

## Drinking-water Standards for New Zealand 2005 (Revised 2018): Summary of Changes

Under the Health Act 1956, drinking-water suppliers are required to take all practicable steps to comply with the Drinking-water Standards for New Zealand (the Standards). As well as specifying the maximum allowable concentrations of contaminants in drinking-water, the Standards specify criteria for demonstrating compliance (including sampling frequencies and testing procedures).

In December 2018, Hon Dr David Clark, Minister of Health, made a number of urgent and minor changes to the Standards and issued the *Drinking-water Standards for New Zealand 2005 (Revised 2018)* to supersede the *Drinking-water Standards for New Zealand 2005 (Revised 2008)*. The *Drinking-water Standards for New Zealand 2005 (Revised 2018)* come into force on 1 March 2019. A copy of the *Drinking-water Standards for New Zealand 2005 (Revised 2018)* is displayed on the website of the Ministry of Health at: <https://www.health.govt.nz/publication/drinking-water-standards-new-zealand-2005-revised-2018>

The changes are briefly summarised below. Please note this is only a summary of the changes and anyone using the Standards should take the time to read the Standards in their entirety.

### Requirement to monitor total coliforms

The Standards have been changed to require drinking-water suppliers to monitor total coliforms<sup>1</sup>. A high total coliform reading does not necessarily pose a risk to human health as the subset of faecal coliforms, and specifically *E. coli*, is recognised as the primary indicator that the drinking-water supply may be contaminated with pathogens. However, total coliforms are a useful indicator of drinking-water quality and may detect abnormalities and changes in quality over time. Monitoring total coliforms may provide warning to a water supplier that water quality is changing, such that further testing and assessment is appropriate. The Standards now require monitoring of total coliforms but do not include maximum values for total coliforms as advice on responding to changes in total coliforms will be included in the Ministry's Drinking-Water Guidelines. The action to be followed when finding total coliforms will be specified in the water supplier's water safety plan.

### Requirement to carry out enumeration testing for *E. coli* and total coliforms

Under the previous Standards, for routine monitoring of supplies, it was sufficient to carry out a presence/absence test to determine if *E. coli* was present. If present, the Standards then required water suppliers to do an enumeration test to quantify the result and more accurately assess the level of risk. However, this creates a risk of delay of one to two days in supplier response to a microbiological contamination event that constitutes a significant and readily avoidable risk to public health. Doing enumeration tests would shorten the time required for re-testing and therefore improve the timeliness of response to contamination. This will significantly reduce risk to public health.

Exceptions for emergency response are permitted in the Standards so the requirement for enumeration could be waived following, for example, an earthquake if access to/functionality of laboratories is affected.

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<sup>1</sup> Coliforms are a broad class of bacteria found in our environment, not all of which present a risk to public health. *Total coliforms* include bacteria that are found in the soil, in water that has been influenced by surface water, and in human or animal waste. *Faecal coliforms* are the subset of the total coliforms that are present in the gut and faeces of animals, and may be disease-causing.

## Editorial changes

The Standards have not been amended since 2008. There are typographical errors, sections that require clarification and sections that could be streamlined. The passive voice has been replaced with directive language to emphasise the duties of suppliers.

**1. Clarification and streamlining:** These proposals remove sections from the Standards that are duplicated in the Health Act and provide improved clarification for suppliers. Whilst minor changes, they are more significant than the general changes that follow.

Description of change	Change to the Standards
<p><b>1. Protozoal log removal Standard clarified to reflect scientific evidence of risk</b></p> <p>The default protozoal log removal requirement for surface water source water has been changed to require at least 3-log inactivation/ removal instead of relying on ambiguous qualitative catchment descriptors. There is no change to the maximum acceptable value in supplied drinking water.</p> <p>Currently suppliers are expected to conduct a catchment risk assessment and establish an appropriate log-reduction for each raw water source. Conducting an individual risk assessment is expensive and onerous.</p> <p>Advice from Massey University and the results of investigations by water suppliers indicates that the presence of protozoa is low in New Zealand raw waters and a default 3-log reduction will manage the risk to public health in drinking water suppliers.</p> <p>This change provides greater clarity to suppliers, reduces the cost of source-specific risk assessments and will not increase risk to members of the public.</p> <p>The form associated with conducting a catchment risk assessment, in Appendix 3 of the Standards, has been removed.</p>	<p>Section 5: Protozoal compliance criteria – Changes to section 5.2.1 (Procedures for determining protozoal log credit requirements)</p> <p>Appendix 3: Catchment Risk Categorisation Survey Result Form deleted</p>
<p><b>2. Duplicated requirements for tankered drinking-water carriers removed</b></p> <p>The prescriptive requirements for tankered drinking-water carriers have been removed from the Standards as they are mandated through Part 2A of the Health Act. The supporting technical advice and points of clarification have been moved from the Standards to the Guidelines. This will put a more appropriate emphasis on the water safety plan procedures that carriers are currently required to implement. This does not reduce or alter the obligations of tankered drinking-water carriers.</p>	<p>Section 11: Tankered Drinking-Water Compliance Criteria –entire section transferred from the Standards to Guidelines. Duplicated requirements removed and further explanatory information added.</p>
<p><b>3. Duplicated requirements for record-keeping removed</b></p> <p>Section 13 which sets detailed reporting requirements duplicates the requirements for record keeping in Part 2A of the Health Act. The duplicated sections have been removed and the supporting technical advice and points of clarification moved from the Standards to the Guidelines to allow for advice that complements existing statutory duties in the Health Act. This does not reduce or alter the substantive monitoring and record-keeping duties.</p>	<p>Section 13: (Compliance Criteria: Records) – entire section transferred to Guidelines. Duplicated requirements removed and further explanatory information added.</p>

## 2. **Further general changes:** these changes:

- do not substantively affect the standard – supplier's duties remain the same;
- improve clarity and readability of the standards and therefore can contribute to ease of compliance and enforcement;
- are numerous, occur throughout the document, and are not individually listed in this summary – a description of the key categories of changes are provided, with examples provided for clarity.

Types of changes	Examples of proposed changes
<p>1. Drafting clarifications</p> <ul style="list-style-type: none"> <li>• Passive voice changed to clarify the supplier is a duty-holder; other semantic/syntactical edits for clarity.</li> <li>• Redrafted to clarify the mandatory nature of duties</li> </ul>	Throughout
<p>2. Reorganisation of content for readability</p> <ul style="list-style-type: none"> <li>• Removal of duplicated text through reorganisation and minor redrafting of content</li> <li>• Addition of statements referencing other content, to avoid duplication of content</li> </ul>	Throughout
<p>3. Removal of guidance/migration of guidance to guidelines</p> <ul style="list-style-type: none"> <li>• Removal of guidance or narration where the guidance is redundant or no longer up to date.</li> <li>• Guidance or narrative content has been moved to guidelines. This is to ensure that the DWSNZ are a manageable document that clearly articulates the duties that must be met by suppliers, without undue length.</li> </ul>	<p>In section 3.3.4 the category of 'Priority 4 determinands' has been removed. The category was established to classify substances not likely to be present in the water supply. In practice it has never been used and is considered to be redundant as no action is required if priority 4 determinands are found. Substances and any relevant risk assessment of them can occur in either the Priority 3 classification or within a water supplier's water safety plan.</p> <p>The specific distribution zone compliance criteria in section 4.3.7 (and associated references in other subsections) have been deleted. During the last substantial review of the Standards in 2005, some water suppliers were configured to provide bulk drinking water to another supplier responsible for delivering drinking water to consumers. Specific distribution zone compliance criteria ("7A and 7B") were adopted to recognise this arrangement. However, this arrangement no longer exists. Water from a bulk supplier will still be subject to other Standards and bulk water suppliers must still comply with water safety planning requirements. There will be no adverse impact on water suppliers or public safety.</p> <p>In section 10 the term "participating supplies" has been removed as it is redundant. It was originally adopted to reinforce the supplier categorisation associated with targeted Section 10 of the Standards.</p> <p>Section 12 (Rural Agricultural Drinking-Water Supplies) has been deleted as detailed guidelines exist and the Standards do not contain substantive obligations. As the current content is in the nature of a guideline, it is better suited to being addressed in the guidelines. There is no impact on suppliers or communities as the guidelines already are in place.</p> <p>The prescriptive test process for determining the corrosiveness of water has been moved to the drinking water guidelines as a more fitting location for the detailed procedure. Any updates or improvements to the procedure can be readily updated within the guideline to fit with best practice or new techniques. This does not reduce protections for the public or affect compliance costs.</p> <p>The prescriptive methods which standardise the testing approach used by different laboratories in analysing drinking water have been removed, as these are managed by IANZ who assess the methods used by testing</p>

	laboratories. Inclusion in the Standards is inappropriate, as the Standards are a document for water suppliers, not laboratories. Furthermore, the requirements were out of date.
<p>4. New content to add clarity to existing standards</p> <ul style="list-style-type: none"> <li>Clarifying figures and tables – e.g. ensuring that terms used in figures are explained and are used consistently</li> <li>Information added to clarify existing standards – to ensure the requirement to meet a standard is explicit. These changes do not alter obligations, but ensure there is no uncertainty in meeting the requirement.</li> </ul>	The cartridge filtration template from Chapter 8 of the Guidelines has been incorporated into section 5.12. This clarifies existing requirements for the performance of cartridge filters.
<p>5. Simplification of how standards are expressed</p> <ul style="list-style-type: none"> <li>Some sections rewritten for ease of understanding. These do not alter obligations.</li> </ul>	

### Comprehensive review of the Standards underway

As the Minister noted in his media statement on 20 November 2018 *“A comprehensive review of the Standards is also being carried out, led by an independent Drinking-Water Advisory Committee. I expect proposed changes from this review to be released for public consultation by mid-2019.”*

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