

Tenterfield Drinking Water Health Card

Water Quality

A clean water supply is vital to the health and wellbeing of the Tenterfield Township. Water undergoes regular and thorough testing at many points of the treatment and distribution system. Water samples are sent to accredited laboratories to ensure residents have a safe and secure drinking water supply.

Good rains in February meant that the dam overflowed for the first time since December 2017 and continued rainfall in July, August and October 2020 continued rains through January to May 2021 have seen the dam continue to overtop. As a result we have seen an increase in water quality and made the need for pumping water from the bores to be put on hold. The RO plant has been reactivated to continue the testing regime, as laboratories have now opened as COVID-19 still impacts operations.



Figure 1: View of Dam Wall 9 April 2021



Figure 2: Sod Turning New Water filtration Plant Tenterfield Dam 26 May 2021

Tenterfield Drinking Water Health Card

Occasionally you may notice your water is a little different to usual. Read below for our recommended water quality solutions.

- **Discoloured water**

Discoloured or cloudy water

Discoloured or cloudy water is usually because of a change within your water pipes. An increase in water flow rate or swift change in direction of water flow in the pipes can stir up sediment. The sediment makes the water look discoloured but is harmless, and safe to drink.

What to do

To clear up the discolouration try running a garden tap closest to your water meter for around 2 minutes and then see if the water is clear when run into a glass. Remember to catch the running water in a bucket to use on your garden.

If the water doesn't clear, contact us via email Council@tenterfield.nsw.gov.au

White water

When air is trapped inside pressurised water pipes, it is converted to tiny air bubbles which gives water a white or milky appearance. This water is still safe to drink.

Air can enter the water supply causing the discolouration during repairs to the pipe network.

What to do

Catch water in an open container and it will become clear within a few minutes. The bubbles will clear from the bottom of the glass upward

- **Hard water**

Hard water is caused by a higher than usual concentration of calcium and magnesium salts in water. Water hardness levels are monitored on a regular basis in conjunction with Laboratory Services and reported as mg/L (milligrams per litre) of calcium carbonate.

- **Taste or smell of chlorine**

The water is safe to drink. The smell will disappear simply by leaving a jug of water uncovered in the fridge for a short period of time.

- **'Dirty' tasting and smelly water**

The water is safe to drink. If there is an odour or 'dirt' in the water, flush the tap for approximately 1 minute before using. This will flush the pipes out.

Tenterfield Drinking Water Health Card

Tenterfield Drinking Water Health Card

Health Cards will be prepared monthly and will report how our drinking water meets the quality levels set by the Australian Drinking Water Guidelines and NSW Health requirement in key areas.

We test for a range of water quality characteristics, guided by the Australian Drinking Water Guidelines. The guidelines:

- set the standards for good quality drinking water
- outline good practices for operating a water supply system
- help protect public health
- tell us how drinking water should look and taste.

The characteristics are categorised as physical, chemical and microbial.

| Physical | Chemical | Microbial |
|------------------------|---------------------------------------|---------------|
| Turbidity | Free chlorine | Pathogens |
| Total dissolved solids | Inorganic chemicals (dissolved salts) | Cyanobacteria |
| Conductivity | Organic compounds | |
| pH | | |
| Hardness | | |
| Temperature | | |
| Dissolved oxygen | | |
| Colour | | |
| Taste | | |
| Odour | | |

Our Health Card will be reporting on the following items - based on Australian Drinking Water Guidelines (ADWG) and NSW Health

| Characteristics | Unit of measure | ADWG levels |
|------------------------|-----------------|------------------------|
| <i>E. coli</i> | MPN/100 mL | not detected in 100 mL |
| turbidity | NTU | 0.0 to 0.5 |
| true colour□ | HU | 15 |
| pH | pH units | between 6.5 - 8.5 |
| Total dissolved solids | Mg/L | 600mg/L |
| fluoride | mg/L | 1.5* |
| iron | mg/L | 0.3 |
| aluminium | mg/L | 0.2 |
| manganese | mg/L | 0.1 |

| Measures | |
|-------------------|--|
| 1 milligram (mg) | 0.001 gram (g) |
| 1 gram (g) | 1000 milligrams (mg) |
| 1 kilogram (kg) | 1000 grams (g) |
| 1 Litre (L) | 1000 millilitres (mL) |
| 1 millilitre (mL) | 0.001 Litres (L) |
| NTU | Nephelometric Turbidity Units |
| HU | Hazen Units (also referred to as TCU (True Colour Units)) |
| MPN | Most Probable Number (MPN) is a method used to estimate the concentration of viable microorganisms in a sample |

Drinking Water Health Card

Snapshot of Current Drinking Water Health – May 2021

pH - 7.7

- This is a measure of the acidity or alkalinity of your water where 1 is very acidic, 7 is 'neutral', and 14 is very alkaline.
- coca cola has a pH of 1.5; milk is 6.5 to 6.7; antacid (eg gaviscon) range 9.0 - 11.0

Electrical Conductivity - 187 μ S/cm

- EC is an electrical way of measuring salts

Total Dissolved Solids (TDS) - 120 mg/L

- Total dissolved solids (TDS) consist of inorganic oxides and chlorides .

TURBIDITY - 0.26 NTU

- the cloudiness of water caused by the presence of fine suspended particles

Iron - 0.01 mg/L

- Iron occurs commonly in soil and rocks as the oxide, sulfide and carbonate minerals. In water, it is present in oxidised forms (rust) as ferric or ferrous compounds. Occurs naturally in water, usually at <1 mg/L, but up to 100 mg/L in oxygen-depleted groundwater. Taste threshold 0.3 mg/L. High concentrations stain laundry and fittings

Manganese - 0.0005 mg/L

- Based on aesthetic considerations, the concentration of manganese in drinking water should not exceed 0.1 mg/L, measured at the tap. Manganese would not be a health consideration unless the concentration exceeded 0.5 mg/L.

Aluminium - 0.022 mg/L

- Aluminium may be present in water through natural leaching from soil and rock, or from the use of aluminium salts as coagulants in water treatment. No health-based guideline value can be established currently. Aluminium is a component in a flocculation aid.

Colour (Apparent) - 7

- 'True colour' is the colour after particulate matter has been removed (usually by filtration through a 0.45 micrometer pore size filter). In major Australian reticulated supplies true colour ranges from 1 HU to 25 HU for filtered or fully treated supplies, and from 1 HU to 85 HU for unfiltered supplies. eg Lake Ainsworth is an example of coloured water from tea trees

Fluride - 0.088 mg/L

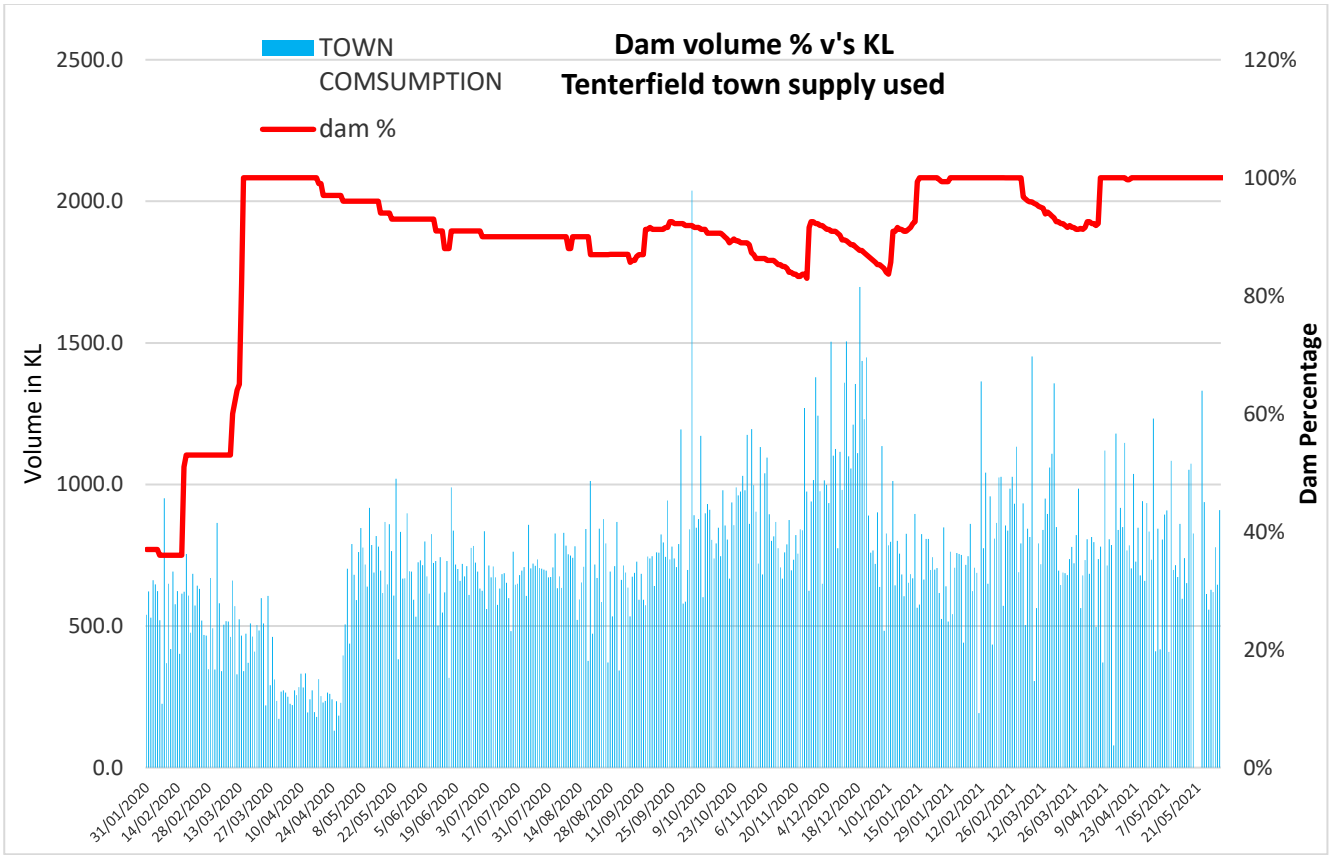
- Occurs naturally in some water from fluoride-containing rocks. Often added at up to 1 mg/L to protect against dental caries.
- Tenterfield has a naturally occurring fluride levels in our bore water of 2.2. we reduce these levels for public consumption

Escherichia coli (E. coli) (pathogenic) - <1 MPN/100mL

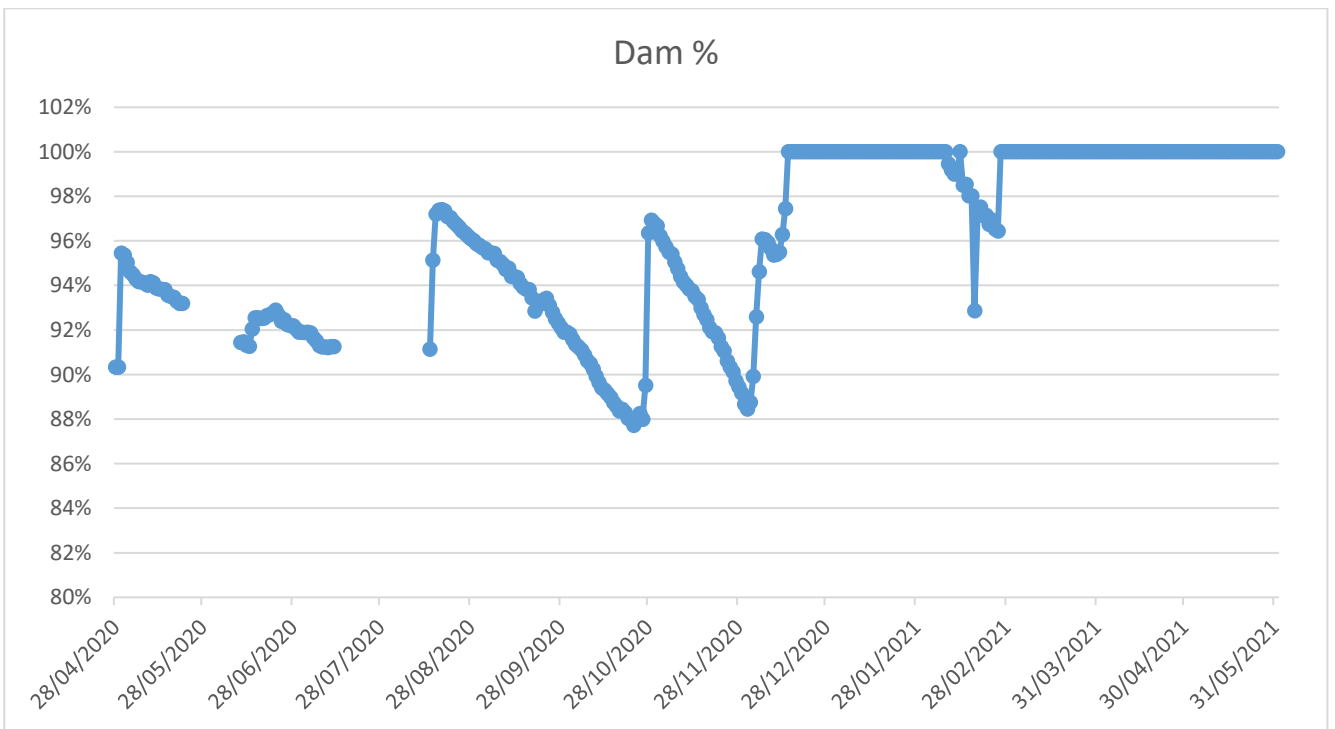
- Escherichia coli (abbreviated as E. coli) are bacteria found in the environment, foods, and intestines of people and animals.
There have been no reported outbreaks of waterborne disease associated with pathogenic E. coli in Australia. Protecting source waters from contamination by human and livestock waste will reduce the potential presence of pathogenic E. coli.

Drinking Water Health Card

Water Storage and Usage



Graph 1 Dam % Levels and Consumption



Graph 2 New Data logger Dam % Graph

Drinking Water Health Card

Feedback

Residents are welcome to report any feedback or changes to their water appearance or quality by emailing council@tenterfield.nsw.gov.au

Links:

[Australian Drinking Water Guidelines](#)

[NSW Department of Industry supports local utilities \(Councils\) in providing water supply and sewerage services](#)

Internal Documents:

The following documents can be found on Council's Internet Page –

[Water Supply \(includes Water Restrictions\)](#)

[Drought Management Plan](#)

[Water Conservation & Demand Management Plan](#)