

Summary of the proposed Drinking Water Aesthetic Values

What are Drinking Water Aesthetic Values?

Drinking Water Aesthetic Values have been developed to ensure that drinking water is acceptable to consumers in terms of its appearance, taste, odour and in some instances its feel. Consumers will generally be more aware of these aesthetic values than the presence of health-significant 'determinands' that influence the water's safety.

A 'determinand' is a constituent or property of water that can be determined or estimated in any given sample.

The proposed Drinking Water Aesthetic Values outlines minimum and maximum values for 'determinands' that relate to the acceptability of drinking water to consumers.

As some people are more sensitive to certain determinands than most of the population, it is not possible to say that complying with the Aesthetic Values will ensure the water is acceptable to everybody.

Water is considered acceptable when the determinands lie within the given range and when its aesthetic properties are not considered objectionable to most consumers.

Note: A determinand may have different minimum or maximum values in the Aesthetic Values and the Drinking Water Standards as the former focuses on aesthetics while the latter focuses on health risks.

Most aesthetic properties do not directly influence the safety of the water. However, in extreme cases water that consumers consider aesthetically unacceptable can cause them to seek water from other, possibly unsafe, sources. To guard against this possibility, water suppliers have a duty (under section 24 of the Water Services Act 2021 (the Act) to take all reasonably practicable steps to ensure that they provide their consumers with aesthetically acceptable water.

Compliance with the Drinking Water Aesthetic Values, along with Drinking Water Standards and the Drinking Water Quality Assurance Rules, are part of a broad risk management approach under the Act. The purpose is to ensure a safe and secure supply of drinking water to consumers.

Taumata Arowai developed the proposed Drinking Water Aesthetic Values in collaboration with sector reference groups from various water supply types across Aotearoa. This included external technical input. The reference groups included representatives from small water suppliers, Māori communities and local authorities.

After consultation, the proposed Drinking Water Aesthetic Values will replace the guideline values for aesthetic determinands currently included as part of the *Drinking-water Standards for New Zealand 2005 (Revised 2018)* made under the Health Act 1956.

Summary of the proposed changes

The proposed Drinking Water Aesthetic Values are largely based on the existing guideline values for aesthetic determinands set out in the *Drinking-water Standards for New Zealand 2005 (Revised 2018)* made under the Health Act 1956.

The table below lists the proposed changes to determinand ranges. These changes have been made to bring aesthetic values up to date and to ensure alignment with the Act rather than the Health Act 1956.

The Drinking Water Acceptable Values' most important component is the general requirement that taste and odour should be acceptable to a reasonable consumer.

The acceptable ranges are those that studies and experience indicate should ensure water is acceptable to a reasonable consumer. We have adopted World Health Organization acceptability values for a determinand, where these have been set.

The proposed changes to the Drinking Water Aesthetic Values are listed in the table below. Note the table only reflects the proposed changes, the table does not reflect the full list of determinands and associated acceptable ranges.

Acceptable range of determinands that may affect aesthetic properties of drinking water

Name	Existing Aesthetic Guideline Values	Proposed Aesthetic Values – Acceptable Range
Chlorine	0.6 – 1.0 (mg/L)	0.3 – 0.6 (mg/L) as Cl ₂
Iron	0.2 (mg/L)	≤0.3 (mg/L)
Temperature	Should be acceptable to most consumers, preferably cool	Preferably not more than 15°C
Turbidity - the quality of being cloudy, opaque, or thick with suspended matter	2.5 NTU	≤4 NTU
Colour	10 TCU	≤ 15 TCU