Hot water heater problems?

Hot Water Heater Issues

Many water quality questions from residents are due to common hot water heater issues that are easily corrected. Unmaintained hot water heaters can yield water that is brown, black, has identifiable particles, and/or has a musty or rotten egg odor. See if you have experienced any of these concerns!

Discolored Water

If you take a hot water sample and compare it to a cold water sample, there should be no visible difference in color. If there is, the most probable source is the hot water heater. Red, brown, yellow, or orange-colored water can indicate iron from corrosion of pipes, fixtures, or the water heater tank itself. Black water can be caused by magnesium, but is usually caused by degradation of rubber gaskets and seals in valves and faucets. Copper corrosion can cause bluish or greenish water.

The short-term solution to discolored water is to flush the hot water heater. But if the problem persists, the hot water heater may need to be replaced.

Particles in the Water

If you notice white or faint bluish-green floating particles that resemble eggshells, they are usually from disintegration of the plastic "dip tube" in your hot water heater. Older hot water heaters are more likely to produce these particles. They can accumulate in the screens of faucets, washing machines, and shower heads. When melted or burned, they emit a melted plastic odor. The only way to correct this condition is to replace the dip tube or the entire hot water heater.

Tan or white particles that don't float can be "scale," which is calcium carbonate or magnesium carbonate. These minerals precipitate out of the water and settle onto the bottom of the hot water heater. Pressure fluctuations in the city water distribution system can mobilize small quantities of sand or silt, which can also accumulate in the water heater. When scale, sand, and silt are dislodged from the hot water heater, they can accumulate in the screens of faucets, washing machines, and shower heads. Flushing the hot water heater will keep these materials from accumulating.

Black particles are usually pieces of gaskets or washers from faucets that are wearing out. Eventually, enough of the gasket will wear away so that you can't fully turn off the faucet. Replace these with like materials.

Environmental Services
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4395 West 144th Avenue, BROOMFIELD, CO 80023

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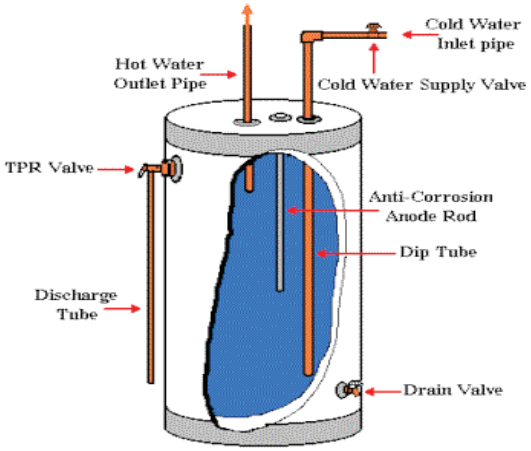
Odors in the Water

Water that smells like rotten eggs can be caused by sulfate-reducing bacteria. Keeping the water temperature of the hot water heater at or above 140 degrees F. will help prevent these bacteria from growing in the hot water heater. But once they are present, the electrons given off by the anti-corrosion anode rods in the hot water heater can act as a catalyst for the bacteria. Anodes made of aluminum or magnesium are more troublesome than anodes made of zinc. Flushing the hot water heater and raising the temperature to above 140 degrees F. should correct this condition. Care should always be taken in homes with young children, elderly, or disabled residents to prevent accidental scalding. It is a good idea to flush your home hot water heater once per year. Flushing the hot water heater will prevent sediment from building up, prolong the service life, increase efficiency, and prevent water quality problems.

HOW TO FLUSH A HOT WATER HEATER:

DIAGRAM OF A TYPICAL HOME WATER HEATER

WARNING! If you have an older hot water heater that has not been maintained regularly, the drain valve may already be corroded and may make it impossible to shut the valve after flushing. If you are in doubt or feel uncomfortable performing home maintenance tasks like this, contact a plumber for assistance.



Step 1. Connect a garden hose to the drain valve at the bottom of the hot water heater.

Step 2. Place the other end of the hose in a floor drain, sink, or bathroom drain. The water coming out will be hot, so be careful where you place the end of the hose.

Step 3. Open the hot water heater drain valve and allow the water to flush out of the tank until the water coming out of the hose is cool. Sediment that has accumulated on the bottom of the tank will flush out.

Step 4. Close the drain valve and remove the garden hose. Allow time for the cold water in the tank to heat before using.

And remember: hot water is for cleaning, NOT for drinking or cooking!

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