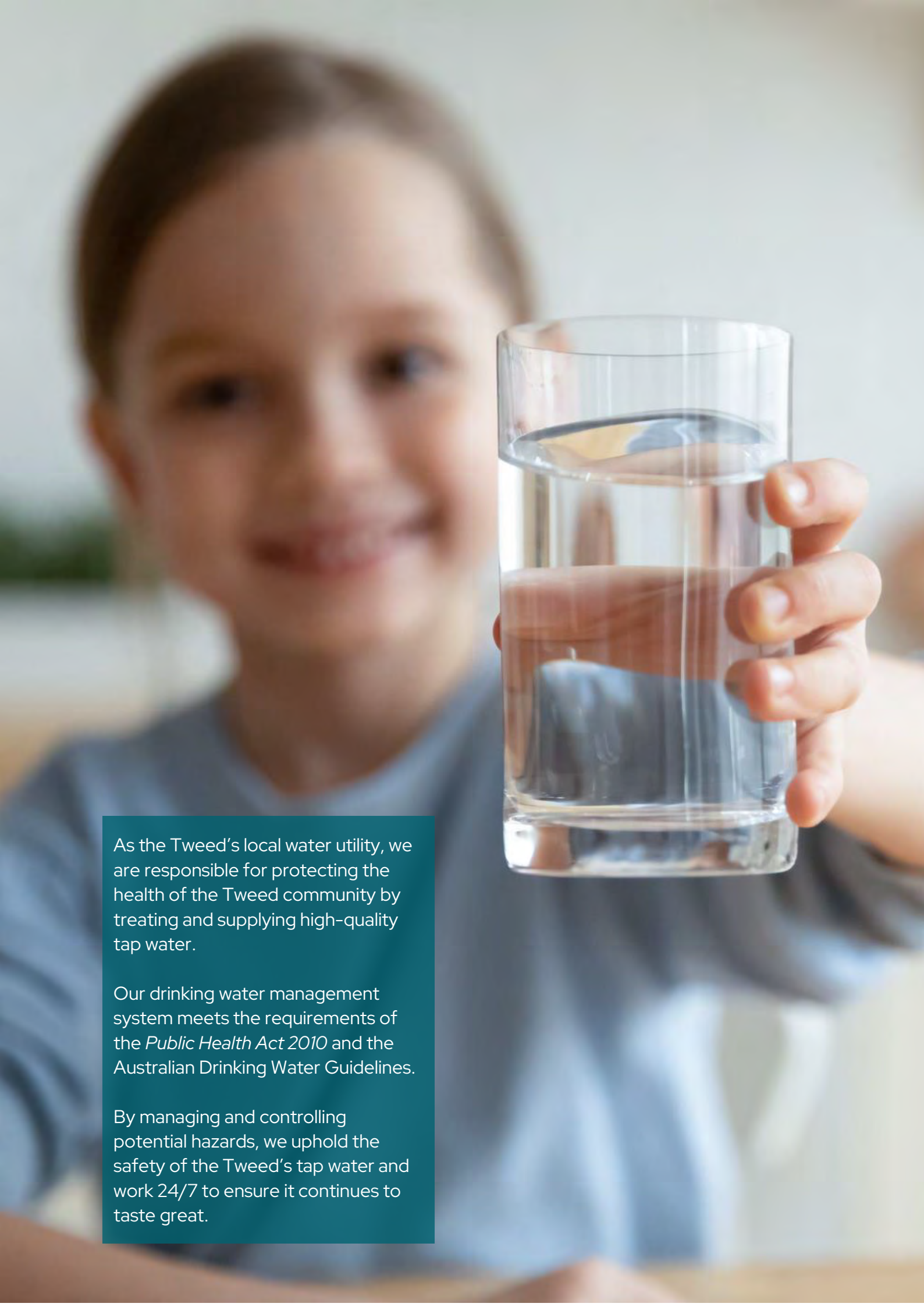


Typical Water Quality Analysis

2023–24

Compared with the Australian Drinking Water Guidelines

A young girl with brown hair, wearing a blue shirt, is smiling and holding a clear glass filled with water. The background is a soft, out-of-focus indoor setting.

As the Tweed's local water utility, we are responsible for protecting the health of the Tweed community by treating and supplying high-quality tap water.

Our drinking water management system meets the requirements of the *Public Health Act 2010* and the Australian Drinking Water Guidelines.

By managing and controlling potential hazards, we uphold the safety of the Tweed's tap water and work 24/7 to ensure it continues to taste great.

Monitoring tap water quality

Tweed Shire Council samples and tests tap water at many locations throughout the Shire including our 3 water treatment plants. Water samples are tested by scientists at the Tweed Laboratory Centre, which is accredited by the National Association of Testing Authorities (NATA), with field testing also performed by trained Council staff.

We take our responsibility for monitoring the quality of the Tweed's tap water seriously. We routinely revise our results and adjust our operations to ensure tap water remains safe to drink.

What do we test for?

We test for a range of physical, chemical and microbiological parameters. The table below summarises these parameters and the 2023–24 test results.

Tap water quality must meet the Australian Drinking Water Guidelines

Set by the National Health and Medical Research Council, the Australian Drinking Water Guidelines (ADWG) set strict standards, which local water utilities throughout Australia uphold every day.

The guidelines set the tone of our tap water quality policy and drive our commitment to supplying quality tap water throughout the Tweed.



Water quality results: 1 July 2023 to 30 June 2024

Measure		ADWG guidelines		Water supply system		
Parameter	Units	Health	Aesthetic	Tweed	Uki	Tyalgum
Physical characteristics *						
True colour	HU	N/a	15	1	1	1.5
Turbidity	NTU	N/a	5	0.2	0.2	0.2
Hardness	mg CaCO3/L	N/a	200	58.5	37	41
Alkalinity	mg CaCO3/L	N/a	N/a	61	49	53.5
Total dissolved solids	mg/L	N/a	600	120	100	83.5
pH	pH units	N/a	6.5 – 8.5	7.3	7.7	7.2
Disinfectants **						
Free chlorine	mg/L	5	N/a	0.7	0.79	0.89
Disinfection by-products **						
Trihalomethanes	mg/L	0.25	N/a	0.074	0.08	0.053
Chemical characteristics **						
Aluminium	mg/L	N/a	0.2	0.01	0.02	<0.01
Antimony	mg/L	0.003	N/a	<0.001	<0.001	<0.001
Arsenic	mg/L	0.01	N/a	<0.001	<0.001	<0.001
Cadmium	mg/L	0.002	N/a	<0.001	<0.001	<0.001
Calcium	mg/L	N/a	N/a	17	10	9
Chloride	mg/L	N/a	250	22	23	12
Chromium IV	mg/L	0.05	N/a	<0.001	<0.001	<0.001
Copper	mg/L	2	1	0.01	0.001	0.04
Fluoride	mg/L	1.5	N/a	1	0.08	0.09
Iron	mg/L	N/a	0.3	0.01	0.01	<0.01
Magnesium	mg/L	N/a	N/a	5.25	4.5	5.05
Manganese	mg/L	0.5	0.1	0.001	0.01	<0.001
Nickel	mg/L	0.02	N/a	<0.001	<0.001	<0.001
Lead	mg/L	0.01	N/a	<0.001	<0.001	0.001
Sodium	mg/L	N/a	180	15	18	13
Sulfate	mg/L	500	250	2.7	2.65	1.45
Zinc	mg/L	N/a	3	0.01	0.01	0.01
Microbiological **						
E. coli	cfu/100mL	0	N/a	<1	<1	<1

N/a indicates not applicable (because there is no published guideline).

ADWG refers to the 2011 Australian Drinking Water Guidelines.

ADWG Health refers to a health-related guideline value that results in no significant risk to customer health over a lifetime of consumption.

ADWG Aesthetic refers to an aesthetic guideline value that's associated with acceptability of water in regard to appearance, taste and odour.

* Median is based on weekly sampling during the 2023–24 financial year at the water treatment plant.

** Median is based on routine sampling during the 2023–24 financial year.





Escherichia coli

Escherichia coli (E. coli) is the primary indicator of faecal contamination of drinking-water, due to its prevalence in the gut of warm-blooded animals. The presence of E. coli in a sample may indicate contamination by pathogens. E. coli is measured as the most probable number of organisms per 100 mL of sample (MPN/100mL). The testing laboratory's limit of reporting for E. coli is <1. We never want to record E. coli in our tap water, and we seldom do. Typically, detections are caused by sampling errors such as accidental contact of a sample container by sources with traces of E. coli.

Fluoride

Following NSW Health policy to prevent tooth decay, we add fluoride to tap water during the water treatment process. The ADWG health guideline for fluoride is 1.5 mg/L. For more information, go to tweed.nsw.gov.au/drinking-water-quality or contact NSW Health.

Chlorine

We add chlorine to tap water as a final disinfection step in the water treatment

process. Chlorine protects against contamination from bacteria that could cause disease. We aim to ensure a residual chlorine concentration throughout the Tweed's tap water distribution systems.

Trihalomethanes

Trihalomethanes (THMs) are disinfection by-products that form when chlorine reacts with naturally occurring organic matter in treated water. The ADWG (2011) health guideline value for THMs is 0.25 mg/L.

Turbidity

Turbidity is a measure of the light scattering properties of water due to the presence of fine particles. Low turbidity is important; higher levels of particles can shield microorganisms from disinfection. Ideally, tap water should have a turbidity of less than 1 NTU (Nephelometric Turbidity Units). The ADWG has set an aesthetic guideline value for turbidity of 5 NTU. No health value has been set.

True colour

Tap water should be colourless. The ADWG has set an aesthetic guideline value of 15 HU (Hazen Units) for true colour. No health value has been set.

Iron and manganese

Iron and manganese in tap water can be responsible for unpleasant tastes and/or staining. The ADWG has set an aesthetic

guideline value of 0.3 mg/L for iron. No health value has been set for iron. The aesthetic guideline for manganese is 0.1mg/L and the health guideline is 0.5mg/L.

Per- and polyfluoroalkyl substances (PFAS) testing results: October 2024

In October 2024, Council screened for PFAS compounds in treated tap water at its Bray Park, Uki and Tyalgum Water Treatment Plants.

The Bray Park Water Treatment Plant supplies the Tweed district, extending from Murwillumbah to Tweed Heads and along the coast south of Pottsville. The Uki and Tyalgum Water Treatment Plants supply the Uki and Tyalgum villages.

Trained Council staff collected the water samples and Sydney Water Laboratory Services, which is accredited with the National Association of Testing Authorities (NATA), conducted the testing.

The laboratory recorded the PFAS testing results at or below the laboratory limits of quantification.

Measure		ADWG ¹ guidelines		Water supply system		
Parameter	Units	Current	Proposed ²	Tweed	Uki	Tyalgum
Per- and poly-fluoroalkyl substances (PFAS)*						
Perfluorooctanoic acid (PFOA)	ng/L	560	200	0.1	<0.1	<0.1
Perfluorooctane sulfonic acid (PFOS)	ng/L	The sum of concentrations of PFOS and PFHxS in drinking water should not exceed 70 ng/L.	4	<0.1	<0.1	<0.1
Perfluorohexane sulfonic acid (PFHxS)	ng/L		30	<0.1	<0.1	<0.1
Perfluorobutane sulfonic acid (PFBS)	ng/L	No current guideline.	1000	<0.5	<0.5	<0.5

* Sampling was undertaken on 22 October 2024.

¹ADWG refers to the [Australian Drinking Water Guidelines](#) .

² The National Health and Medical Research Council (NHMRC) has drafted an updated version of the per- and polyfluoroalkyl substances (PFAS) fact sheet for the Australian Drinking Water Guidelines (ADWG). This includes revised and newly established health-based guideline values. It is expected that the draft guidance material will be finalised and published as part of the ADWG in 2025. Visit [Australian Drinking Water Guidelines](#) for more information.

Next steps in relation to PFAS

Council is working with NSW Health to determine ongoing water quality monitoring activities, including the frequency of PFAS testing, within its tap water supply systems.

Where can I find more information?

tweed.nsw.gov.au/drinking-water-quality

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