



What is our aim?

Essential Water is committed to providing safe, secure, reliable and high quality water to our customers.

How do we test water quality?

Water samples are taken from 38 locations including the reservoirs, at the inlet and outlet of water filtration plants, and from various other locations throughout our water network. Independent laboratories certified to the National Association Testing Authority (NATA) standards carry out all testing, and the results are reviewed by NSW Health.

In the attached table you will find a summary of the test results for samples collected from locations throughout our network over the last 12 months.

What is tested?

Your water is tested for up to 70 different characteristics including taste, colour, odour, micro-organisms and chemical content. In this report you will find a summary of a selection of health characteristics, chosen in consultation with NSW Health, and key aesthetic characteristics.

What are the water guidelines we must meet?

Australian Drinking Water Guidelines (ADWG) are set by the National Health and Medical Research Council (NHMRC) and the Agriculture & Resource Management Council of Australia and New Zealand (ARMCANZ). In 2004 the guidelines were revised in consultation with the community, health agencies, water suppliers and regulators.

The role of Essential Water is to ensure that safe drinking water is supplied to meet all guidelines.

Information sourced from National Health and Medical Research Council.
www.nhmrc.gov.au/publications/synopses/eh19syn.htm

We're here
to help.

Essential Service Centre

Broken Hill
160 Beryl Street

Drinking Water

Quality Report

EWX0078.FEB12

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essentialwater.com.au

Essential Energy trading as Essential Water



What are the results?

Water Quality Test Results – 1 January to 31 December 2010



Australian Drinking water Guidelines (ADWG)	Microbiological	Physical/Chemical																	
ADWG Guidelines Performance Criteria (for assessment over 12 month period)	E.coli	Fluoride	Chlorine	Turbidity	True Colour	Iron	Lead	Arsenic	Total Dissolved Solids										
At least 98% of results contain no E.coli	At least 95% of results 0.9 to 1.5mg/L	At least 95% of results less than 5mg/L	At least 95% of results less than 5NTU	At least 95% of results less than 15HU	At least 95% of results less than 0.3mg/L	At least 95% or results less than 0.01mg/L	At least 95% of results less than 0.007mg/L	Less than 500mg/L is rated as good. Less than 800mg/L is rated as fair.											
Health - (H), Aesthetic - (A)	(H)	(H)	(H)	(A)	(A)	(H)	(H)	(H)	(A)										

Actual Test results for 12 months from 1 January 2010 to 31 December 2010

Customer Supply System	All parameters comply	% of results complying	Number of samples taken	% of results complying	Number of samples taken	% of results complying	Number of samples taken	Average test result (NTU)	Number of samples taken	Average test result (HU)	Number of samples taken	Average test result (mg/L)	Number of samples taken	Average test result (mg/L)	Number of samples taken	Average test result (mg/L)	Number of samples taken	Average test result (mg/L)	Number of samples taken
Broken Hill	✓	100	117	100	12	100	107	0.25	13	1	12	0.01	12	0.002	12	0.001	12	184	12
Menindee	✓	100	47	100	11	100	47	0.15	2	2	2	0.02	2	0.002	2	0.002	2	285	2

What do these results mean?

Essential Water's assessment, based on our water quality test results for this period, indicates that drinking water quality has again complied with the health related guideline values in the ADWG, as well as the aesthetic guideline values in the ADWG.

What are the health and aesthetic aspects that were tested?

You will find in this brochure an outline of a selection of both aesthetic and health characteristics that were tested in the process of assessing the quality of drinking water.

Naegleria fowleri

Naegleria fowleri was not detected in any of the samples taken of the drinking water during the period 1 January to 31 December 2010. Naegleria fowleri is an organism that lives naturally in fresh water and breeds when water temperatures are high. It is regularly detected during the summer months in South Australia, Western Australia and Northern Territory.

During the summer months, in various locations of both the drinking and untreated water reticulation network, between 10 and 20 weekly water samples are routinely taken for Naegleria fowleri. These samples are analysed at an independent laboratory in Adelaide, the Australian Water Quality Centre.

If water containing this organism is forced up the human nose, there is a remote chance it can cause a rare disease called Primary Amoebic Meningoencephalitis (a form of meningitis). Even if contaminated water does go up the nose, the chance of contracting meningitis is extremely low – about one in 10 million. You cannot get this disease by drinking water, however precautionary measures are taken to avoid growth of the organism.

Escherichia coli (E.coli)

E.coli is used as a scientific indicator of the quality of drinking water and of the possible presence of disease causing micro-organisms. They are measured in Organisms/100mL and none were detected in the drinking water this period.

Fluoride

In accordance with legislation, small amounts of fluoride are added for dental health reasons. It is measured in milligrams per litre (mg/L) and fluoride levels were maintained within the required health range for drinking water.

Chlorine

Chlorine is added to water to kill bacteria that may cause disease, which helps to ensure good quality drinking water. We test for the residual level of chlorine that needs to be present to make sure that water is disinfected all the way to your tap. The chlorine levels for the entire period were maintained to the health guideline value for 'free' chlorine of 5 mg/L.

Turbidity

Turbidity is a measure of suspended material in water that may cause it to look muddy or discoloured. It is measured in Nephelometric Turbidity Units (NTU) and the average figure reported was well under the aesthetic guideline.

True Colour

Water should be virtually colourless. It is measured in Hazen Units (HU) and the average figure reported was significantly lower than the aesthetic guideline.

Iron

Iron can be present at low levels in the water and may be responsible for taste and staining problems. It is measured in milligrams per litre (mg/L) and the average figure reported was also well under the health guideline.

Lead

Lead can be present in drinking water as a result of dissolution from natural sources, or from household plumbing systems containing lead. The amount of lead dissolved in the water depends on several factors including pH, water hardness, and standing time of the water. Lead is measured in milligrams per litre (mg/L) and was significantly lower than the health guideline.

Arsenic

Arsenic is a naturally occurring element which can be introduced into water through the dissolution of minerals and ores, or from industrial effluent, atmospheric deposition (through the burning of fossil fuels and waste incineration), or the use of some types of sheep dip. It is measured in milligrams per litre (mg/L) and the average figure reported was well under the health guideline.

Total Dissolved Solids (TDS)

Total Dissolved Solids (TDS) consists of inorganic salts and small amounts of organic matter that are dissolved in water. It is measured in milligrams per litre (mg/L) and the average figure reported was well under the aesthetic guideline.