

Discoloured water

Discoloured water is a change in the appearance or the colour of your water – usually to a brown or yellow colour.



This discolouration is mostly caused by trace elements within the water such as iron and manganese. When these materials enter the water supply system they are in extremely low levels, however they can accumulate in the pipes and when there are changes in flow conditions the water can become discoloured.

Discoloured water

Discoloured water occurs occasionally in all water supply systems. It is most commonly caused when there is a sudden increase or change in direction of water flow through pipes. Operational incidents, such as burst water mains, or use of fire hydrants are examples of events that cause this discolouration.

Harmless deposits of iron and manganese that have accumulated within the water main over a period of time are disturbed and suspended in the water, giving it a discoloured appearance. Although unsightly, the suspended particles are harmless to health and the water is safe to drink.



Manganese

Typical of most rivers and streams, the Tweed Catchment has low levels of soluble manganese ranging from 0 to 0.05 mg/L. However, at concentrations as low as 0.02mg/L manganese will form manganese oxide sediments in pipes. Some nuisance organisms that typically exist in distribution systems can also concentrate manganese in the biofilm that lines the pipes. Disturbance of the manganese deposits results in a yellow-brown colour in the water and sometimes an undesirable taste. It may also cause the staining of plumbing fixtures and laundry.

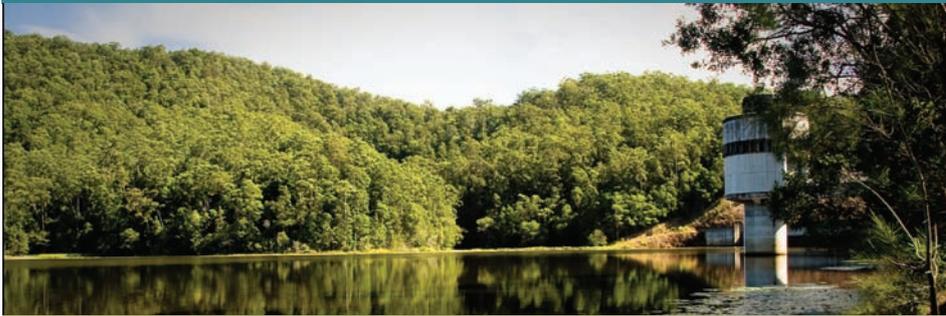
Manganese is regarded as a nuisance rather than a toxic component of drinking water. Although unsightly it is harmless to health and the water is safe to drink. The Australian Drinking Water Guidelines (ADWG) has an aesthetic guideline of 0.1 mg/L for manganese and a health guideline of 0.5mg/L.

If manganese is removed from the water to concentrations below 0.02 mg/L then the build up of deposits in the distribution system is greatly reduced. Manganese removal requires chemical oxidation from the soluble form to the insoluble manganese oxide. Once in the oxide form the particles are easily removed by filtration, however soluble manganese is poorly removed by filtration methods. At Bray Park Water Treatment Plant the raw water soluble manganese concentration is measured at least daily and the required quantity of the oxidant Potassium permanganate is dosed prior to filtration. The filtered water is then checked for the target concentration of less than 0.015 mg/L. This is well below the aesthetic guide in the ADWG.



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Commonly asked questions about discoloured water



What causes discoloured water?

Discoloured water is caused by a build-up of deposits that settles in pipes. It may also occur when flows increase due to burst water mains or where operational changes reverse the flows in water mains. In the Tweed the deposits may compromise manganese and iron which gives the water a yellow/brown colour and may stain plumbing fixtures and clothing.

What should I do if I experience discoloured water?

If you experience discoloured water, it is usually only a temporary situation. We advise you to run the garden tap closest to your water meter into a bucket for two minutes to see if it clears. If it doesn't clear, please call Council on 02 66702400 or 1800 818 326 after hours.

Is discoloured water safe to drink?

Yes. Although unsightly, the suspended particles that cause discoloured water are harmless to health and the water is safe to drink. Council has a comprehensive monitoring and testing program to ensure the safety of the drinking water. Regular water samples are collected and tested from water sources, treatment plants and pipe networks. These tests look at microbiological and chemical levels that can affect customers' health, as well as aesthetic quality levels that can affect the taste and colour of water.

What can I do if it stains my laundry?

The staining of your laundry from discoloured water is due to particles of sediment lodged in the fabric. The stain usually only becomes permanent if the laundry is allowed to dry. It is therefore essential to keep stained laundry immersed in water and call Council for a Cleaning Kit. Do not use bleaching agents. They will only fix the stain and make it worse.

What if I have milky or white coloured water?

Water that is milky or white in colour is the result of small air bubbles within the water. This is usually caused by air becoming trapped in the pipes after repair work to water mains. This water is harmless and left in a container on the bench, the air will quickly dissipate and the water will become clear.



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