Elkhorn City Water

2018 Water Quality Report

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Meetings: City Hall / 2nd Tuesday, Each Month @ 7:00 PM

The Elkhorn City Water Department purchases drinking water from Mountain Water District. Mountain Water District withdraws surface water from the Levisa Fork of the Big Sandy River for treatment at the water plant in Marrow Bone. The source water protection area is highly influenced by coal mining industries and the Breaks Interstate Park. The area is also highly influenced by commercial and industrial businesses, traffic flow, and the location of major railways. Other areas of concern include non-point sources of pollution originating from activities such as agriculture, mining, and road construction. Within the greater source water protection area, potential contaminant sources of concern include 1 major road, 2 railroads, 3 small sewage plants, 2 areas of waste generation or transportation, 10 bridges and culverts, and 2 points of active mining activity. Each of these potential sources of contamination is rated high in a susceptibility analysis because of the contaminant type, their proximity to the intake and the high chance of release. This completed plan is available for review at the main office at Mountain Water located at 6332 Zebulon Highway.

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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 may be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

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 and, in some cases, radioactive material, and may pick up 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, (sewage plants, septic systems, livestock operations, or wildlife). Inorganic contaminants, such as salts and metals, (naturally occurring or from stormwater runoff, wastewater discharges, oil and gas production, mining, or farming). Pesticides and herbicides, (stormwater runoff, agriculture or residential uses). Organic chemical contaminants, including synthetic and volatile organic chemicals, (by-products of industrial processes and petroleum production, or from gas stations, stormwater runoff, or septic systems). Radioactive contaminants, (naturally occurring or from oil and gas production or mining activities). In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water to provide the same protection for public health.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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. Your local public water system is 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 http://www.epa.gov/safewater/lead.

Some or all of these definitions may be found in this report:

Maximum Contaminant Level (MCL) - 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.

Maximum Contaminant Level Goal (MCLG) - 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.

Maximum Residual Disinfectant Level (MRDL) - 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.

Maximum Residual Disinfectant Level Goal (MRDLG) - 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.

Below Detection Levels (BDL) - laboratory analysis indicates that the contaminant is not present.

Not Applicable (N/A) - does not apply.

Parts per million (ppm) - or milligrams per liter, (mg/l). One part per million corresponds to one minute in two years or a single penny in $10,000.

Parts per billion (ppb) - or micrograms per liter, (µg/L). One part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Parts per trillion (ppt) - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in $10,000,000,000.

Parts per quadrillion (ppq) - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in $10,000,000,000,000.

Picocuries per liter (pCi/L) - a measure of the radioactivity in water.

Millirems per year (mrem/yr) - measure of radiation absorbed by the body.

Million Fibers per Liter (MFL) - a measure of the presence of asbestos fibers that are longer than 10 micrometers.

Nephelometric Turbidity Unit (NTU) - a measure of the clarity of water. Turbidity has no health effects. However, turbidity can provide a medium for microbial growth. Turbidity is monitored because it is a good indicator of the effectiveness of the filtration system.

Variances & Exemptions (V&E) - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Action Level (AL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system shall follow.

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

Spanish (Español) Este informe contiene información muy importante sobre la calidad de su agua beber. Tradúzcalo o hable con alguien que lo entienda bien.

The data presented in this report are from the most recent testing done in accordance with administrative regulations in 401 KAR Chapter 8. As authorized and approved by EPA, the State has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data in this table, though representative, may be more than one year old.

M=Mountain Water District

	Allowable Levels	Source	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity
Turbidity (NTU) TT * Representative samples of filtered water	No more than 1 NTU* Less than 0.3 NTU in 95% monthly samples	M=	0.76	97	No	Soil runoff

Regulated Contaminant Test Results

Contaminant [code] (units)	MCL	MCLG	Source	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Radioactive Contaminants								
Combined radium (pCi/L)	5	0	M=	1.5	1.5 to 1.5	May-14	No	Erosion of natural deposits
Uranium (µg/L)	30	0	M=	2.2	2.2 to 2.2	May-14	No	Erosion of natural deposits
Inorganic Contaminants								
Barium [1010] (ppm)	2	2	M=	0.031	0.031 to 0.031	Apr-18	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	M=	0.84	0.84 to 0.84	Apr-18	No	Water additive which promotes strong teeth
Nickel (ppm) (US EPA remanded MCL in February 1995.)	N/A	N/A	M=	0.5	0 to 1	Apr-18	No	N/A
Nitrate [1040] (ppm)	10	10	M=	0.13	0.13 to 0.13	Oct-18	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Selenium [1045] (ppb)	50	50	M=	0.001	0.001 to 0.001	Apr-18	No	Discharge from petroleum and metal refineries or mines; erosion of natural deposits
Synthetic Organic Contaminants including Pesticides and Herbicides								
Dioxin [2,3,7,8-TCDD] (ppq)	30	0	M=	5	5 to 5	May-18	No	Waste incineration and other combustion; discharge from chemical factories
Disinfectants/Disinfection Byproducts and Precursors								
Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios)	TT*	N/A	M=	1.03	1 to 1.38	2018	No	Naturally present in environment.
*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average must be 1.00 or greater for compliance.								
Other Contaminants								
Cryptosporidium [oocysts/L]	0	TT (99% removal)	M=	1 (positive samples)	12 (no. of samples)	2018	No	Human and animal fecal waste

Cryptosporidium. We are required to monitor the source of your drinking water for Cryptosporidium in order to determine whether treatment at the water treatment plant is sufficient to adequately remove Cryptosporidium from your drinking water.
Cryptosporidium is a microbial pathogen found in surface water. Cryptosporidium was detected in 1 sample of 12 collected from the raw water source for our water system. It was not detected in the finished water. Current test methods do not enable us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Cryptosporidium must be ingested to cause disease and it may be spread through means other than drinking water.

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Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Inorganic Contaminants							

Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.005 (90th percentile)	0 to 0.01	2018'	No	Corrosion of household plumbing systems
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	0.7 (90th percentile)	0.1 to 0.9	2018'	No	Corrosion of household plumbing systems
Disinfectants/Disinfection Byproducts							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	2 (high site average)	1.49 to 1.85	2018'	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	59 (high site average)	7.9 to 98.4 (range of individual sites)	2018'	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	76 (high site average)	13.8 to 83 (range of individual sites)	2018	No	Byproduct of drinking water disinfection.

Maximum Contaminant Levels (MCL's) are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

This report will not be mailed unless requested. Copies are available at our office. Please contact our office if you would like to receive a copy by mail.

Our supplier, Mountain Water District, received a monitoring violation (2018-9950630) for failing to submit the required number of analytical results for turbidity during the 2nd quarter of 2018. This was due to the failure of MWD's monitoring equipment. Upon ordering the equipment, the sole source entity providing the equipment did not install the replacement until 14 days later. The MWD has made provisions to impeede a reoccuring incident of the same nature.