

Drinking Water Quality Frequently Asked Questions

Discolored or "Dirty" Water

From time to time, water customers in Boulder may experience a temporary red or brown coloration to their tap water. Most often, the cause of this discolored water is due to occasional sloughing of common iron rust from the inner surfaces of drinking water pipes.

Where is the rust coming from? What is the city doing about it?

Sometimes, city pipes shed rust. Areas of town most susceptible to rusty water are the older parts where unlined cast-iron pipes are still common. The city is replacing these with corrosion-resistant pipes over time, but there are some still left. Residential plumbing can also cause rusty water if galvanized steel fixtures are present.

What causes a rusty water "event"?

Any occurrence that causes a change in water pressure in the city's drinking water distribution system may dislodge rust. Such occurrences can be caused by the use of fire hydrants, construction projects, heavy water use in particular areas, or water being temporary shut-off and turned back on for emergencies like a water main break.

What can customers do to make rusty water go away?

Running several taps with cold water at full force for a short period may help flush the rusty water out of your system. A general recommendation is to run the taps for 20 minutes. If the water is not clear, wait for half an hour before running them for 20 minutes again. To conserve water, you may collect it and use it on plants or landscaping. If the water still hasn't cleared at that point, contact the Drinking Water Program at 303-413-7400.

It is recommended to not do laundry during a rusty water event, as the rust can stain clothing. Also, avoid using hot water to prevent sediment from entering a hot water heater.

Is rusty water safe to drink?

There are no known health hazards associated with rusty water. However, due to unpleasant taste, it is recommended that water users wait until the water has cleared before drinking it.

Is there anything else the city is doing to solve this problem long term?

Yes. The city is currently implementing corrosion control treatment at its drinking water plants. This treatment will provide some relief from rusty water. In addition, the Drinking Water Program staff enters all rusty water complaint calls into a database. This information is used by the city's engineering staff in efforts to prioritize areas of town for pipe replacement. City pipe replacement efforts are underway.

White Flakes or Chunks in Drinking Water

What are the white flakes that float in my water?

The Drinking Water Program sometimes receives calls from customers concerning white material that plugs up their aerators on their faucets, the screens for their clothes and dishwashers and other water using appliances.

The most likely source of this problem is the part of the property's hot water heater called a dip tube. The dip tube is located on the cold water inlet of the hot water heater and is made from polypropylene (plastic). This particular part, when defective, will disintegrate and form white flakes

or chunks. This problem has occurred nationwide and affects many different brands of hot water heaters. The manufacturers are now making this part with a Cross-Linked Polyethethylene (PEX) material.

To determine if your dip tube is the problem, you can perform this experiment:

- Take the aerator off your kitchen faucet and place a pan or container under the faucet or a stopper in the sink drain.
- Turn on the cold water and let it flow. You may see some initial flakes but it should clear up after a minute or two. Turn the cold water off. Empty the pan or drain the sink and make sure there are no flakes in it. Replace the pan or stopper under the faucet.
- Turn the tap water on hot on full flow and observe to see if the flakes continue to appear. If the problem is your hot water heater dip tube, you should see some more white flakes appear or increase in the hot water.
- When these flakes are dry, they can be flame heated slowly in a spoon. They should melt into a small shiny looking glob. Careful: don't let it catch on fire, it will smell like burning plastic. You can also place these flakes in vinegar. There should not be any reaction (foaming) and the particles will float in the vinegar.

If after performing these experiments, you are not sure of your results, you can call the Drinking Water Program at 303-413-7400 for more assistance. The Drinking Water Program does maintain a database of water quality complaints. If you would like to have your incident added, please call us with the information listed below.

How do I get rid of this or get it fixed?

The Drinking Water Program recommends that first you gather some important information from your hot water heater:

- Manufacturer;
- Model;
- Serial number;
- Age of unit; and
- Owner's manual or any warranty documents.

If you know who installed the unit or where it was purchased from, call them first and request a warranty service on your unit. If your hot water heater is still under warranty (check your owner's manual), the manufacturer may provide assistance in replacing defective parts. Check your owner's manual for an 800 phone number.

Fizzy Milky-Looking Water

Why is my water fizzy?

In Boulder, the most common cause of milky-looking or gray-colored water is dissolved air in the water. This condition is due to Boulder's unique, high-altitude water system, which combines a steep, turbulent drop in elevation with cold water that is already naturally saturated with dissolved gasses. This results in a sometimes milky-looking water at the tap, which is just air bubbles. Effervescence such as this is most noticeable in the winter and early spring months, though it can occur at any time of the year.

Cold water from the mountains can be supersaturated with dissolved air as it enters the water treatment plants. As the water is sent to Boulder, it is pressurized above 150 pounds per square inch.

When this water enters your home and warms to room temperature, the dissolved gasses comes out of the water as tiny air bubbles.

To determine if tiny air bubbles are causing your water to look milky, you can do the following experiment:

1. Fill a clear glass with cold water and set it on a counter top or table
2. Watch and see if the milky-looking substance rises to the top of the glass
3. Within a few minutes most of the tiny bubbles will move to the surface of the water and the water should look clear. If so, it was only air bubbles.

If you have additional questions, please call the Drinking Water Program at 303-413-7400.