

Annual
WaterQuality
Report
Water testing performed in 2010

Presented By _____
Evergreen Metropolitan District

PWS ID#: 0130030

Quality First Quality

Once again we are proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2010. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all of our water users. Thank you for allowing us to continue providing you and your family with high-quality drinking water.

We encourage you to share your thoughts with us on the information contained in this report. Should you ever have any questions or concerns, we are always available to assist you.

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 east end. Normally Evergreen Metro has a very high-quality water supply. However, because it is a surface water, it is susceptible to impact from high stream flows due to spring runoff and summer rainstorm events. However, the treatment process used by the District is capable of handling periodic, poor-water-quality events. The Bear Creek Watershed Association is an organization of groups holding an interest in the health and well-being of the Bear Creek Watershed. They do a significant amount of monitoring within the Watershed. Information regarding the current status of water quality within the watershed can be found at the Association's website: www.bearcreekwatershed.org.

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. A chemical is then injected into the water. This chemical (a polyaluminum chloride) 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 2 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 it will not allow parasites, Giardia, most bacteria, and most viruses to pass through it. In 2007, a microscopic particulate analysis of the lake water and the finished water demonstrated a log removal of microorganisms of 5.2, or a >99.999% removal of all microorganisms! This compares to the nominal log removal of the District's past conventional treatment process of 4.0.

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.

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. The Board meetings are normally scheduled for the fourth Wednesday of each month beginning at 8:30 a.m. The meetings are held at the District Administration Office located at 30920 Stagecoach Boulevard, Evergreen, Colorado. A complete list of meeting dates for the year 2011 is available at the Administration Office. It is also available on our web site at www.evergreenmetrodistrict.com. We also invite the public to tour any of our facilities, especially the water treatment facility. Please call (303) 674-4112 to set up a time.

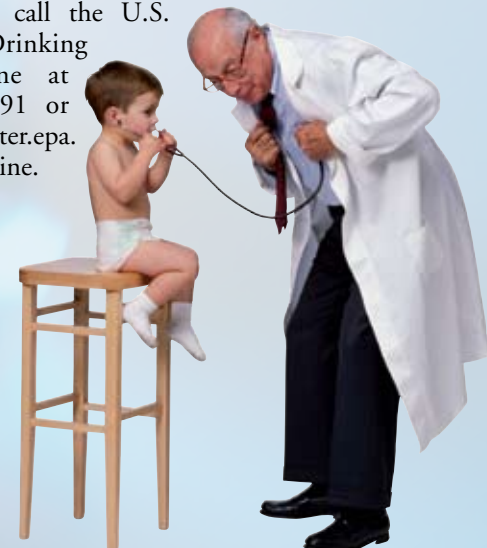
Questions?

For more information about this report, or for any questions relating to your drinking water, please contact Dave Lighthart, Operations Manager, at (303) 674-4112.

Important Health Information

All 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 the water poses a health risk. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants or who have AIDS or other immune system disorders, some elderly, and infants can be particularly at risk of infections. These people should seek advice about drinking water from their health care providers. More information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (U.S. EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *cryptosporidium* and microbiological contaminants, call the U.S.

EPA Safe Drinking Water Hotline at (800) 426-4791 or go to <http://water.epa.gov/drink/hotline>.



Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25 percent of bottled water is actually just bottled tap water (40 percent, according to government estimates).

The Food and Drug Administration is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Furthermore, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.

For a detailed discussion on the NRDC study results, check out their Web site at www.nrdc.org/water/drinking/bw/exesum.asp.

Lead and Drinking Water

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. Evergreen Metro District is responsible for providing high-quality drinking water, but we 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/safewater/lead.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. 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 the land or through the ground, it dissolves naturally occurring minerals, 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 stormwater 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 stormwater 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 stormwater 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.

System Improvements

During 2010, Evergreen Metro District completed the construction of a new 500,000 gallon water storage reservoir and a 4.0 million-gallon-per-day pumping station. In addition, the District completed upgrade of an existing pump station to increase its capacity and efficiency. This upgrade also reduces the electrical consumption of the total system. The District also added backup generator power to two pump stations.

In 2011, the District is scheduled to perform improvements to the distribution system. These are scheduled to be done in the Hiwan Hills and Camels Heights subdivisions. If you have any questions regarding these projects, please call the office at (303) 674-4112.

We have also budgeted to upgrade the Communications System and Programmable Logic computers used to operate and monitor the facilities of the distribution system in 2011.

Source Water Assessment

The Evergreen Metropolitan District drinking water supply is surface water rather than groundwater. This is an important distinction as different impurities 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, 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.cdph.state.co.us/wq/sw/swaphom.html, or by contacting Dave Lighthart 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 in its protection. Please contact Dave Lighthart to learn more about what you can do to help protect your drinking water.

Water Conservation

You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks (if you are allowed access). Simply turn off all taps and water using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

LT2 Rule

The U. S. EPA has created the Long-Term 2 Enhanced Surface Water Treatment Rule (LT2) for the sole purpose of reducing illness linked with the contaminant *Cryptosporidium* and other disease-causing microorganisms in drinking water. The rule will bolster existing regulations and provide a higher level of protection of your drinking water supply.

As part of the required two-year study, sampling of our water source was performed during the first three months of 2010. This completed the required study under the LT2 Rule. The results of analysis for the first three months of 2010 showed the following:

- *Cryptosporidium*: We detected a low value of 0 #/L and a high value of 0 #/L.
- *Giardia lamblia*: We detected a low value of 0 #/L and a high value of 1 #/L.
- *E. coli*: We detected a low value of 0 #/L and a high value of 4.1 #/L.

Results of the total study period have determined that Evergreen Metro District Water Treatment Facility does not need to make modifications to the treatment process.

It is important to note that these results are from our raw water source only and not from our treated drinking water supply. For more information, contact the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were detected in the water. The state requires us to monitor for certain substances less often 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.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2010	[4]	[4]	1.18	0.16–2.2	No	Water additive used to control microbes
Fluoride (ppm)	2010	4	4	1.6	0.243–1.81	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA5] (ppb)	2010	60	NA	20	8–36	No	By-product of drinking water disinfection
Nitrate (ppm)	2010	10	10	0.018	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2010	80	NA	47	17–74	No	By-product of drinking water disinfection
Total Organic Carbon (ppm)	2010	TT	NA	1.552	0.673–4.02	No	Naturally present in the environment
Turbidity¹ (NTU)	2010	TT	NA	0.21	0.02–0.21	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2010	TT	NA	100%	NA	No	Soil runoff

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Color (Units)	2010	15	NA	1	ND–13	No	Naturally-occurring organic materials
Manganese² (ppb)	2010	50	NA	7	ND–74	No	Leaching from natural deposits
pH (Units)	2010	6.5–8.5	NA	8.3	7.0–9.2	No	Naturally occurring

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromochloromethane (ppb)	2010	3.6	NA	By-product of drinking water disinfection
Chloroform (ppb)	2010	24.5	NA	By-product of drinking water disinfection

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

² Manganese is an aesthetic contaminant causing a yellow-brown tint to the drinking water. There are no health effects associated with Manganese.

Definitions

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

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

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

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).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

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