

A close-up photograph of a glass of lemon water with ice cubes and a chrome faucet with water flowing. The glass is on the left, and the faucet is on the right. The water is clear and sparkling. The background is blurred. A diagonal grey band runs across the image from the top right to the bottom left.

Presented By
Evergreen Metropolitan District

ANNUAL
**WATER
QUALITY
REPORT**

WATER TESTING PERFORMED IN 2016

We've Come a Long Way

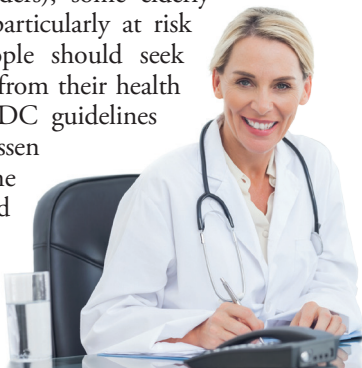
We continue to strive for excellence.

Evergreen Metropolitan District is proud to present our annual water quality report covering the period between January 1 and December 31, 2016. In a matter of only a few decades, drinking water has become exponentially safer and more reliable than at any other point in human history. Our exceptional staff continues to work hard every day—at any hour—to deliver the highest quality drinking water without interruption. Although the challenges ahead are many, we feel that by relentlessly investing in customer outreach and education, new treatment technologies, system upgrades, and training, the payoff will be reliable, high-quality tap water delivered to you and your family.

Important Health Information

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons (such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders), some elderly adults, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. U.S. EPA/CDC guidelines on appropriate means to lessen the risk of infection by the *Cryptosporidium* parasite and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).



Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/lead.



Substances That Could Be in Water

In order to ensure that tap water is safe to drink, the Colorado Department of Public Health and Environment prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of land or through the ground, it dissolves naturally occurring minerals, and in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- **Microbial Contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;
- **Inorganic Contaminants**, such as salts and metals, which can be naturally occurring or may result from urban storm-water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;
- **Pesticides and Herbicides**, which may come from a variety of sources such as agriculture, urban storm-water runoff, and residential uses;
- **Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also come from gas stations, urban storm-water runoff, and septic systems;
- **Radioactive Contaminants**, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Where Does My Water Come From?

The water supply for Evergreen Metropolitan District comes from the Upper Bear Creek Watershed. The watershed begins at the top of the Mount Evans Wilderness area. The water supply resides in the watershed in the form of snow pack, rainfall, and lake storage. Evergreen Lake is located at the base of the Upper Bear Creek Watershed. The lake is about 600 acre-feet in size, or about 197 million gallons. It is a relatively shallow lake, with an average depth of 15 feet. The Evergreen Metropolitan District Water Treatment Plant draws water from the lake at a point near the dam on the northeast end. Evergreen Lake provides a high-quality, low-hardness water supply. However, because it is a surface water and is relatively shallow and small in size, it is susceptible to impact from periodic high stream flows due to spring runoff and summer rainstorm events. The treatment process used by the District is capable of handling these periodic, poor water-quality events.

The Bear Creek Watershed Association is an organization of groups with significant interest in and responsibility for the health and well-being of the Bear Creek Watershed. The group does a significant amount of water sampling and monitoring within the Watershed, from Mount Evans to Bear Creek Lake Park. As new points of potential contamination to the watershed are found, additional water sampling is coordinated for those sites. Information regarding the current status of water quality within the watershed can be found at the Association's website: www.bearcreekwatershed.org.

Community Participation

Community members are always invited to participate in our public meetings and voice any concerns you might have about the drinking water or other issues pertaining to the District. Board meetings are normally scheduled for the fourth Wednesday of each month, beginning at 8:30 a.m. The meetings are held at the Gerald C. Schulte District Administration Office, located at 30920 Stagecoach Boulevard, Evergreen, Colorado.

A complete list of meeting dates for 2017 is available at the Administration Office. It is also available on our website at www.evergreenmetrodistrict.com. We invite the public to tour any of our facilities, especially the water treatment facility. Please call (303) 674-4112 to set up a time.

Source Water Assessment

The Evergreen Metropolitan District drinking water supply is surface water rather than groundwater. This is an important distinction, as there are different impurities that potentially affect the quality of each type of water source. Bear Creek and Evergreen Lake are potentially susceptible to contamination from many sources. Runoff from roads, mining activity drainage, accidental spills from above-ground fuel storage facilities, runoff from pasture lands, and septic leach field discharges are all potential sources of pollution to our drinking water supply. The Colorado Department of Public Health and Environment has provided us with a Source Water Assessment Report of our water supply. The report may be viewed at the District's website: www.evergreenmetrodistrict.com. You may also obtain a copy of the report by visiting www.colorado.gov/pacific/cdphe/swap-assessment-phase, or by contacting Chris Schauder at the Evergreen Metropolitan District at (303) 674-4112.

As recipients and users of the high-quality water that begins in the Mount Evans Wilderness, the District and customers are all stewards of Bear Creek and must remain vigilant to its protection. Please contact Chris Schauder to learn more about what you can do to help protect your drinking water.

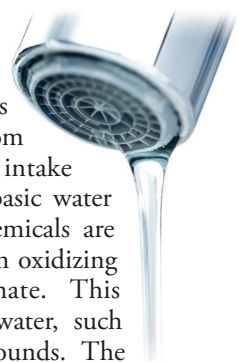
How Is My Water Treated and Purified?

The treatment process consists of a series of steps. First, raw water is drawn from Evergreen Lake and sent through an intake pipe for volume measurement and two basic water quality tests: pH and turbidity. Two chemicals are then injected into the water. The first is an oxidizing chemical called potassium permanganate. This chemical reacts with impurities in the water, such as iron, manganese, and organic compounds. The reaction changes these impurities from a dissolved state to a solid particle state. This will allow the impurities to be removed during subsequent treatment.

The second chemical (a polyaluminum chloride compound) reacts with impurities in the water to form small particles. The water and chemical are slowly mixed and allowed to react for a period of about two hours. The water is then filtered by passing the water through ultrafiltration membranes. The membrane type the District uses has a nominal pore size of 0.035 microns to 0.1 microns. This opening is so small that it will not allow parasites (such as Giardia), most bacteria, and most viruses to pass through it.

Once the water is filtered, it must be disinfected. Chlorine is used for this process. It is necessary to add chlorine because it will remain in the water when pumped to the distribution system. This residual chlorine protects the water and the customer from contaminants that could possibly enter the water system, such as through a cross-connection.

Finally, a corrosion-control chemical called a polyphosphate, and fluoride (used to prevent tooth decay) are added before the water is pumped to a sanitized, underground distribution system and into your home or business.



QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please contact the Administration Office at (303) 674-4112.

Notice of Tier 3 Violation: Disinfectant Monitoring Equipment Verification

Description of Violation:

On August 12, 2016, the Colorado Department of Public Health and Environment Drinking Water Division performed an inspection of the Evergreen Metropolitan District Drinking Water System. During the inspection, it was found that the chlorine residual verification analysis procedure was being improperly conducted and documented. This resulted in the District not properly verifying or operating disinfectant monitoring analytical equipment in accordance with the manufacturer requirements. This is a violation of the Colorado Drinking Water Regulation 11, Section 11.46.

The State inspection revealed that the chlorine residual test was being conducted with a total chlorine test reagent instead of a free chlorine reagent, the bench-top verification tests that were being performed for the treatment plant's entry-point free chlorine residual may have been up to 30 percent higher than actual values. The bench-top verification chlorine test is performed to validate the instantaneous chlorine residual analysis that is done by on-line automated testing equipment. Because Evergreen Metropolitan District Drinking Water System does not use chloramine disinfection, reporting total chlorine analysis results is not an appropriate test method for measuring free disinfectant residuals or verifying the analysis results for an on-line free chlorine analytical instrument.

Date of violation:

The violation occurred on August 12, 2016.

Adverse Health Effects:

This Tier 3 violation did not pose any adverse health effects to the public served by the Evergreen Metropolitan District Water Department.

Population at risk:

Non-applicable.

Alternate water supplies required:

Non-applicable.

Consumer Actions:

No consumer actions are required due to this Tier 3 Violation.

Corrective Action:

Once it was discovered that a total chlorine reagent was being used incorrectly for the analysis procedure, the total chlorine reagent was immediately replaced with the proper free chlorine residual reagent during the inspection.

After the completion of the State inspection, an investigation was immediately launched to determine how the total chlorine reagent was installed in the Hach chlorine reagent dispenser. The investigation revealed that an employee of the Drinking Water Department had erroneously replaced an empty free chlorine reagent with a total chlorine reagent in the Hach chlorine reagent dispenser a few weeks prior to the inspection.

To correct the situation and ensure future compliance, the Evergreen Metropolitan District Water Division has implemented an updated free chlorine residual verification procedure, using a 1.5 mg/L free chlorine residual standard. The 1.5 mg/L free chlorine residual standard is used to verify the accuracy of the bench-top Hach DR 3900 spectrophotometer. Once the Hach DR 3900 spectrophotometer is found to be reading the 1.5 mg/L free chlorine residual accurately, an entry-point sample is collected to verify the on-line Hach CL17 free chlorine analyzer reading. The analysis findings is documented in the comment section of the Monthly Operating Report and submitted to the CDPHE Drinking Water Division.

Return to Compliance:

The Evergreen Metropolitan District Drinking Water System returned to compliance during the State inspection, which found that the incorrect chlorine reagent was being used for the free chlorine residual analysis.

Contact Information:

For further information/clarification on this violation please contact:

David Lighthart, General Manager, or Garry Jeffrey, Water Department Manager
Evergreen Metropolitan District
P.O Box 3819
Evergreen CO 80437-3819
Phone: 303 674-4112

Distribution of Notice:

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in public places or by distributing copies by hand.

Test Results

Our water is monitored for many different kinds of contaminants on a very strict sampling schedule. The information below represents only those substances that were detected; our goal is to keep all detects below their respective maximum allowed levels. The State allows us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

We participated in the 3rd stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the U.S. EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality. Contact us for more information on this program.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	2016	2	2	0.02	0.02–0.02	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chlorine (ppm)	2016	[4]	[4]	1.55	0.31–3.01	No	Water additive used to control microbes
Fluoride (ppm)	2016	4	4	0.76	0.5–1.1	No	Erosion of natural deposits; water additive, which promotes strong teeth; discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] (ppb)	2016	60	NA	20	13–24	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	2016	80	NA	29	18–34	No	By-product of drinking water disinfection
Turbidity ¹ (NTU)	2016	TT	NA	0.13	0.02–0.13	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2016	TT = 95% of samples < or = 0.1 NTU	NA	100	NA	No	Soil runoff

Tap Water Samples Collected for Lead and Copper Analyses from Sample Sites throughout the Community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2014	1.3	1.3	0.44	0/50	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	2014	15	0	15	5/50	No	Corrosion of household plumbing systems; erosion of natural deposits

UNREGULATED CONTAMINANT MONITORING RULE - PART 3 (UCMR3)

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Chromium-6 (ppb)	2014	0.14	0.04–0.15	Naturally occurs in the environment
Strontium (ppb)	2014	63	52–78	Naturally occurs in the environment

¹Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

Definitions

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as LRAAs.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible, using the best available treatment technology.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter, µg/L).

ppm (parts per million): One part substance per million parts water (or milligrams per liter, mg/L).

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.