

---

# Hilltops Council Drinking Water Monitoring Report

## Executive Summary

Hilltops Council performed routine drinking water sampling and testing to monitor the quality of drinking water. The results were submitted to the NSW Drinking Water Database. The report below outlines the Drinking Water Quality summary from the reporting period from 1 July 2025 up to 1 April 2026.

Compliance is determined against the Australian Drinking Water Guidelines (2011) guideline values for *E. coli*, physical and chemical characteristics of drinking water.

The *Boorowa* supply system achieved compliance of 93.88% for physical, 99.54% for chemical, and 100% for microbiological samples.

The *Harden* supply system achieved compliance of 98.41% for physical, 100% for chemical, and 100% for microbiological samples.

The *Young* supply system achieved compliance of 98.72% for physical, 100% for chemical, and 100% for microbiological samples.

## Water Quality

### Boorowa Water Quality

#### Summary

Table 1. Boorowa Water Quality Compliance

Sample Type	Sample Count	Number of Characteristics	Number of Non-Compliant Samples	Compliance (%)
Physical	49	4	3	93.88
Chemical	216	35	1	99.54
Microbiological	80	2	0	100.00

### Routine Drinking Water Monitoring Characteristics

Table 2. Boorowa Chronic health-related Chemical Water Quality Data

Characteristic	Guideline Value		Mean	Maximum	Sample count	Meeting Guideline Value (%)
	Health	Aesthetic				
Aluminium	0.003		0.05333	0.11000	3	100.00
Antimony	0.003		0.00013	0.00020	3	100.00
Arsenic	0.01		0.0033	0.0040	3	100.00
Barium	2		0.15	0.16	3	100.00
Boron	4		0.02	0.03	3	100.00

Characteristic	Guideline Value		Mean	Maximum	Sample count	Meeting Guideline Value (%)
	Health	Aesthetic				
Cadmium	0.002		0.0001	0.0001	3	100.00
Calcium			57.6	59.2	3	100.00
Chloride	c	250	240.7	255.0	3	66.67
Chromium	0.05		0.0008	0.0010	3	100.00
Copper	2	1	0.013	0.018	3	100.00
Fluoride	1.5		0.327	0.330	3	100.00
Iodine	c	0.15	0.050	0.070	3	100.00
Iron	c	0.3	0.010	0.010	3	100.00
Lead	0.01		0.0003	0.0004	3	100.00
Magnesium			47.9	48.8	3	100.00
Manganese	0.5	0.1	0.00027	0.00030	3	100.00
Mercury	0.001		0.00020	0.00040	3	100.00
Molybdenum	0.05		0.001	0.001	3	100.00
Nickel	0.02		0.00083	0.00100	3	100.00
Nitrate	50		0.83333	1.00000	3	100.00
Nitrite	3		0.05	0.05	3	100.00
pH	c	6.5-8.5	7.6	8.0	43	100.00
Selenium	0.01		0.0018	0.0035	3	100.00
Silver	0.1		0.00020	0.00025	3	100.00
Sodium	Not necessary	180	103.0	110.0	3	100.00
Sulfate	c	250	20.0	29.0	3	100.00
Uranium	0.02		0.00027	0.0	3	100.00
Zinc	c	3	0.02000	0.03000	3	100.00

**Note:** 'c' means there is no health-based guideline value in the Australian Drinking Water Guidelines.

Chronic health-related chemical characteristics are inorganic chemicals that might be present in water and can pose a risk to health with prolonged exposure. The Guideline values for these materials are usually set to protective over a lifetime of exposure. Single results above a Guideline value are unlikely to pose a risk to health and compliance is based on analysing long term trends.

**Table 3a. Boorowa Acute health-related Chemical Water Quality Data**

Characteristic	Guideline Value		Mean	Maximum	Sample count	Meeting Guideline Value (%)
Copper	2	1	0.013	0.018	3	100.00
Nitrate	50		0.83333	1.00000	3	100.00
Nitrite	3		0.050	0.050	3	100.00

Acute health-related chemical characteristics are inorganic chemicals that can pose a health risk based on a small number of exposures. High concentrations of copper can cause vomiting. High concentrations of nitrite or nitrate can be risky for bottle-fed babies. The Guideline values for these characteristics have been set to protect people from short-term exposure.

**Table 4b. Boorowa Physical and Selected Aesthetic Chemical Water Quality Data**

Characteristic	Guideline Value		Mean	Maximum	Sample count	Meeting Guideline Value (%)
Iron	c	0.3	0.010	0.010	3	100.00
Sodium	Not necessary	180	103.0	110.0	3	100.00
Calcium			57.6	59.2	3	100.00
Chloride	c	250	240.7	255.0	3	66.67
Magnesium			47.9	48.8	3	100.00
Total Dissolved Solids (TDS)			592.0	614.0	3	100.00
Total Hardness as CaCO <sub>3</sub>	Not necessary	200	340.7	348.2	3	0.00
True Colour		15 HU	1.33	2.00	3	100.00
Turbidity	c	5 NTU	0.28	0.71	42	100.00

**Note:** 'c' means there is no health-based guideline value in the Australian Drinking Water Guidelines.

Physical and aesthetic chemical characteristics change the way that water appears; its taste, smell, look and feel. These characteristics do not have health guideline values but do affect how people feel about their drinking water.

**Table 5. Boorowa Microbiological Water Quality Data**

Characteristic	Guideline Value		Mean	Maximum	Sample count	Meeting Guideline Value (%)
E. coli	< 1 MPN/100ml		0.00	0	40	100.00
Free Chlorine	0.2-5 mg/L		0.74	1.50	40	92.50
Total Chlorine	5 mg/L		1.06	2.20	40	100.00

*Escherichia coli*, a bacteria found in the gut of many backboned animals, is an indicator that there has been recent contamination with faeces in a drinking water supply. Chlorine is used widely to kill disease-causing organisms in drinking water. A reasonable residual concentration in the supply provides ongoing protection all the way to customer taps, and gives some indication that filtration is working well and the distribution system has not been compromised.

**Table 4. Per- and Poly-fluorinated alkyl substances (PFAS) testing**

Boorowa Water							
PFAS Component	Bore 2	Bore 2	River	River	WTP	WTP	ADWG Value/Limit
	Results (µg/L)	Results (ng/L)	Results (µg/L)	Results (ng/L)	Results (µg/L)	Results (ng/L)	(ng/L)
PFOA	< 0.001 ug/L	<1	< 0.001 ug/L	<1	< 0.001 ug/L	<1	200
PFOS	< 0.001 ug/L	<1	< 0.001 ug/L	<1	< 0.001 ug/L	<1	8
PFHxS	< 0.001 ug/L	<1	< 0.001 ug/L	<1	< 0.001 ug/L	<1	30
PFBS	< 0.001 ug/L	<1	< 0.001 ug/L	<1	< 0.001 ug/L	<1	1000

PFAS is a group of Chemicals commonly used in a variety of consumer products which include food packaging and industrial processes and can be present in soil and water in the Environment.

They can pose a risk to health with prolonged exposure. The Guideline values for these materials are set to be protective over a lifetime of exposure.

As part of Council’s ongoing commitment to provide a continuous drinking water supply that meets the current Australian Drinking Water Guidelines (ADWG), sample analysis for PFAS was conducted on the Boorowa Water Supply systems in October 2025.

The results of the testing showed that the levels of PFAS in the Boorowa water supply were well below the new limits set in revised the Australian Drinking Water Guidelines (ADWG) June 2025.

## Harden Water Quality

### Summary

**Table 5. Harden Water Quality Compliance**

Sample Type	Sample Count		Number of Characteristics	Number of Non-Compliant Samples	Compliance (%)
Physical	63		4	1	98.41
Chemical	231		35	0	100.00
Microbiological	114		2	0	100.00

## Routine Drinking Water Monitoring Characteristics

Table 6. Harden Chronic health-related Chemical Water Quality Data

Characteristic	Guideline Value		Mean	Maximum	Sample count	Meeting Guideline Value (%)
	Health	Aesthetic				
Aluminium	0.003		0.03000	0.04000	2	100.00
Antimony	0.003		0.00010	0.00010	2	100.00
Arsenic	0.01		0.0010	0.0010	2	100.00
Barium	2		0.03	0.03	2	100.00
Boron	4		0.01	0.01	2	100.00
Cadmium	0.002		0.0001	0.0001	2	100.00
Calcium			21.7	22.9	2	100.00
Chloride	c	250	32.0	34.0	2	100.00
Chromium	0.05		0.0005	0.0005	2	100.00
Copper	2	1	0.025	0.037	2	100.00
Fluoride	1.5		0.615	0.920	2	100.00
Iodine	c	0.15	0.020	0.020	2	100.00
Iron	c	0.3	0.040	0.050	2	100.00
Lead	0.01		0.0005	0.0006	2	100.00
Magnesium			9.8	10.8	2	100.00
Manganese	0.5	0.1	0.01490	0.01860	2	100.00
Mercury	0.001		0.00010	0.00010	2	100.00
Molybdenum	0.05		0.000	0.000	2	100.00
Nickel	0.02		0.00075	0.00100	2	100.00
Nitrate	50		1.00000	1.00000	2	100.00
Nitrite	3		0.05	0.05	2	100.00
pH	c	6.5-8.5	7.4	8.0	59	100.00
Selenium	0.01		0.0010	0.0010	2	100.00
Silver	0.1		0.00025	0.00025	2	100.00
Sodium	Not necessary	180	39.0	42.0	2	100.00
Sulfate	c	250	55.5	58.0	2	100.00
Uranium	0.02		0.00025	0.0	2	100.00
Zinc	c	3	0.02000	0.02000	2	100.00

**Note:** 'c' means there is no health-based guideline value in the Australian Drinking Water Guidelines.

Chronic health-related chemical characteristics are inorganic chemicals that might be present in water and can pose a risk to health with prolonged exposure. The Guideline values for these materials are usually set to protective over a lifetime of exposure. Single results above a Guideline value are unlikely to pose a risk to health and compliance is based on analysing long term trends.

**Table 6a. Harden Acute health-related Chemical Water Quality Data**

Characteristic	Guideline Value		Mean	Maximum	Sample count	Meeting Guideline Value (%)
Copper	2	1	0.025	0.037	2	100.00
Nitrate	50		1.00	1.00	2	100.00
Nitrite	3		0.050	0.050	2	100.00

Acute health-related chemical characteristics are inorganic chemicals that can pose a health risk based on a small number of exposures. High concentrations of copper can cause vomiting. High concentrations of nitrite or nitrate can be risky for bottle-fed babies. The Guideline values for these characteristics have been set to protect people from short-term exposure.

**Table 6b. Harden Physical and Selected Aesthetic Chemical Water Quality Data**

Characteristic	Guideline Value		Mean	Maximum	Sample count	Meeting Guideline Value (%)
Iron	c	0.3	0.040	0.050	2	100.00
Sodium	Not necessary	180	39.0	42.0	2	100.00
Calcium			21.7	22.9	2	100.00
Chloride	c	250	32.0	34.0	2	100.00
Magnesium			9.8	10.8	2	100.00
Total Dissolved Solids (TDS)			269.0	355.0	2	100.00
Total Hardness as CaCO <sub>3</sub>	Not necessary	200	94.0	101.0	2	100.00
True Colour		15 HU	2.75	5.00	2	100.00
Turbidity	c	5 NTU	0.42	1.22	57	100.00

**Note:** 'c' means there is no health-based guideline value in the Australian Drinking Water Guidelines.

Physical and aesthetic chemical characteristics change the way that water appears; its taste, smell, look and feel. These characteristics do not have health guideline values but do affect how people feel about their drinking water.

**Table 7. Harden Microbiological Water Quality Data**

Characteristic	Guideline Value		Mean	Maximum	Sample count	Meeting Guideline Value (%)
E. coli	< 1 MPN/100ml		0.00	0	57	100.00
Free Chlorine	0.2-5 mg/L		0.92	1.82	57	98.25
Total Chlorine	5 mg/L		1.16	2.30	57	98.25

*Escherichia coli*, a bacteria found in the gut of many backboned animals, is an indicator that there has been recent contamination with faeces in a drinking water supply. Chlorine is used widely to kill disease-causing organisms in drinking water. A reasonable residual concentration in the supply provides ongoing protection all the way to customer taps, and gives some indication that filtration is working well and the distribution system has not been compromised.

**Table 8. Harden Per- and Poly-fluorinated alkyl substances (PFAS) testing**

<b>Harden Water (Demondrille Reservoir)</b>			
<b>PFAS Component</b>	<b>Results (µg/L)</b>	<b>Results (ng/L)</b>	<b>ADWG Value/Limit ng/L</b>
PFOA	0.003 ug/L	3	200
PFOS	0.004 ug/L	4	8
PFHxS	0.004 ug/L	4	30
PFBS	0.004 ug/L	4	1000

PFAS is a group of Chemicals commonly used in a variety of consumer products which include food packaging and industrial processes and can be present in soil and water in the Environment.

They can pose a risk to health with prolonged exposure. The Guideline values for these materials are set to be protective over a lifetime of exposure.

As part of Council’s ongoing commitment to provide a continuous drinking water supply that meets the current Australian Drinking Water Guidelines (ADWG), sample analysis for PFAS was conducted on the Harden Water Supply systems in October 2025.

The results of the testing showed that the levels of PFAS in the Harden water supply were well below the new limits set in revised the Australian Drinking Water Guidelines (ADWG) June 2025.

## Young Water Quality

### Summary

**Table 9. Young Water Quality Compliance**

<b>Sample Type</b>	<b>Sample Count</b>	<b>Number of Characteristics</b>	<b>Number of Non-Compliant Samples</b>	<b>Compliance (%)</b>
Physical	78	4	1	98.72
Chemical	405	35	0	100.00
Microbiological	102	2	0	100.00

## Routine Drinking Water Monitoring Characteristics

Table 10. Young Chronic health-related Chemical Water Quality Data

Characteristic	Guideline Value		Mean	Maximum	Sample count	Meeting Guideline Value (%)
	Health	Aesthetic				
Aluminium	0.003		0.03111	0.06000	9	100.00
Antimony	0.003		0.00009	0.00010	9	100.00
Arsenic	0.01		0.0008	0.0010	9	100.00
Barium	2		0.03	0.03	9	100.00
Boron	4		0.01	0.01	9	100.00
Cadmium	0.002		0.0001	0.0001	9	100.00
Calcium			20.7	25.8	9	100.00
Chloride	c	250	30.6	41.0	9	100.00
Chromium	0.05		0.0006	0.0010	9	100.00
Copper	2	1	0.040	0.105	9	100.00
Fluoride	1.5		0.841	0.940	9	100.00
Iodine	c	0.15	0.013	0.020	9	100.00
Iron	c	0.3	0.021	0.040	9	100.00
Lead	0.01		0.0004	0.0006	9	100.00
Magnesium			8.9	12.8	9	100.00
Manganese	0.5	0.1	0.01803	0.04090	9	100.00
Mercury	0.001		0.00013	0.00040	9	100.00
Molybdenum	0.05		0.000	0.000	9	100.00
Nickel	0.02		0.00061	0.00100	9	100.00
Nitrate	50		1.77778	3.00000	9	100.00
Nitrite	3		0.05	0.05	9	100.00
pH	c	6.5-8.5	7.4	8.0	60	100.00
Selenium	0.01		0.0013	0.0035	9	100.00
Silver	0.1		0.00023	0.00025	9	100.00
Sodium	Not necessary	180	37.6	47.0	9	100.00
Sulfate	c	250	53.3	61.0	9	100.00
Uranium	0.02		0.00023	0.0	9	100.00
Zinc	c	3	0.03444	0.14000	9	100.00

**Note:** 'c' means there is no health-based guideline value in the Australian Drinking Water Guidelines.

Chronic health-related chemical characteristics are inorganic chemicals that might be present in water and can pose a risk to health with prolonged exposure. The Guideline values for these materials are usually set to protective over a lifetime of exposure. Single results above a Guideline value are unlikely to pose a risk to health and compliance is based on analysing long term trends.

**Table 10a. Young Acute health-related Chemical Water Quality Data**

Characteristic	Guideline Value		Mean	Maximum	Sample count	Meeting Guideline Value (%)
Copper	2	1	0.040	0.105	9	100.00
Nitrate	50		1.78	3.00	9	100.00
Nitrite	3		0.050	0.050	9	100.00

Acute health-related chemical characteristics are inorganic chemicals that can pose a health risk based on a small number of exposures. High concentrations of copper can cause vomiting. High concentrations of nitrite or nitrate can be risky for bottle-fed babies. The Guideline values for these characteristics have been set to protect people from short-term exposure.

**Table 10b. Young Physical and Selected Aesthetic Chemical Water Quality Data**

Characteristic	Guideline Value		Mean	Maximum	Sample count	Meeting Guideline Value (%)
Iron	c	0.3	0.021	0.040	9	100.00
Sodium	Not necessary	180	37.6	47.0	9	100.00
Calcium			20.7	25.8	9	100.00
Chloride	c	250	30.6	41.0	9	100.00
Magnesium			8.9	12.8	9	100.00
Total Dissolved Solids (TDS)			186.4	224.0	9	100.00
Total Hardness as CaCO <sub>3</sub>	Not necessary	200	88.1	117.2	9	100.00
True Colour		15 HU	0.83	2.00	9	100.00
Turbidity	c	5 NTU	0.73	2.20	57	100.00

**Note:** 'c' means there is no health-based guideline value in the Australian Drinking Water Guidelines.

Physical and aesthetic chemical characteristics change the way that water appears; its taste, smell, look and feel. These characteristics do not have health guideline values but do affect how people feel about their drinking water.

**Table 11. Young Microbiological Water Quality Data**

Characteristic	Guideline Value		Mean	Maximum	Sample count	Meeting Guideline Value (%)
E. coli	< 1 MPN/100ml		0.00	0	51	100.00
Free Chlorine	0.2-5 mg/L		0.87	2.60	51	98.04
Total Chlorine	5 mg/L		1.24	3.70	51	98.04

*Escherichia coli*, a bacteria found in the gut of many backboned animals, is an indicator that there has been recent contamination with faeces in a drinking water supply. Chlorine is used widely to kill disease-causing organisms in drinking water. A reasonable residual concentration in the supply provides ongoing protection all the way to customer taps, and gives some indication that filtration is working well and the distribution system has not been compromised.