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Rules and standards post consultation – part 2

23 June 2022



Ko wai, ko au, ko tātou

Ko te wai ahau, ko ahau te wai.
He whakaaturanga tātau nō te wai.
Ko te ora te wai ko te ora o te
tangata.
He taonga te wai me tiaki.
Ko wai tātou.
Ko wai tātou.

I am wai, wai is me.
We are reflections of our wai.
The health of te wai is the health of te
tangata.
Wai is a taonga that must be protected.
Ko wai tātou.
We are wai. Wai is us.



What we will cover today

- **Key dates**
 - Helen Robertson, Regulatory Policy Manager
- **Level 1 and Level 2 rules**
 - Jim Graham, Principal Advisor Drinking water
- **Pātai / questions**
 - Opportunity to answer any pātai / questions you might have



Key dates

Timeframes

	Publicly available	Come into effect
Drinking Water Standards	9 June 2022	14 November 2022
Drinking Water Aesthetic Values	15 June 2022	14 November 2022
Drinking Water Quality Assurance Rules	25 July 2022	14 November 2022 (anticipate reporting in line with new rules from 1 January 2023)
Drinking Water Acceptable Solutions	August 2022	Likely to be 14 November 2022
Drinking Water Network Environmental Performance Measures	Guidance to support reporting will be published late-June 2022	First reporting period begins on 1 July 2022



Drinking Water Quality Assurance Rules

Categories of drinking water supply

- Very small community drinking water supplies (≤ 25 people)
- Networked Drinking Water Supplies
 - ❑ Small (26 – 100 people)
 - ❑ Medium (101 – 500 people)
 - ❑ Large (> 500 people)
- Self-supplied Buildings
- Water Carrier Services
- Water Carrier Supplies
- Community Drinking Water Stations
- Planned Temporary Events



Rule Modules

- **Rule Modules**
 - G = General rules
 - VSC = Very Small Communities
 - S = Source water (3 levels)
 - T = Treatment (3 levels)
 - D = Distribution (3 levels)
 - WC = Water Carrier Service Rules
 - PTE = Planned Temporary Event Drinking Water Supplies Rules
 - VP = Varying Populations



Rule modules

G		
VSC		
S1	S2	S3
T1	T2	T3
D1	D2	D 3
WC		
PTE		
VP		



Application of the Rule Modules

- Water suppliers must work out the base population for their supplies
- Rule modules match the different supply categories and suppliers must demonstrate compliance against the rules in those modules
- E.g. Medium networked supply (101 – 500 people) G + S2 + T2 + D2
- A water supplier can elect to demonstrate compliance against a higher-level module
- E.g. Medium networked supply (101 – 500 people) G + S2 + T3 + D2
- Reporting requirements are set out in the General Rules and are based on the modules that water suppliers demonstrate compliance against
- Reporting periods – the interval that reporting covers
- Compliance periods – 1 Day, 1 Week, 1 Month, 1 Year
- Monitoring rules
- Assurance rules

General Rules

General Rules

- Must report compliance for key parameters to Taumata Arowai
 - Level 1 rules every 6 months – (*E. coli*, total coliforms, turbidity)
 - Level 2 rules every 3 months – (*E. coli*, total coliforms, turbidity, UV dose, FAC, pH)
 - Level 3 rules every month
 - Bacterial compliance – (FAC, UV dose, Ozone residual)
 - Protozoa compliance – (Turbidity, Ozone C.t, UV dose)
 - Distribution zone – (FAC, *E. coli*, total coliforms)
- All other monitoring rules annually
- All assurance rules annually



General Rules

- Laboratory samples must have identifiers, must use IANZ laboratories
- Micro samples to laboratory in 24 hours, not colder than zero degrees, not warmer than when collected
- Calibration of all instruments must be according to manufacturers' requirements
- Must prepare a hygiene code of practice for people working on water systems
- Continuous analysers used to demonstrate compliance with treatment rules (T1,T2,T3), separation of data records 1 minute
- For source water or in a distribution zone separation of data records 30 minutes
- Where continuous monitoring equipment fails – grab samples every 30 minutes



Very Small Community Drinking Water Supplies

Very small community drinking water supplies

- Population ≤ 25 (but can be up to 50 for up to 60 days)
- 2 rules
- VSC.1 – *E.coli* and total coliforms sampled every 6 months
- VSC.2 – Results must be made available to all consumers on the supply



Level 1 Rules

Level 1 Rules – S1

Surface water and ground water

Contaminant Group	Determinands	Sampling Frequency
Bacterial	<i>E. coli</i> and total coliforms.	Every three Months
Physico-chemical	arsenic, boron, nitrate , iron, manganese.	Every three years,

Roof water

Contaminant Group	Determinands	Sampling Frequency
Bacterial	<i>E. coli</i> and total coliforms.	Every three months
Chemical	cadmium, copper, zinc, lead, benzo [a] pyrene (In winter – June, July or August).	Every three years



Level 1 Rules – T1

- Raw water must be selectively abstracted, filtered (back-washable media) or settled
- Filtered by cartridge filters (unless groundwater)
- Disinfected with UV
- UV must meet a standard:
 - NSF
 - USEPA
 - DVGW
 - öNORM



Level 1 Rules – T1

Determinands	Sampling Frequency	Compliance period
<i>E. coli</i>	Every 3 Months	6 Months
Total coliforms	Every 3 Months	6 Months
Turbidity	Every 3 Months	6 Months



Level 1 Rules – D1

Determinands	Sampling Frequency	Compliance period
<i>E. coli</i>	Every 3 months	6 months
Total coliforms	Every 3 months	6 months

- Backflow



Level 2 Rules

Level 2 Rules – S2

Surface water and ground water

Contaminant Group	Determinands	Sampling Frequency
Bacterial	<i>E. coli</i> and total coliforms.	Monthly
Physico-chemical	pH, turbidity.	6 Monthly
	iron, manganese, nitrate .	Annually
	arsenic, boron	Every three years

Roof water

Contaminant Group	Determinands	Sampling Frequency
Bacterial	<i>E. coli</i> and total coliforms.	Monthly
Chemical	cadmium, copper, zinc, lead, benzo [a] pyrene (In winter – June, July or August).	Every three years



Level 2 Rules – T2

- Must have
 - Filtration (media, membrane, cartridge), UV, Chlorination.
- UV must meet a standard:
 - NSF
 - USEPA
 - DVGW
 - öNORM
- Chemical compliance rules
- Cyanobacteria compliance rules



Level 2 Rules – T2

Determinands/Parameters	Sampling Frequency	Duration Between Samples	Compliance Period
Turbidity (water leaving the treatment plant)	2 x Week	At least 2 Days	1 Week
UVI or UV dose (at the reactor)	2 x Week	At least 2 Days	1 Week
Flow (at the reactor)	2 x Week	At least 2 Days	1 Week
FAC (in water leaving the treatment plant)	2 x Week	At least 2 Days	1 Week
pH (in water leaving the treatment plant)	2 x Week	At least 2 Days	1 Week
<i>E. coli</i> (in water leaving the treatment plant)	2 x Month	At least 30 Days	1 Month
Total coliforms (in water leaving the treatment plant)	2 x Month	At least 30 Days	1 Month
Any chemical used in the treatment process	2 x Month	At least 30 Days	1 Month
Fluoride (if added, in water leaving the treatment plant)	2 x Week	At least 2 Days	1 Week
UVT	Every 3 Months	At least 70 Days	1 Year
Chlorate (in water leaving the treatment plant)	Every 3 Months	At least 70 Days	1 Year



Level 2 Rules – D2

Determinands	Sampling Frequency	Compliance period
<i>E. coli</i>	2 x month	1 Month
Total coliforms	2 x Month	1 Month
Antimony, cadmium, chromium, copper, lead, mercury, nickel, zinc	Annually	1 Year

- Backflow



Varying Population

Varying population

- For Level 1 supplies
- Before the population exceeds 100 a sample for *E. coli* and total coliforms must be taken
- When a population exceeds 100 sampling for *E. coli* and total coliforms must be weekly
- When a population exceeds 500 sampling for *E. coli* and total coliforms must be twice weekly



Varying population

- Treatment plant monitoring for level 2 supplies when the population exceeds 500

Parameter	Sampling Frequency	Duration Between Samples	Compliance period
Turbidity of water leaving the treatment plant	Daily	18 hours	1 Day
FAC of water leaving the treatment plant	Daily	18 hours	1 Day
pH of water leaving the treatment plant	Daily	18 hours	1 Day
<i>E. coli</i> in water leaving the treatment plant	Weekly	5 Days	1 Week
Total coliforms in water leaving the treatment plant	Weekly	5 Days	1 Week



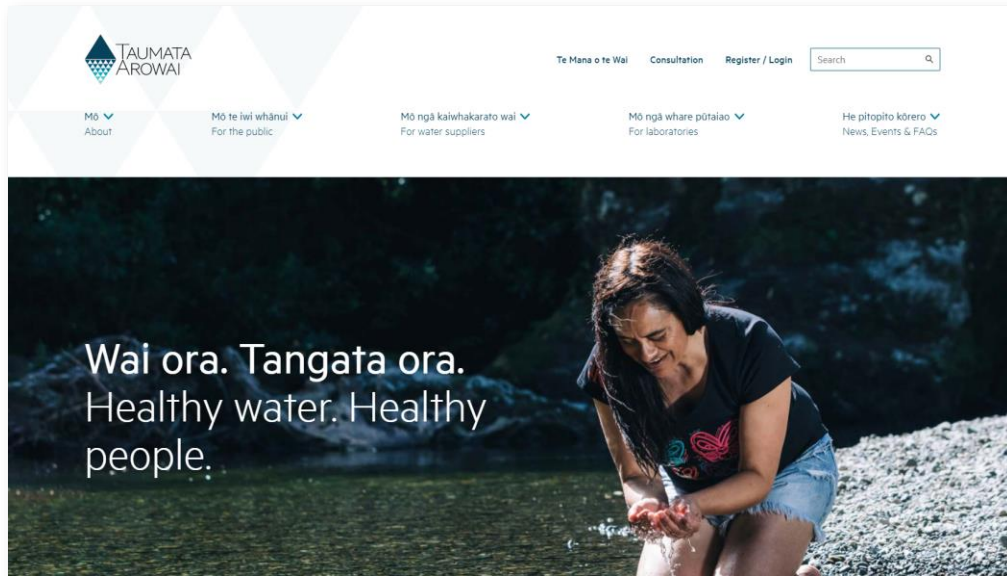
Varying population

- Distribution zone monitoring for level 2 supplies when the population exceeds 500

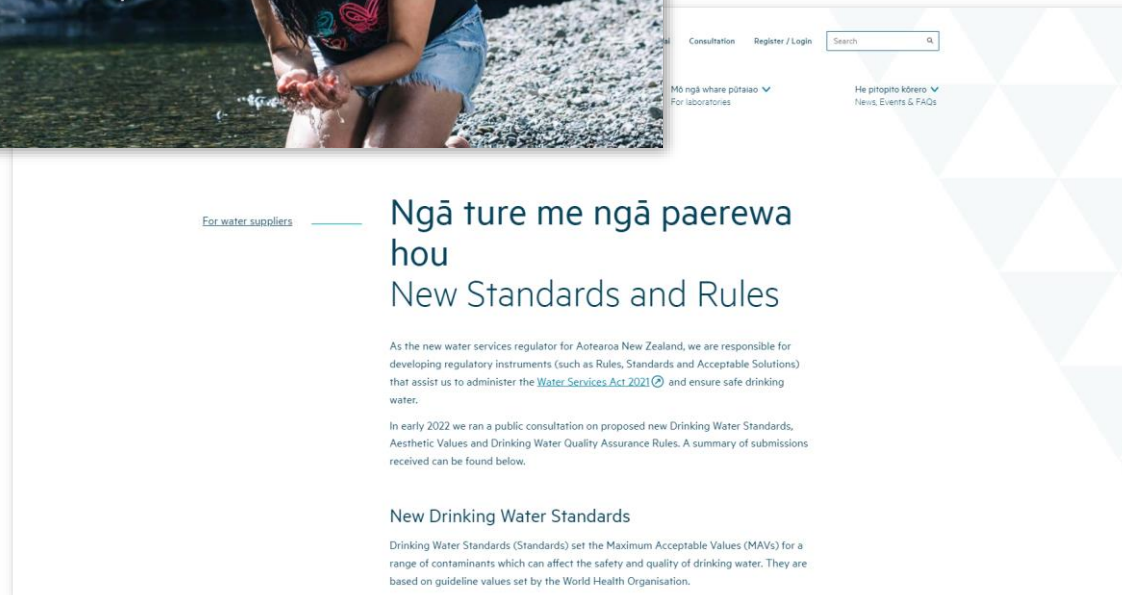
Parameter	Sampling Frequency	Duration Between Samples	Compliance period
FAC	Daily	18 hours	1 Day
<i>E. coli</i>	Weekly	5 Days	1 Week
Total coliforms	Weekly	5 Days	1 Week



For more information



Find out more at www.taumataarowai.govt.nz/for-water-suppliers/new-compliance-rules-and-standards/



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Pātai | Questions?