation document – section 10.10, p.74 to 85</p>	<ul style="list-style-type: none"> <li>● <del>Yes</del></li> <li>● No</li> <li>● <del>Don't know</del></li> </ul> <p>Add a comment if relevant -</p> <ul style="list-style-type: none"> <li>● The Councils hold differing views on maintaining a FACE concentration of 0.2 mg/L everywhere in the network. Please refer to our main submission. It will be challenging for supplies with water which has naturally high pH (e.g. Napier) to achieve a FACE of 0.2 mg/L at all times in the network. This will require a FAC concentration of 0.6 mg/L. Alternatively, pH correction could be implemented but this would also require alkalinity dosing to prevent corrosion. This is not an issue for the other Hawke's Bay council supplies.</li> <li>● There is no provision for networked water suppliers to provide dechlorinated water at filling stations; this should be explicitly provided for.</li> <li>● The rules for FAC and pH monitoring are confusing. The paragraph below Rule D3.25 should instead be incorporated into a rule.</li> <li>● D3.26: the compliance period should be 1 day not 1 year as these parameters are measured continuously.</li> </ul>	<p>Amend D3 rules for FAC and pH monitoring:</p> <table border="1" data-bbox="1590 579 2852 1163"> <thead> <tr> <th>Rule Number</th> <th>Requirement</th> <th>Assurance/Monitoring</th> <th>Compliance Period</th> </tr> </thead> <tbody> <tr> <td>D3.20</td> <td>A FACE of at least 0.2 mg/L must be maintained at all locations at all times, <u>other than at dechlorinated filling stations.</u></td> <td>Monitoring</td> <td>1 day</td> </tr> <tr> <td>D3.21</td> <td>Samples must be collected for FAC and pH at the frequencies outlined in <u>Table 32, or monitored continuously in accordance with Rules D3.26 and D3.27.</u></td> <td>Monitoring</td> <td>1 day</td> </tr> <tr> <td>D3.26</td> <td>Continuous monitoring analysers for FAC and pH must be installed in each distribution at the following locations: 1. At the supply point to a distribution zone, e.g. a reservoir or bulk supply point. 2. At a supply main near to the outer extent of the distribution zone in an area associated with higher risk of deterioration in water quality. 3. At other points within the supply as determined by the drinking water safety plan in order to provide the water supplier with a representative understanding of levels across the supply.</td> <td>Monitoring</td> <td><del>1 year</del> <u>1 day</u></td> </tr> </tbody> </table> <p><del>Water suppliers may continuously monitor FAC and pH in a distribution zone in accordance with rules D3.26 and D3.27 as an alternative to demonstrating compliance against rules D3.21, D3.22 and the sampling frequencies set out in the Table 32.</del></p>	Rule Number	Requirement	Assurance/Monitoring	Compliance Period	D3.20	A FACE of at least 0.2 mg/L must be maintained at all locations at all times, <u>other than at dechlorinated filling stations.</u>	Monitoring	1 day	D3.21	Samples must be collected for FAC and pH at the frequencies outlined in <u>Table 32, or monitored continuously in accordance with Rules D3.26 and D3.27.</u>	Monitoring	1 day	D3.26	Continuous monitoring analysers for FAC and pH must be installed in each distribution at the following locations: 1. At the supply point to a distribution zone, e.g. a reservoir or bulk supply point. 2. At a supply main near to the outer extent of the distribution zone in an area associated with higher risk of deterioration in water quality. 3. At other points within the supply as determined by the drinking water safety plan in order to provide the water supplier with a representative understanding of levels across the supply.	Monitoring	<del>1 year</del> <u>1 day</u>
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<p>Section 10 of the proposed Drinking Water Quality Assurance Rules covers the Compliance Rule Modules.</p> <p>Section 10.11 provides the Water Carrier Service Rules.</p> <p>Do you agree with the proposed Water Carrier Service Rules?</p> <p>Reference to the consultation document – section 10.11, p82 to 85</p>	<ul style="list-style-type: none"> <li>● Yes</li> <li>● <del>No</del></li> <li>● <del>Don't know</del></li> </ul> <p>Add a comment if relevant -</p>																	
<p>Section 10 of the proposed Drinking Water Quality Assurance Rules covers the Compliance Rule Modules.</p>	<ul style="list-style-type: none"> <li>● <del>Yes</del></li> <li>● No</li> </ul>	<p>Amend the rules to read: 10.12 <del>PTE-Planned</del> Temporary Event Rules.</p>																

Question	Possible Response	Recommendation				
<p>Section 10.12 provides the Planned Temporary Events Rules for the PTE module.</p> <p>Do you agree with the proposed Planned Temporary Events Rules for the PTE module?</p> <p>Reference to the consultation document – section 10.12, p.84</p>	<ul style="list-style-type: none"> <li>• <del>Don't know</del></li> </ul> <p>Add a comment if relevant -</p> <ul style="list-style-type: none"> <li>• As mentioned above, this category of water supply also includes unplanned events such as tangi, so the word planned should be removed from the title and P should be removed from the rule number prefixes.</li> <li>• The requirement to chlorinate a supply that is normally unchlorinated, just because there is an event on (Rule PTE.4), is unreasonable and impractical. The risks associated with handling chlorine when a water supplier is unfamiliar with it outweigh the benefits. Additionally, if hypochlorite is used, it may have expired before the event occurs.</li> </ul>	<table border="1"> <tr> <td data-bbox="1590 233 1715 268">PTE.4</td> <td data-bbox="1715 233 2724 268">All water provided as drinking water must be disinfected <del>including with chlorine</del>.</td> </tr> <tr> <td data-bbox="1590 268 1715 346">PTE.5</td> <td data-bbox="1715 268 2724 346">All water provided as drinking water must be monitored for FAC residual (if chlorine is used), pH and turbidity.</td> </tr> </table>	PTE.4	All water provided as drinking water must be disinfected <del>including with chlorine</del> .	PTE.5	All water provided as drinking water must be monitored for FAC residual (if chlorine is used), pH and turbidity.
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PTE.5	All water provided as drinking water must be monitored for FAC residual (if chlorine is used), pH and turbidity.					
<p>Section 10.12 of the proposed Drinking Water Quality Assurance Rules provides the Planned Temporary Events Rules for the PTE module.</p> <p>Section 1.3 defined a 'Planned Event Temporary Drinking Water Supplies' as a short-term event where people gather and where a water supply is required for the duration of an event which continues for a limited time of less than 60 days.</p> <p>(p.7 of the consultation document).</p> <p>Do you agree with the proposed definition of Planned Temporary Drinking Water Supplies?</p>	<ol style="list-style-type: none"> <li><del>1. Yes</del></li> <li>2. No</li> <li><del>3. Don't know</del></li> </ol> <p>Add a comment if relevant -</p> <ul style="list-style-type: none"> <li>• To be consistent with the guidance on determining population size, the definition should also say that this category also includes unplanned events such as hui or tangi held at marae or gatherings at a community hall.</li> </ul>	<p>Amend the definition in section 1.3 to read:</p> <p><b>Planned Event Temporary Drinking Water Supplies</b> – Short term events where people gather and where a water supply is required for the duration of an event which continues for a limited time of less than 60 days. Typically, this category includes events like music festivals, <u>shearing in woolsheds</u>, farm field days, <u>tangi, gatherings at a community hall</u>, civil defence or military exercises.</p>				

Do you have any comments on the transition time required to adopt the proposed rules?

Comment on transition time required:

- It is recommended that transitional provisions are added to the Rules to allow time for registered suppliers to undertake upgrades, implement systems and processes, and undertake training. This could be linked to the timeframes in a water supplier's drinking water safety plan, with those timeframes to be agreed with Taumata Arowai.
- Please refer to the Hawke's Bay councils overarching submission which sets out recommendations regarding the proposed rules.

If you want to provide any additional feedback, please provide this here:

Additional feedback:

- **Please refer to the Hawke's Bay councils overarching submission which sets out recommendations regarding the proposed rules.**

# F- Drinking Water Network Performance Consultation



## Drinking Water Network Environmental Performance

The Water Services Act 2021 (the Act) introduces new requirements to monitor and report on the environmental performance of drinking water, wastewater, and stormwater networks (Part 3, Subpart 8). These new requirements do not apply to all drinking water suppliers. They will only apply to networks which are operated or supervised by one of the following:

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

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

### Environmental performance scope and giving effect to Te Mana o te Wai

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

Environment has the meaning given to it in the Resource Management Act 1991. This means environmental performance considers:

- The impact of a network on any natural receiving environment (for example, the emissions profile of a drinking water treatment plant).
- The impact of a network on the social and cultural wellbeing of people and communities (for example, the resilience of water sources and volume of on-demand treated drinking water).
- The performance of the network infrastructure in so far as it relates to its impact on ecosystems, people, and communities (for example, the quality of the pipes in our drinking water network).
- Any social, economic, or cultural factors that may impact on environmental performance including the financial position of network operators and progress against any required maintenance or upgrades (for example, asset condition and value).

Using this definition, we consider the scope of environmental performance to include the entire network for all three waters, from source (drinking water catchments and abstraction points) to discharge (the disposal of wastewater, stormwater, and drinking water treatment by-products).

We also need to consider how we give effect to Te Mana o te Wai as required under the Act. We are still refining our approach and welcome any suggestions. We are particularly interested in whether the initial package of measures clearly incorporates the hierarchy of obligations that underpin Te Mana o te Wai. If not, we'd like to know what changes we could make to better incorporate the obligations. We're also interested in your views on how the package of measures reflects or responds to the six principles articulated as part of Te Mana o te Wai.



Questions	Possible response
Do you agree that the scope of environmental performance should include the entire network, from source to discharge?	<ol style="list-style-type: none"> <li>1. Yes</li> <li><del>2. No</del></li> <li><del>3. Don't know</del></li> </ol> <p>Add a comment if relevant -</p>
Do you have any suggestions for how we could give effect to Te Mana o te Wai through the drinking water network environmental performance measures and the Network Environmental Performance Annual Report?	<ol style="list-style-type: none"> <li><del>1. Yes</del></li> <li><del>2. No</del></li> <li>3. Don't know</li> </ol> <p>Add a comment if relevant –</p> <p>The level of reporting proposed and the context of that information will not necessarily be useful to mana whenua who will want to undertake their own cultural assessments and interpret their information in their way. There are many examples where western science and interpretation of the state of the environment does not align with Maori values and perspectives therefore we would urge TA to work with iwi to determine how and who will report on Te Mana o te Wai with respect to network and service performance.</p>

**Monitoring and reporting: outcomes and principles**

We have developed draft principles and outcomes to articulate what a successful approach to monitoring and reporting looks like in the long-term. The principles and outcomes will apply across all our reporting to ensure we are consistent in our approach.

**Outcomes:**

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

**Principles:**



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

Questions	Possible response
Do you agree with the proposed outcomes and principles?	1. Yes 2. <del>No</del> 3. <del>Don't know</del>  Add a comment if relevant -

## Measures

We are proposing to introduce a package of measures, grouped into five areas which correspond to the key insights we want to gain. These measures will be phased in over a period of three years, to reflect network operators’ ability to collect the information.

The five insights are as follows:

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

Under each insight we have included a range of measures which will help us determine how the sector is performing. We know that for some of these measures, few or no networks currently collect the applicable data, and some of the measures listed may not be front-of-mind for all network operators. We therefore propose to phase in the measures over the next three years.

Please refer to the tables in Appendix 1 of the discussion document to see the list of measures for each phase. You will need to refer to the tables to help you answer the next questions.

Questions	Possible response
Do you agree with the insights and measures we have proposed?	<ol style="list-style-type: none"> <li>1. Yes - <i>Generally</i></li> <li>2. <del>No</del></li> <li>3. <del>Don't know</del></li> </ol> <p>Add a comment if relevant - There is a need to consider risk and priorities to ensure things measured and reported on add value to decision making, actions, and policymaking. Also need to consider what other reporting maybe occurring</p>
Do you agree with the proposed phasing of the measures over three years?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. <del>No</del></li> <li>3. <del>Don't know</del></li> </ol> <p>Add a comment if relevant -</p>
Do you want to comment on the insights individually?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. <del>No</del></li> </ol>
<b>If no...</b>	
Do you have any comments you want to make on the insights, measures, data and/or the timing of the proposed measures and data?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol> <p>Add a comment if relevant –</p>
<b>If yes....</b>	
Do you agree we should include the insight: <b>Is the environment and public health protected?</b>	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. <del>No</del></li> <li>3. <del>Don't know</del></li> </ol> <p>Add a comment if relevant -</p>
Do you agree with the year one <b>1 July 2022</b> measures and data associated with the insight: <b>Is the environment and public health protected?</b>	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. <del>No</del></li> <li>3. <del>Don't know</del></li> </ol> <p>Add a comment if relevant –</p>
Do you agree with the year two <b>1 July 2023</b> measures and data associated with the insight: <b>Is the environment and public health protected?</b>	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. <del>No</del></li> <li>3. <del>Don't know</del></li> </ol> <p>Add a comment if relevant -</p>

Questions	Possible response
<p>Do you agree with the year three <b>1 July 2024</b> measures and data associated with the insight: <b>Is the environment and public health protected?</b></p>	<p>1. Yes  <del>2. No</del>  <del>3. Don't know</del></p> <p>Add a comment if relevant –  For the performance measure “impact of capital works on ecosystems”, how would the data “construction impacts from capital works including reinstatement/realignment of assets” be reported in practice? We suggest this is changed to “the number infringement and abatement notices issued on construction projects due to impacts on ecosystems”.</p>
<p>Do you agree we should include the insight: <b>Are services economically sustainable?</b></p>	<p>1. Yes  <del>2. No</del>  <del>3. Don't know</del></p> <p>Add a comment if relevant –</p>
<p>Do you agree with the year one <b>1 July 2022</b> measures and data associated with the insight: <b>Are services economically sustainable?</b></p>	<p>1. Yes  <del>2. No</del>  <del>3. Don't know</del></p> <p>Add a comment if relevant –  How will % complete for water supply capital investment projects be measured? More guidance is needed.</p>
<p>Do you agree with the year two <b>1 July 2023</b> measures and data associated with the insight: <b>Are services economically sustainable?</b></p>	<p>1. Yes  <del>2. No</del>  <del>3. Don't know</del></p> <p>Add a comment if relevant –  For the performance measure “affordability”, data is requested for “number of non-payments of water bills.” We note that this will not apply to all councils as some charge for water through rates, rather than billing for water separately.</p>
<p>Do you agree we should include the insight: <b>Are services reliable?</b></p>	<p>1. Yes  <del>2. No</del>  <del>3. Don't know</del></p> <p>Add a comment if relevant –</p>



Questions	Possible response
<p>Do you agree with the year one <b>1 July 2022</b> measures and data associated with the insight: <b>Are services reliable?</b></p>	<p>1. Yes  <del>2. No</del>  <del>3. Don't know</del></p> <p>Add a comment if relevant –  The performance measure “customer water use” should be renamed “water meter coverage” as the data only relates to the presence of water meters, not water usage (which is covered under the insight “are resources used efficiently?”)</p>
<p>Do you agree with the year two <b>1 July 2023</b> measures and data associated with the insight: <b>Are services reliable?</b></p>	<p>1. Yes  <del>2. No</del>  <del>3. Don't know</del></p> <p>Add a comment if relevant –  The data for the performance measure “water pressure” is “properties below reference level of flow at end of year”. Presumably the data should refer to pressure rather than flow? Will Taumata Arowai advise what the reference level of flow/pressure is?</p>
<p>Do you agree with the year three <b>1 July 2024</b> measures and data associated with the insight: <b>Are services reliable?</b></p>	<p>1. Yes  <del>2. No</del>  <del>3. Don't know</del></p> <p>Add a comment if relevant -</p>
<p>Do you agree we should include the insight: <b>Are resources used efficiently?</b></p>	<p>1. Yes  <del>2. No</del>  <del>3. Don't know</del></p> <p>Add a comment if relevant –  The word efficient should be removed from the name of the performance measure “efficient consumer use of water” as the as the amount of water used by each individual consumer does not correlate with efficiency.</p>
<p>Do you agree with the year one <b>1 July 2022</b> measures and data associated with the insight: <b>Are resources used efficiently?</b></p>	<p>1. Yes  <del>2. No</del>  <del>3. Don't know</del></p> <p>Add a comment if relevant -</p>



Questions	Possible response
<p>Do you agree with the year two <b>1 July 2023</b> measures and data associated with the insight: <b>Are resources used efficiently?</b></p>	<p>1. Yes 2. <del>No</del> 3. <del>Don't know</del></p> <p>Add a comment if relevant -</p>
<p>Do you agree with the year three <b>1 July 2024</b> measures and data associated with the insight: <b>Are resources used efficiently?</b></p>	<p>1. Yes 2. <del>No</del> 3. <del>Don't know</del></p> <p>Add a comment if relevant -</p>
<p>Do you agree we should include the insight: <b>Are services resilient?</b></p>	<p>1. Yes 2. <del>No</del> 3. <del>Don't know</del></p> <p>Add a comment if relevant -</p>
<p>Do you agree with the year one <b>1 July 2022</b> measures and data associated with the insight: <b>Are services resilient?</b></p>	<p>1. Yes 2. <del>No</del> 3. <del>Don't know</del></p> <p>Add a comment if relevant -</p>
<p>Do you agree with the year two <b>1 July 2023</b> measures and data associated with the insight: <b>Are services resilient?</b></p>	<p>1. Yes 2. <del>No</del> 3. <del>Don't know</del></p> <p>Add a comment if relevant – For the performance measure “return to service post natural disaster”, it is unclear whether the data “days to connect to post disaster service levels” and “days taken to return to normal levels of service post disaster” would be reported only after a disaster, or if these are the projected times. What is meant by “Days to connect to post disaster service levels”?</p>
<p>Do you agree with the year three <b>1 July 2024</b> measures and data associated with the insight: <b>Are services resilient?</b></p>	<p>1. Yes 2. <del>No</del> 3. <del>Don't know</del></p> <p>Add a comment if relevant - The performance measure “return to service post disaster” requests data on “level of service during disaster” and “level of service post disaster”. Councils have many different levels of service, so which ones would be reported on? As above, would these be reported only after a disaster, or are these the projected times?</p>

Questions	Possible response
<b>All</b>	
Do you think we have missed any insights, measures or data that fall within the environmental performance definition scope?	<ol style="list-style-type: none"> <li>1. <del>Yes</del></li> <li>2. No</li> <li>3. <del>Don't know</del></li> </ol> <p>Add a comment if relevant -</p>
Do you have any comment on the likely impact of complying with the data requirements in the timeframe outlined (i.e., will compliance require operators to employ more people or purchase new software)?	<ol style="list-style-type: none"> <li>1. <del>Yes</del></li> <li>2. <del>No</del></li> <li>3. Don't know</li> </ol> <p>Add a comment if relevant -</p>

### Next steps

We will use feedback from public consultation to inform drinking water environmental performance measures. Following that we expect to test the following details through targeted consultation:

- data collection frequency, methods, and standards
- our approach to measuring data quality, including how much confidence we have in the data
- how we approach qualitative data collection (e.g., how network operators provide a narrative to support the data they provide)
- additional, updated or amended measures to incorporate Te Ao Māori perspectives.

### Links with other Government work

We are considering the links between the work we are doing to develop measures for the environmental performance of networks and the following work the Government is currently undertaking:

- Three waters reform, including the work of the National Transition Unit
- A future economic and consumer protection regulator for water
- Resource management reform and freshwater planning processes, in particular the work to develop the new national planning framework and to implement the National Policy Statement for Freshwater Management.

We will also consider interdependencies and crossovers with the following reporting:

- Te Waihanga, the Infrastructure Commission's Infrastructure Pipeline
- Land and Water Aotearoa
- Ministry for the Environment / Statistics New Zealand State of the Environment reporting.

We are interested to know if there is any other work currently underway or any existing resources that we should be aware of.



Questions	Possible response
Do you want to be contacted when targeted consultation on the drafting of the rules begins?	1. Yes 2. <del>No</del>  If you haven't already, please provide the best email address to contact you via:
Have we missed any other pieces of work that may interact with drinking water environmental performance?	1. <del>Yes</del> 2. <del>No</del> 3. Don't know  Add a comment if relevant -

If you have any comments on possible transition issues or how we can improve the transition to the new system please provide them here.

Feedback on transition:

If you want to provide any additional feedback on environmental performance and/or the drinking water environmental performance measures please provide this here:

Additional feedback on environmental performance:

