

Water Quality FAQs

Water Quality

1. What do we mean by “water quality”?

Water quality can be thought of as a measure of the suitability of water for a particular use based on selected physical, chemical, and biological characteristics. To determine water quality, scientists first measure and analyze characteristics of the water such as temperature, dissolved mineral content, and number of bacteria. Selected characteristics are then compared to numeric standards and guidelines to decide if the water is suitable for a particular use.

2. How do we measure water quality?

The quality of water is determined by making measurements in the field or by taking samples of water, suspended materials, bottom sediment, or biota and sending them to a laboratory for physical, chemical, and microbiological analyses. For example, acidity (pH), color, and turbidity (a measure of the suspended particles in the water) are measured in the field. The concentrations of metals, nutrients, pesticides, and other substances are measured in the laboratory. Another way to obtain an indication of the quality of water is biological testing. This test determines, for example, whether the water or the sediment is toxic to life forms or if there has been a fluctuation in the numbers and kinds of plants and animals. Some of these biological tests are done in a laboratory, while others are carried out at the stream or lake.

3. Why do we have water quality standards and guidelines?

Standards and guidelines are established to protect water for designated uses such as drinking, recreation, agricultural irrigation, or protection and maintenance of aquatic life. Standards for drinking-water quality ensure that public drinking-water supplies are as safe as possible. The U.S. Environmental Protection Agency (USEPA) and the States are responsible for establishing the standards for constituents in water that have been shown to pose a risk to human health. Other standards protect aquatic life, including fish, and fish-eating wildlife such as birds.

4. Where does my drinking water come from?

We are fortunate to have one of the finest sources of drinking water in the nation...the Rocky Mountains. Most of our water comes directly from high country snowmelt, which means we are primarily first-time users of the water.

Taste, Color, and Odor

5. What makes my drinking water smell/taste bad?

Drinking water can pick up tastes and odors from new pipe, from low usage in the treated water system, or from natural elements in the source water. Taste and odor events often occur seasonally during blooms of algae or aquatic plants. Although the plant material is removed during treatment, sometimes the odors persist. Tastes and odors in treated water are not harmful, but we do take steps to try and eliminate them.

6. What can I do if my drinking water smells and tastes like chlorine?

We disinfect drinking water with chlorine to ensure protection against contaminants throughout the distribution system and in your home. We routinely collect and analyze samples throughout the city to ensure chlorine levels are at or below our stringent target level. However, at times customers may notice an increase in chlorine taste and odor. A chlorine odor is often an indicator that the disinfectant is effectively working to remove bacteria and debris in your pipes.

If you are experiencing a chlorine odor, we recommend flushing your cold water taps for 5-10 minutes for three days to eliminate the odor and remove any bacteria and debris. If you experience a chlorine taste, we recommend collecting and refrigerating cold water after running your cold tap for at least two minutes or after another high water use activity such as bathing or washing clothes. Use clean, sterile (dishwasher-safe) bottles or pitchers for collecting cold tap water and refrigerate in an open container. Within a few hours, the chlorine taste and odor will disappear and the water will be conveniently cold for drinking.

7. Why is my drinking water discolored?

Drinking water discoloration is usually rust from aging pipes. It is not harmful, but is aesthetically displeasing. Discoloration of the water can be a result of disturbances in the water line due to using a hydrant improperly, installing new pipe, or shutting off the water to a local area for system maintenance. Home plumbing can also cause discoloration of the water.

8. What is causing my drinking water to have a reddish color?

Your drinking water might be affected by iron, a commonly occurring constituent of water. Iron tends to add a rusty, reddish brown (or sometimes yellow) color to water, and leaves particles of the same color. If the color is more like black, it could be a combination of iron and manganese. Both of these metals can cause staining of plumbing fixtures or laundry, but they are not known to cause health problems.

9. Why does my tap water sometimes look milky or cloudy?

Milky or cloudy water is often caused by air that enters pipes and escapes in the form of oxygen bubbles when water leaves your tap. Cloudiness and air bubbles do not present a health risk. During colder months, water in outside pipes is colder and holds more oxygen than your household pipes. Consequently, when the cold water enters your building and begins to warm, the oxygen bubbles escape and cause the water to look milky. Construction in the distribution system can also allow air to enter the pipes and cause the appearance of cloudy water.

Cloudiness and air bubbles should naturally disappear in a few minutes. You can test this by running the water into a clear container and observing for a few minutes. If the water clears from the bottom to the top of the container, air bubbles are rising to the surface.

10. What is the white residue I sometimes find on cookware, in the shower, and even in ice cubes?

White residue is commonly found in showers and kitchenware as the result of dissolved minerals found in water, such as calcium and magnesium. Mineral particles can also be visible in ice cubes made with tap water. These minerals are not a risk to human health, but can build up on surfaces over time. Commercial products are available to remove white residue caused by minerals in water.

11. Why do I sometimes see black particles in my tap water?

The common cause of black particles in tap water is the disintegration of rubber materials used in plumbing fixtures. Plumbing gaskets and o-rings disintegrate over time and can collect in toilet tanks and around faucets. Similar problems are common in newly constructed or renovated buildings.

If you have filters attached to your plumbing system or a water pitcher that uses carbon filters to remove contaminants, these can also contribute to the presence of black particles. The small carbon particles of these filters are black and can pass through into your water. Black particles can also come from precipitated iron and manganese in water, which may come loose from pipe walls after a large main break or major construction.

Flushing the system and your taps will likely resolve the issue of black particles caused by plumbing fixtures or construction. If black particles are from your filter, you should replace the filter as recommended by the manufacturer. If the problem continues after flushing and you have determined that the source is not a rubber gasket or filter, please contact our lab at 719-668-4560

Fluoride

12. What is fluoride?

Fluoride is a compound found naturally in many places, including soil, food, plants, animals, and the human body. It is also found naturally at varying levels in all Colorado Springs' water sources.

13. Does Colorado Springs Utilities add fluoride to my drinking water?

No, we do not add additional fluoride to your drinking water. Any fluoride in the drinking water results from what occurs naturally in our source waters.

14. What is the EPA's drinking water standard for fluoride?

The United States Environmental Protection Agency's (US EPA) maximum contaminant level (MCL) and maximum contaminant level goal (MCLG) for fluoride is 4 mg/L. According to the U.S. EPA, "Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums." For more information about fluoride, visit the [EPA](#) website.

Chemicals and Contaminants

15. What chemicals does Colorado Springs Utilities put in my drinking water?

During the treatment process aluminum sulfate (alum) and polymer are added to the untreated water. These chemicals bind with foreign matter such as dirt particles and form into large clumps that can be removed during the sedimentation and filtration portion of the treatment. A disinfectant is added during treatment and within the distribution system to protect the drinking water from potentially harmful microscopic organisms.

Other chemicals we use in water treatment include sodium carbonate and sodium hydroxide for pH control. All chemicals used in water treatment are certified ANSI/NSF 60 Standards for Drinking Water Additives.

16. Is there lead in my drinking water, and if so, what can I do about it?

We have not detected lead in their treated water or source water. However, lead can come from the customer's plumbing. According to the EPA, two types of homes may be at risk for lead contamination:

- Homes that are very old (pre-WWII) with lead services or lead pipe, and
- Homes that were built between 1982 and 1987, which used copper pipe with lead-based solder. Lead-based solder was banned from use on domestic drinking water plumbing in 1987.

Here are some ways to reduce your exposure to lead if you think it's present in your tap water:

- When water has been standing in your pipes, run the cold-water tap until it gets noticeably colder. The lower temperature indicates you have cleared water that has been standing in pipes. (To conserve water, remember to catch the flushed tap water for plants or some other household use.)
- Use only water from the cold-water tap for drinking, cooking and, especially, for making baby formula. Hot tap water dissolves lead faster and is likely to contain higher levels of lead if present.
- Insist on lead-free solder and lead-free fixtures when repairing or replacing plumbing.

17. Where can I find information about the health effects of contaminants in drinking water?

The EPA Office of Ground Water and Drinking Water Web page [Drinking water and health: What you need to know](#) has a link to "What are the health effects of contaminants in drinking water?" This link connects you to fact sheets for many contaminants.

Pharmaceuticals and Personal Care Products (PPCPs)

18. What are pharmaceuticals and other emerging contaminants?

Pharmaceuticals found in water are prescription drugs or over-the-counter drugs used by humans and animals. In addition, personal care products (fragrances, cosmetics, lotions, and other compounds) and the broad range of substances we use daily can enter the environment, and eventually find its way into our source water that is treated and used for drinking in Colorado Springs.

19. What does the detection of low levels mean?

Low levels of pharmaceuticals and other compounds found in parts per billion and parts per trillion are below levels known to harm human health. Advances in research and technology improve our understanding of the types and levels of chemicals present in water across the United States and to date do not show evidence of risks to human health.

20. How should I properly dispose of unused pharmaceuticals?

During times when Colorado Springs is not hosting public drug take-back or collection programs, alternatives to flushing those pharmaceuticals down the toilet or drain can be found below. The Office of National Drug Control Policy recommends the following:

1. Take your prescription drugs out of their original containers.
2. Mix drugs with a substance undesired by children and animals, such as cat litter or used coffee grounds.
3. Put the mixture into a disposable container with a lid, such as an empty margarine tub, or into a sealable bag.
4. Conceal or remove any personal information, including Rx number, on the empty containers by covering it with black permanent marker or duct tape, or by scratching it off.
5. Place the sealed container with the mixture, and the empty drug containers, in the trash.

For additional information, please contact the El Paso County Health Department at 719-578-3199, or at www.elpasocountyhealth.org.

21. Are unused pharmaceuticals and personal care products (PPCPs) regulated in any way?

Yes. Unused pharmaceutical agents are regulated by USEPA and disposed of according to provisions of the Resource Conservation and Recovery Act (RCRA). This is a federal law controlling the management and disposal of solid and hazardous wastes produced by a wide variety of industries and sources. The RCRA program regulates the management and disposal of hazardous pharmaceutical wastes produced by pharmaceutical manufacturers and the health care industry. Under RCRA, a waste is a hazardous waste if it is specifically listed by the EPA under this category or if it exhibits one or more of the following four characteristics: ignitability, corrosivity, reactivity or toxicity.

Flushing Hydrants

22. Why do I sometimes see work crews flushing fire hydrants?

Even the best water will get stale and taste unpleasant if not used sufficiently. Conservation is important, but to maintain good, fresh water, flushing is vital, especially in areas where water usage is low. Flushing is also important for maintaining the optimal quality of our hydrants.

Hydraulic Fracturing or “Fracking”

23. What is “fracking”?

Hydraulic fracturing, or "fracking" is the term applied to the practice by natural gas producers of flooding underground gas deposits with water to break rock and force the gas up to be captured. Fracking is used to collect natural gas from sources such as coalbeds and shale gas formations. Fracking is also used for other applications including oil recovery. During the process, operators pump at least a million gallons of water per well, deep into the earth to break layers of rock and release gas.

24. Does my drinking water contain water used in fracking?

No. Colorado Springs City Council voted against the use of fracking in March of 2013.

25. How is fracking regulated?

Water is an important component of the hydraulic fracturing process. The United States Environmental Protection Agency (U.S. EPA) Office of Water regulates waste disposal of flowback and sometimes the injection of fracturing fluids as authorized by the Safe Drinking Water Act and Clean Water Act.

Miscellaneous

26. Why does my skin itch after I shower in the winter?

Our climate is usually cold and dry during the winter, and we tend to take hotter showers because of it. However, hot water dries the skin. Taking a warm shower instead of a hot one should help.

27. Is water treated with chlorine hazardous to some pets?

Colorado Springs Utilities uses chlorine in its drinking water to maintain disinfection residual in the distribution system. Chlorine is safe for all pets except those with gills (fish, tadpoles, etc.). Water that contains chlorine may be treated a number of ways, including commercial products found in pet supply stores. Just follow the instructions on the package. If you have any questions, consult the manufacturer's web page because these products contain varying amounts and types of reactive agent.

28. Is bottled water safer than tap water?

Bottled water is not necessarily safer than your tap water, although it is almost always significantly more expensive. EPA sets standards for tap water provided by public water systems; the Food and Drug Administration sets bottled water standards based on EPA's tap water standards.

Bottled water and tap water are both safe to drink if they meet these standards, although people with severely compromised immune systems and children may have special needs. Some bottled water is treated more than tap water, while some is treated less or not treated at all. Bottled water costs much more than tap water on a per gallon basis. Bottled water is valuable in emergency situations (such as loss of pressure and floods), and high quality bottled water may be a desirable option for people with weakened immune systems. Consumers who choose to purchase bottled water should carefully read its label to understand what they are buying, for example, to determine the source of water and the method of treatment.

29. Who should I contact if I want my well water tested?

For well water testing, contact the El Paso County Health Department or Colorado Department of Public Health and Environment.

El Paso County Health Department
#719-578-3199
www.elpasocountyhealth.org

Colorado Department of Public Health and Environment
#303-692-3048
<http://www.colorado.gov/cs/Satellite/CDPHE-WQ/CBON/1251596876659>

30. Does Colorado Springs Utilities test my inside water?

We are responsible for the outside water *entering* your home. Therefore, only samples from an outside spigot are taken. This ensures that the water coming into your home is clean and safe.

However, if you are experiencing problems with your internal plumbing, you may contact either the El Paso County Health Department, or the Colorado Department of Public Health and Environment at:

El Paso County Health Department
#719-578-3199
www.elpasocountyhealth.org

Colorado Department of Public Health and Environment
#303-692-3048
<http://www.colorado.gov/cs/Satellite/CDPHE-WQ/CBON/1251596876659>