



Water Services Authority
Taumata Arowai

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Water Services (Small to Medium Networks) Drinking Water Acceptable Solution 2025

This Drinking Water Acceptable Solution is made under section 50 of the Water Services Act 2021 by the Chief Executive of the Water Services Authority—Taumata Arowai acting under delegated authority after consultation in accordance with section 53 of that Act.

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Requirements for Small to Medium Networks

1 Title	
	This is the Water Services (Small to Medium Networks) Drinking Water Acceptable Solution 2025.
2 Commencement	
	This Drinking Water Acceptable Solution comes into force on 5 September 2025.
3 Interpretation	
	In this Drinking Water Acceptable Solution, unless the context otherwise requires,—

Act means the Water Services Act 2021

base population means the number of people that are normally supplied drinking water at a connection using an end-point treatment system regardless of any seasonal or temporary increases

bore means a piped or encased hole constructed to access groundwater

building means a stand-alone structure where drinking water is provided. A building does not include a structure where only non-potable water is provided for other uses

consumer's property means one property, or two or more properties with common ownership arrangements, that receives drinking water from a drinking water supply and is not owned or controlled by the drinking water supplier

designated validation standard means one of the following:

- (a) NSF/ANSI 55 Class A:
- (b) USEPA Ultraviolet Disinfection Guidance Manual:
- (c) DVGW Technical Standard W294-1:2023-12:
- (d) ÖNORM M 5873-1: 2020 01 01:
- (e) DIN 19294-1:2020-08

determinand means a substance or characteristic that is determined or estimated in drinking water

distribution system means all components of a drinking water supply used to transmit drinking water to consumers' properties or other drinking water supplies including buildings, storage tanks, electrical equipment, pipes and pumps

end-point treatment system means the combined system of end-point treatment devices at the point of supply

IANZ means International Accreditation New Zealand, a trading entity of the Accreditation Council continued under the Standards and Accreditation Act 2015

MAV means the maximum acceptable value of a determinand as set out in the Water Services (Drinking Water Standards for New Zealand) Regulations 2022

network means a distribution system that provides drinking water to consumers' properties or other drinking water supplies. A network may provide water at a pressure and volume to meet consumer demand, or at a restricted flow and volume

pre-treatment means infrastructure or processes to treat drinking water to improve water quality prior to distribution to connected properties that use end-point treatment

roof water means the rainwater collected from the roof of a building or structure

small to medium networked drinking water supply has the meaning set out in clause 4 of this Drinking Water Acceptable Solution

spring means a location where groundwater naturally emerges from the ground surface

surface water means a lake, river, stream or similar body of water that is located on top of land

UV means ultraviolet light

UV transmittance means the measurement of the amount of UV light that can pass through water usually measured as a percentage

4 Meaning of small to medium networked drinking water supply

- (1) In this Drinking Water Acceptable Solution, **small to medium networked drinking water supply** means a drinking water supply that provides drinking water via a network primarily to consumers' properties and may also provide drinking water to another drinking water supply.
- (2) A small to medium drinking networked drinking water supply must serve no more than 500 people (additional population limits for buildings served by end-point treatment apply).

5 Application

- (1) This Drinking Water Acceptable Solution may be used only by drinking water suppliers who own or operate small to medium networked drinking water supplies.
- (2) Bore, spring, roof or surface water may be used as source water for the drinking water supply.
- (3) A consumer may supplement the drinking water supply with drinking water from another source (for example, self-supplied roof water) or from another drinking water supply (for example, a registered water carrier).

6 Compliance with the Water Services Act 2021

- (1) Drinking water suppliers who ensure that a small to medium networked drinking water supply meets all the applicable requirements in Schedule 1 are deemed to comply with the following sections of the Act:
 - (a) section 24 – duty to take reasonable steps to supply aesthetically acceptable drinking water:
 - (b) section 27 – duty to protect against risk of backflow:
 - (c) section 30 – owner must have a drinking water safety plan:
 - (d) section 37(1) – drinking water suppliers to keep records:
 - (e) section 43 – source water risk management plans:
 - (f) section 49(3) – duty to comply with all applicable compliance rules.
- (2) For the avoidance of doubt, drinking water suppliers who comply with the requirements in Schedule 1 are not required to prepare a drinking water safety plan (including a source water risk management plan) or demonstrate compliance with compliance rules (for example, the *Drinking Water Quality Assurance Rules*).

7 Revocation and transition

- (1) The *Drinking Water Acceptable Solution for Spring and Bore Water Supplies 2022* and the *Drinking Water Acceptable Solution for Roof Water Supplies 2022* are revoked from the date of commencement of this Drinking Water Acceptable Solution.
- (2) Drinking water suppliers that were using the *Drinking Water Acceptable Solution for Spring and Bore Water Supplies 2022* or the *Drinking Water Acceptable Solution for Roof Water Supplies 2022* at the date of commencement of this Drinking Water Acceptable Solution—
 - (a) are deemed to be compliant with this Drinking Water Acceptable Solution for 1 year from that date if the previous requirements continue to be met; or
 - (b) may transition to this Drinking Water Acceptable Solution at any time following commencement.

Schedule 1

Requirements for Small to Medium Networks

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End-point treatment

SMN.1 End-point treatment must be used at consumers' properties

End-point treatment that meets the requirements of SMN.3 to SMN.5 must be installed and maintained at consumers' properties for any buildings where the water supplied is used as drinking water unless SMN.2 applies.

SMN.2 Exceptions to end-point treatment requirements may apply in respect of connected drinking water supplies

Requirements relating to end-point treatment are not required to be met in respect of any point of supply where—

- (a) drinking water is supplied from a small to medium network (Supply A) to another drinking water supply (Supply B); and
- (b) a general exemption under section 57 of the Act exempts Supplier A from the duties to supply safe drinking water and comply with drinking water standards in respect of drinking water supplied to Supplier B.

SMN.3 End-point treatment must meet population and building limits

- (a) Each end-point treatment system must either—
 - (i) provide drinking water to a single building where the base population does not exceed 500 people; or
 - (ii) provide drinking water to no more than three buildings on one property or adjoining properties with common ownership arrangements where the base population does not exceed 100 people.
- (b) The population supplied by each end-point treatment system may exceed its base population limit if—
 - (i) the exceedance is for a total of no more than 60 days in any 12-month period; and
 - (ii) the end-point treatment system has the capacity to effectively treat drinking water for these periods.

SMN.4 End-point treatment must be effective

The following requirements must be met to ensure that all end-point treatment systems are effective for treating drinking water:

- (a) an end-point treatment system must consist of at least a cartridge filtration system and a UV disinfection system;
- (b) each component of an end-point treatment system must be installed—
 - (i) to meet the peak instantaneous demand for treated drinking water at the connected property; and
 - (ii) in accordance with the manufacturer's instructions and requirements:

- (c) an end-point treatment system must include at least one cartridge filter, installed before the UV disinfection system and with the final or only cartridge having a 5 micron or less nominal pore size:
- (d) every device in the end-point treatment system must be operated and maintained in accordance with the manufacturer's instructions:
- (e) the UV disinfection system must deliver at least 40 mJ/cm² reduction equivalent dose of UV light:
- (f) water flowing through the UV disinfection system must be restricted or monitored so that the flow rate does not exceed the flow rate specified by the manufacturer for 40 mJ/cm² reduction equivalent dose of UV light:
- (g) lamp usage in the UV disinfection system must not exceed the manufacturer's recommendations:
- (h) written evidence must be available (for example, the manufacturer's website, or the instruction manual) confirming—
 - (i) the UV disinfection system delivers at least 40 mJ/cm² reduction equivalent dose of UV light; and
 - (ii) the flow rate specified by the manufacturer for 40 mJ/cm² reduction equivalent dose of UV light.

SMN.5 UV disinfection systems must be validated for designated buildings

An end-point treatment UV disinfection system must be validated to and operate within the specifications of a designated validation standard, for any buildings—

- (a) with a base population that exceeds 25 people; or
- (b) with a base population of any size; if—
 - (i) the building has a community purpose (for example, a school, marae, sports club, or community hall); or
 - (ii) the building has drinking water available to the public (for example a cafe, hotel, or camping ground); but
- (c) notwithstanding (a) and (b), validation is not required where a UV disinfection system was installed before 17 October 2022 and written evidence is available (for example, the manufacturer's website, or the instruction manual) that the unit delivers at least 40 mJ/cm² reduction equivalent dose of UV light.

Water quality

SMN.6 Water must be suitable for end-point treatment

Where end-point treatment is used, all water in the distribution system must meet the following requirements to be suitable for cartridge filtration and UV disinfection:

- (a) turbidity must be low enough to ensure cartridge filters will last for at least one month before replacement of cartridges is required:

- (b) UV transmittance must be high enough for the UV disinfection system to achieve at least 40 mJ/cm² reduction equivalent dose of UV light:
- (c) iron must be low enough to ensure the UV disinfection system sleeve is not fouled with iron deposits within one year before cleaning is required:
- (d) manganese must be low enough to ensure the UV disinfection system sleeve is not fouled with manganese deposits within one year before cleaning is required:
- (e) chemical determinands that are required to be monitored under SMN.8 and SMN.11 must not exceed their respective MAV in the drinking water standards:
- (f) where surface water is used, cyanobacteria/cyanotoxin risk in must be either assessed as low or managed to mitigate the risk prior to end-point treatment.

SMN.7 Pre-treatment may be used

- (a) Pre-treatment may be used to partially treat drinking water to meet the requirements of SMN.6 prior to end-point treatment.
- (b) Chlorine may be added to a drinking water supply to control bacterial and viral pathogens and to reduce the risk of growth of biofilms, however it is not required to meet this Drinking Water Acceptable Solution.

SMN.8 Bore, spring and surface water must be monitored

- (a) Where the source water is or includes bore, spring or surface water, the following determinands must be monitored in the supply distribution system, following any central pre-treatment and prior to end-point treatment, before this Drinking Water Acceptable Solution is used and then—
 - (i) at least every three months for the following microbiological determinands:
 - a. *E. coli*:
 - b. total coliforms; and
 - (ii) at least every three months for the following physical determinands:
 - a. turbidity:
 - b. UV transmittance; and
 - (iii) at least annually for the following chemical determinands:
 - a. iron:
 - b. manganese:
 - c. nitrate:
 - d. arsenic:
 - e. boron:
 - f. hardness:

- g. any other chemical determinands that are identified as presenting a risk to the supply.
- (b) Microbiological and chemical samples collected for SMN.8(a) must be—
 - (i) collected according to any instructions and specifications provided by the laboratory; and
 - (ii) analysed by a laboratory accredited by IANZ for the type of analysis being undertaken.

SMN.9 Cyanobacteria/cyanotoxin risk must be identified and managed for surface water sources

Where the source water is or includes surface water, the following requirements must be met:

- (a) monitoring or visual inspections of the water and area around and upstream of any surface water intake must be undertaken each month between October and May (inclusive) for the presence of benthic cyanobacteria mats and planktonic cyanobacterial growth:
- (b) if there is evidence of cyanobacterial growth steps must be taken to assess the cyanotoxin risk to consumers:
- (c) if there is a risk of supplying water with cyanotoxins that exceed a MAV, a response plan must be developed and followed under SMN.18:
- (d) consumer taste or odour complaints, which have the potential to relate to cyanobacteria, must be—
 - (i) recorded; and
 - (ii) investigated to determine the cause.

SMN.10 Springs and bores must be protected

Where the source water is or includes a spring or a bore, the following requirements must be met:

- (a) springs and bores must be protected by headworks which minimise the risk of contamination from nearby surface water:
- (b) farm animals must be excluded from an area extending at least five metres in all directions from the headworks of a bore, spring or spring-fed pond:
- (c) springs and bores must not be affected by contamination from any of the following:
 - (i) a sewage disposal field or effluent discharge (for example, a septic tank or other wastewater treatment system):
 - (ii) an underground storage tank (such as at a petrol station):
 - (iii) a waste pond:
 - (iv) a landfill:
 - (v) an offal pit:
 - (vi) areas where pesticides or animal effluent is applied to land:

- (vii) aquifers contaminated with, or at risk of contamination with, sewage from exfiltration and/or pump station overflows:
- (viii) contaminated sites:
- (d) springs and bores must not provide geothermal water.

SMN.11 Roof water must be monitored

- (a) Where the source water is or includes roof water, the following determinands must be monitored in untreated roof water before this Drinking Water Acceptable Solution is used and then—
 - (i) at least every three months for the following microbiological determinands:
 - a. *E. coli*;
 - b. total coliforms; and
 - (ii) at least every three years for the following chemical determinands:
 - a. cadmium;
 - b. copper; and
 - c. lead
- (b) Microbiological and chemical samples collected for SMN.11(a) must be—
 - (i) collected according to any instructions and specifications provided by the laboratory; and
 - (ii) analysed by a laboratory accredited by IANZ for the type of analysis being undertaken.

SMN.12 Risks to roof water quality must be minimised

Where the source water is or includes roof water, the following requirements must be met:

- (a) as far as practicable, roof surfaces used for the collection of drinking water must be kept free from decaying debris, leaves, branches, bird nests and faeces from animals or birds:
- (b) the roof supply must be able to be disconnected from the water storage and treatment system for cleaning and maintenance.

Information provision

SMN.13 Monitoring results must be made available

The results of all water quality monitoring required under SMN.8 and SMN.11 must be made available to consumers and other drinking water suppliers within a reasonable time after receiving the results.

SMN.14 Information about testing must be provided

The following testing information must be provided to consumers at least annually and when the drinking water supplier becomes aware that property ownership has changed:

- (a) a recommendation to test drinking water treated by end-point systems for *E. coli* and total coliforms at least every 6 months;
- (b) where to find a laboratory accredited by IANZ;
- (c) advice to increase testing to weekly for any periods when the base population temporarily increases following SMN.3(b).

SMN.15 Information on how to minimise risks associated with consumers' storage tanks must be provided

The following recommendations must be provided to consumers at least annually and when the supplier becomes aware that property ownership has changed:

- (a) treated drinking water storage tanks should be secured against the ingress of rainwater and surface water;
- (b) inlets, lids, overflows and any other small gaps in treated and untreated drinking water storage tanks should be secure from contamination by vermin, birds, animals, faecal material, or other material;
- (c) any treated or untreated drinking water storage tanks should be inspected annually to ensure the above are met;
- (d) untreated water from any other source should be first delivered into an untreated water storage tank so that all water to be used for drinking passes through the end-point treatment system.

SMN.16 Information must be provided to owners of premises who are required to install, maintain and test end-point treatment devices

If the drinking water supplier requires the owner of the premises to install, maintain, and test an end-point treatment device under section 28(3)(b) of the Act, information must be provided in writing at least annually, and when the supplier becomes aware that property ownership has changed, that advises the owner of—

- (a) the minimum requirements for the end-point treatment device that must be installed to meet this Drinking Water Acceptable Solution; and
- (b) the maintenance requirements for each end-point treatment device, (for example changing UV lamps and cartridge filters); and
- (c) testing or monitoring requirements to verify that the end-point treatment device is operating correctly.

Backflow prevention

SMN.17 All connections must have backflow prevention

- (a) Backflow prevention must be installed on all connections to the drinking water supply regardless of whether the water is used for drinking after that connection.

- (b) Backflow prevention must be one of the following types:
 - (i) air gaps:
 - (ii) non-testable dual check valves:
 - (iii) non-testable double check valves:
 - (iv) testable backflow prevention devices.
- (c) Air gaps used for backflow prevention must be inspected annually.
- (d) Testable backflow prevention devices must—
 - (i) be installed if there is a medium or high backflow risk; and
 - (ii) be inspected and tested annually.

Emergency management, record-keeping and capability

SMN.18 Events and emergencies must be managed appropriately

- (a) Events and emergencies that could compromise the ability of end-point treatment systems to make drinking water safe or put the supply of a sufficient quantity of drinking water at risk must be identified and documented.
- (b) A response plan must be developed and followed for each event or emergency identified under SMN.18(a).

SMN.19 Records of the drinking water supply must be kept

The following records must be kept and maintained for at least three years:

- (a) records of installation, maintenance and testing of end-point treatment devices:
- (b) records of inspection and maintenance of supply components including storage tanks, pipes and pumps:
- (c) records of all monitoring undertaken by the drinking water supplier:
- (d) records of all information provided to consumers:
- (e) records of installation, inspection and testing of backflow prevention:
- (f) records of response plans and responses to events and emergencies.

SMN.20 People working on the drinking water supply must be competent

People who install, maintain or operate any aspect of the drinking water supply must be suitably qualified, trained or experienced to undertake the relevant task.

Made at Wellington on 3 September 2025.

Allan Prangnell
Chief Executive
Water Services Authority—Taumata Arowai

Explanatory note

This note is not part of the drinking water acceptable solution but is intended to indicate its general effect.

This drinking water acceptable solution, which comes into force on 5 September 2025, provides a prescribed set of requirements that small to medium networked drinking water suppliers can use to establish compliance with particular duties in the Act.

The population limit for the drinking water supply is 500 people.

End-point treatment systems consisting of cartridge filtration and UV disinfection are required at consumers' properties as an alternative to treating drinking water centrally. An end-point treatment system can serve one building with no more than 500 people or up to 3 buildings with no more than 100 people. Validated UV systems are required for buildings with over 25 people or buildings that have a community purpose or are open to the public.

Drinking water supplied must be of a quality suitable for end-point treatment, key determinands must be monitored, spring and bore sources must be protected, information must be provided to consumers, backflow prevention must be installed, emergencies must be managed, records must be kept and people working on the supply must be competent.

A drinking water supplier who meets the criteria and requirements is not required to comply with compliance rules made under the Act and prepare a drinking water safety plan.

The *Drinking Water Acceptable Solution for Spring and Bore Water Supplies 2022* and the *Drinking Water Acceptable Solution for Roof Water Supplies 2022* are revoked and replaced with separate acceptable solutions for small to medium networks and self-supplied buildings.

This is secondary legislation issued under the authority of the Legislation Act 2019 .	
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