

COMMON DRINKING WATER ISSUES

GUIDANCE

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) has developed this document to aid you in identifying the most common drinking water quality issues and what might be causing them, for customers of *public water supplies*.

BASIC CONSIDERATIONS

To help determine the potential cause of a water quality issue, ask the following questions:

- Does the problem occur all the time, periodically, or seasonally?
- Does the problem occur at some or all inside taps?
- Does the issue occur only when you first turn on the water or does it occur continuously?
- Does the issue occur with just cold water, hot water, or both?
- Have you had any recent work done on your drinking water plumbing and faucets?

ISSUE

TASTE AND ODOR

Earthy / Musty / Fishy / Moldy

These odors can be caused by algae blooms in source water and are typically a short-lived, seasonal event. Contact your water supply officials.

Sewage Odor

If you experience this odor seasonally, it may be due to agricultural runoff. If this odor is present all the time, the odor may be coming from the sink's drain instead of the water. This is due to the running water stirring up the odor into the air. The odor could also be coming from the hot water. Hot water can have a foul odor when bacteria grow on the magnesium rod in the water heater tank. If you are worried about harmful bacteria being present in your water you could contact your water supplier, your local health department, and/or the Department of Environment, Great Lakes, and Energy.

Sulfur / Rotten Egg Odor

If you experience this odor **mainly with hot water**, there may be bacteria in the tank of your water heater causing hydrogen sulfide gas. The odor may be associated with the magnesium rod in the hot water tank. If this is the case, replacement rods and rods with different material than magnesium can be installed to help correct the issues causing the smell. Contact a licensed plumber for further assistance.

If you have a private well and are experiencing a sulfur/rotten egg odor with both hot and cold water, there may be iron bacteria creating hydrogen sulfide gas. Disinfection of the well may be needed. To get your well checked or disinfected, contact a well driller to help you. [A list of licensed well drillers](#) can be found at Michigan.gov/DrinkingWater (under Water Well Construction).

Chlorine / Bleach Odor

If you experience this odor all the time, or periodically, it may be caused by the use of disinfectant in the drinking water. Chlorine is a common disinfectant used in public water supply systems to reduce or eliminate bacterial growth. When drinking water has a chlorine odor that makes it smell like bleach or a swimming pool, it is usually due to over-chlorination. When the right amount of chlorine is added, the average person cannot smell or taste chlorine in the water. Contact your water supply officials for more information.

Stagnant / Stale Taste and Odor

If you experience this issue all the time, or periodically, you may be in a low flow, dead end area of a water supply system and fresh water may not be replenished at an ideal rate. Contact your water supply officials about a flushing routine.

Plastic Odor and Taste

If you experience a plastic odor and taste in your water, this could be due to PEX or other plastic plumbing materials present in your plumbing. A test for volatile organic compounds can help confirm if these plumbing items are the cause.

COLOR OR APPEARANCE

Cloudy / Milky / White or Gray Water

If you experience cloudy or milky, white or gray water that clears after the water sits for a few minutes, then the cloudiness is likely tiny air bubbles escaping from the water. These air bubbles can get into the water in many ways, but the most common is due to the aerator, or screen, on the faucet which is designed to conserve water and reduce splashing of water out of the sink.

If the cloudiness does not settle, and leaves a film on dishes, faucets, etc., then the cloudiness may be from naturally occurring minerals such as calcium or magnesium in the water. When these minerals are present in large amount in the water, then the water is typically considered to be “hard water.” Other issues you may notice with hard water include a film or rainbow-like color on top of coffee or tea, or white deposits that form at the ends of faucets and shower heads.

Sediment / Sand in Water

If you experience this issue only when using hot water, then your water heater may be contributing to this problem. Has the water heater been flushed in the last 1-5 years? Follow your water heater’s manufacturer’s guidance for routine maintenance instructions including routine flushing for sediment removal.

If you experience this issue when using cold water only, contact your water supply officials to see if any routine flushing of the system or water main breaks have occurred. When these activities occur, particles can be dislodged from the inside of the pipes and find their way to customers’ faucets. Flushing and cleaning out the plumbing will remove the debris from the plumbing. Residential home flushing information can be found [here](#). Please note that this guidance is written for when water service is restored to a home although it is still good guidance when trying to clean out debris from your plumbing system.

Red, Brown, or Yellow Water

If you experience this issue all the time, it could be caused by naturally occurring iron in groundwater. Older galvanized plumbing in your home and cast iron mains in the system may also contribute to the issue. Contact your water supply officials to see if they have any more information. There are several options available to treat your water for iron removal. Contact your local plumber or treatment company for further assistance.

If you experience this discoloration for just a short period of time, it could be because your water system performed a routine cleaning of the water mains or because of a recent water main break. Contact your water supplier for more information.

Blue or Green Water

Copper plumbing can cause blue or green water. If your copper pipes are experiencing severe corrosion the result is oxidized copper, which is a blue or green color. Have you had new copper plumbing recently installed? New plumbing can take a little time to become acclimated to the drinking water. During this “break in” period, higher levels of copper can find their way into the drinking water. Flushing water for a period of time before using it is the best way to make sure you are not getting too much copper in the water you are drinking. Please consult a licensed plumber if the problem persists.

Pink or Red Water (especially staining on bathroom/kitchen surfaces/fixtures)

Various molds and *Serratia* bacteria found naturally in surrounding air and on our bodies may be causing this color. If there is concern that the drinking water has harmful bacteria, a Total Coliform or E. Coli test can be taken. You can contact your local water supply officials, the local health department, or EGLE for more help.

Black Water or Black (flecks)

If the water is black in color or there are black flecks present in the hot water only, it may be a result of the water heater’s magnesium rod. Contact a licensed plumber to help you evaluate your water heater.

If the water is colored black or has black flecks only in the cold water, then it may be caused by the presence of manganese in the drinking water. Manganese is a naturally occurring mineral that when oxidized turns black. Contact your local water supply officials to let them know what you are seeing.

PRESSURE

Low Pressure / Low Flow

If you suddenly are experiencing low pressure or low flow throughout your entire residence, contact your water supply officials to see if there is a nearby issue affecting your supply. If your water pressure or water flow is only slow in one part of your home, it is likely due to a clog in either the pipes or fixtures. Contact a licensed plumber to help find and fix the issue.

If the low pressure is only at one tap, remove and clean the aerator.

MORE INFORMATION

EGLE Drinking Water Web Site: [Michigan.gov/DrinkingWater](https://www.michigan.gov/DrinkingWater)

EGLE does not discriminate on the basis of race, sex, religion, age, national origin, color, marital status, disability, political beliefs, height, weight, genetic information, or sexual orientation in the administration of any of its programs or activities, and prohibits intimidation and retaliation, as required by applicable laws and regulations.