



Discoloured water

Frequently Asked Questions

Note: The complex nature of this issue requires a thorough explanation which has resulted in the length of the document.

What causes discoloured water?

Water can become discoloured for a number of reasons including (but not limited to):

- Ground water source - all water contains natural minerals. The levels of minerals such as iron and manganese can fluctuate depending on the groundwater source location. Iron and manganese are safe minerals at concentrations found in our source water areas, although they can discolour water.
- System design - water supply systems where houses are located at the 'dead end' of water main lines can build high levels of iron and manganese. These systems require regular flushing to ensure the buildup of minerals that cause discoloured water are removed.
- Aging infrastructure - old pipelines can have a buildup of minerals in them causing discoloured water.
- Water supply demand - low water supply demand in water mains can cause discolouration due to the length of time the water has contact with a buildup of minerals, such as iron and manganese, in the pipe line. High demand periods can cause mineral deposits to be stripped from the lining of the pipe and transported to downstream connections, resulting in discolouration.
- Water mains failure - water main failure can push surrounding soil material into the water supply causing dirty water.

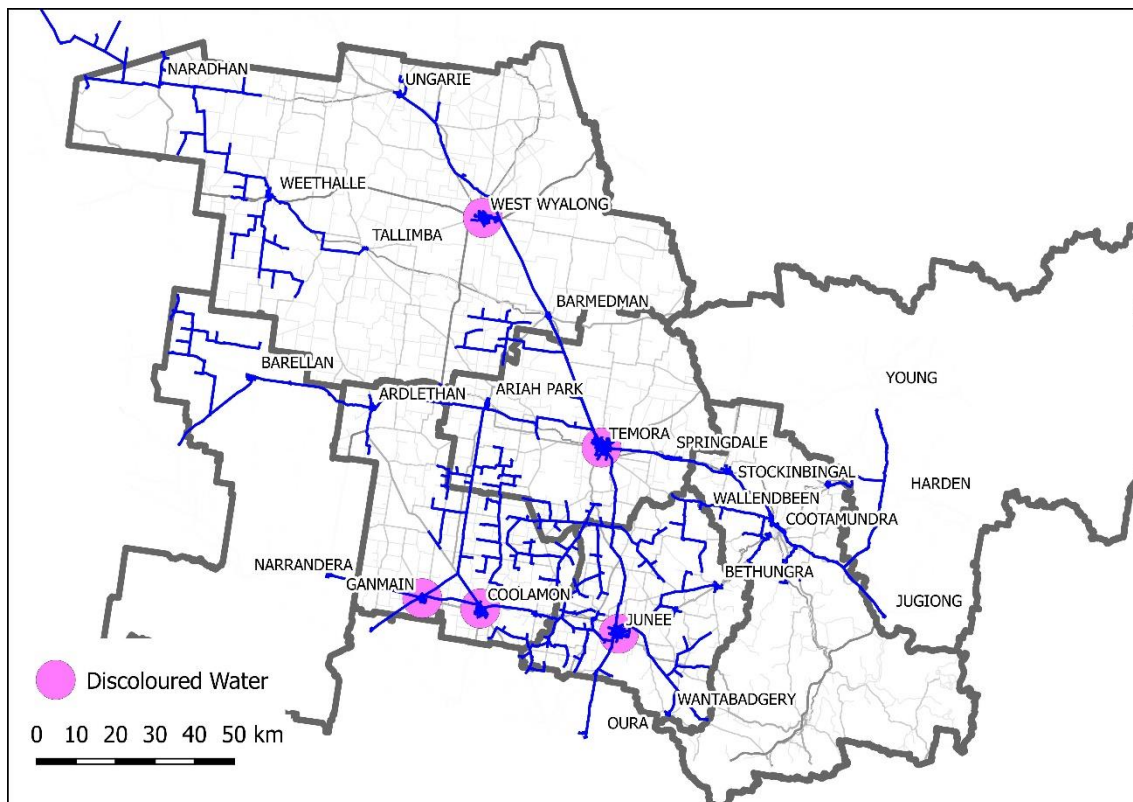
- Electricity supply failure – can cause ‘crash stopping’ of pumping equipment. This can result in stripping of pipeline deposits from the pressure surge.
- Galvanised materials - water pipes on private properties were historically made from galvanised steel. These old materials can cause discoloured water. In these cases Goldenfields Water recommends customers replace galvanised materials with copper or polyethylene which have been certified for drinking water.

Who/what areas are affected?

Anyone connected to a water supply system can be affected by discoloured water. Historically, Goldenfields Water experiences an increase in reports of discoloured water in the Oura and Mount Arthur water supply schemes covering areas such as Junee, West Wyalong, Temora, Coolamon and Ganmain. This is mainly due to the groundwater source having high and fluctuating levels of iron and manganese.

In these areas, service disruptions due to discoloured water can be an isolated issue with most affected customers located at the 'dead end' water main or downstream from a water mains failure where discoloured water travels to the customer. These locations may require regular flushing which is varied based on seasonal water demand, age of infrastructure and varying levels of iron and manganese in the groundwater source water.

See map below



Is discoloured water safe to drink, bath in?

As regulated under the Australian Drinking Water Guidelines, discoloured water is deemed as an aesthetic matter rather than a public health compliance matter. This means discoloured water is generally not a risk to the public. If you have discoloured water, run at least two taps for two to three minutes to see if the water clears. Outdoor taps are recommended as the water can be used in gardens or on grass. If the water does not run clear in a reasonable amount of time, call Goldenfields Water on 02 6977 3200 (9am and 4.30pm Monday to Friday). In case of an emergency or after hours, call 1800 800 917 (24 hours a day, seven days a week).

Should I drink bottled drink water instead of discoloured water?

Goldenfields Water highly recommends using public water supply. All NSW Local Water Utility water supply systems are heavily regulated by NSW Public Health to ensure the water supply is safe and fit for consumption.

Goldenfields Water can supply you around 1000L of drinkable water to your tap for the price of 0.5L of bottled water.

While discoloured water can cause disruptions to customers, the cost of access and supply provides a greater benefit to all communities within Australia.

What testing is done on discoloured water?

Every time Goldenfields Water receives and attends to a discoloured water report, a staff member will investigate the water quality to ensure its compliance under the Australian Drinking Water Guidelines. The staff member will disconnect the property's water meter and flush the water main. A water sample is collected to view the level of discolouration and to test for a chlorine residual, which identifies the presence of chlorine to maintain water supply disinfection from potential contaminants such as microorganisms.

If a chlorine residual of less than 0.2mg/L is identified, an additional sample will be collected and taken for further laboratory testing. The main will be flushed for a longer period until the water clears and re-tested for a chlorine residual.

How long will discoloured water last?

Discoloured water can re-occur depending on property location and its proximity to a water main failure if one occurs. When discoloured water appears, it will generally run clear after a few minutes.



Can discoloured water issues be permanently fixed?

Discoloured water will always be an issue for Local Water Utilities, given the significant variation of causes.

Recurring discoloured water can be minimised by:

- Customers replacing old galvanised water pipes
- Water utilities replacing old water infrastructure such as water mains
- Water utilities improving system designs and operations
- Water utilities installing or upgrading source water treatment systems

Source water treatment systems will significantly reduce the frequency of discoloured water reports that relate to increased levels of iron and manganese. These facilities are usually multi-million dollar projects and can have a significant impact on a customer's typical residential bill if implemented.

What should I do when discoloured water appears?

Run at least two taps for two to three minutes to see if the water clears. Outdoor taps are recommended as the water can be used in gardens or on grass. If the water does not run clear in a reasonable amount of time, call Goldenfields Water on 6977 3200 (9am and 4.30pm Monday to Friday) to report the discoloured water as soon as the incident occurs. Goldenfields Water staff will take your name, location, phone number and account number if known. Staff will attend the property reported to flush the water meter and/or nearby water mains and investigate the issue.

In case of an emergency or after hours, call 1800 800 917 (24 hours a day, seven days a week).

How do we contact Goldenfields Water in an emergency, after hours or on public holidays?

In an emergency or after hours, call Goldenfields Water on 1800 800 917 (24 hours a day, seven days a week). Staff will attend the property to flush the water meter and/or nearby water mains and investigate the issue.



What action is Goldenfields Water taking for discoloured water issues?

Goldenfields Water undertakes a number of programs to help alleviate the frequency of discoloured water including:

- Water mains replacement
- Changing the layout of the water system such as removing 'dead ends' where possible
- Regular flushing and swabbing programs (swabbing is another type of flushing)
- Reservoir cleaning. Goldenfields Water has inspected and contracted reservoir cleaning services to specialised industry contractors. In the past two years more than 120 reservoirs have been inspected, cleaned and had their condition checked
- Continual monitoring, investigation and feasibility assessments are undertaken to seek new technological advances for water quality improvement

How often does Goldenfields Water flush their water mains?

Goldenfields Water undertakes preventative flushing of the water mains in effected towns twice a year at the start of winter and before summer to help alleviate discoloured water during peak seasonal demand. We flush the pipes at these times as less water is being used. During high demand periods, these deposits can be stripped from the lining of the pipe and transported to downstream connections.

Goldenfields Water also undertakes reactive flushing works when a service disruption has occurred. This flushing can take place 24 hours a day, seven days a week.

What compensation does Goldenfields Water provide for damaged laundry (also outlines procedure for claims)?

It is recommended you don't wash white laundry in discoloured water due to the risk of stains.

Damaged laundry must be reported as soon as it occurs. Reports can be made to Goldenfields Water on 02 6977 3200 (9am and 4.30pm Monday to Friday) or 1800 800 917 (24 hours a day, seven days a week). Goldenfields Water staff will attend the property to check, flush and test the water and complete a damaged goods report with the customer. Staff will offer laundry detergent should the customer want to rewash the laundry. If they decline to rewash the customer will be advised to:

- buy replacements for damaged goods listed
- sign the release form
- provide itemised receipts to Goldenfields Water via email, post or in person

The customer will then be issued a cheque for the damaged items listed on the report.



If the customer chooses to rewash and the stains remain, they must contact Goldenfields Water. At this stage the damaged goods report will be reviewed and if approved by Goldenfields Water, the customer will be notified via a letter and sent a release form. The letter requests:

- the customer buy replacements for damaged goods listed
- sign the release form
- provide itemised receipts to Goldenfields Water via email, post or in person

The customer will then be issued a cheque for the damaged items listed on the report.

Are there circumstances where Goldenfields Water isn't responsible for water discolouration?

There are cases where water discolouration is caused by water pipes on customer's private properties. These usually occur due to galvanised pipes or soil material entering broken pipes. In these cases, water supply arrives to the property's water meter clear, but comes out of the taps discoloured after passing through the galvanised pipes. The exact cause of the water discolouration is determined on a case-by-case basis.

See image below of a galvanised pipe.



Do other water suppliers experience the same issue?

Every Local Water Utility in Australia and overseas experiences water discolouration. The frequency can vary due to water source, treatment technologies, age of infrastructure and system design.



How do I stay up to date with news on discoloured water?



Visit the Goldenfields Water website at www.gwcc.nsw.gov.au



Visit the Goldenfields Water Facebook page at www.facebook.com/GoldenfieldsWater

For more information call Goldenfields Water on **6977 3200** (9am and 4.30pm Monday to Friday) or email office@gwcc.nsw.gov.au

