Cumberland Falls Highway Water District

2018 Water Quality Report

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Meetings: Water District Office / 3rd Monday each month at 3:30 pm

We purchase water from Corbin Utilities, Williamsburg Water Department and West Laurel Water District (treated by Wood Creek Water District). The source of water for all three utilities is surface water from Laurel River Lake, Wood Creek Lake and the Cumberland River, respectively. An analysis of the susceptibility to contaminantion of these water supplies is considered to be moderate. The predominant land cover is forest; this land cover could be subject to logging which can result in soil erosion. There are water quality impairments common to all three water supplies. These impairments are created by excess nutrients created by human and animal sources such as commercial fertilizers, livestock manure, industrial discharges, and sewage. Other potential contaminants and activities of concern are highway maintenance and runoff, railroads, permitted wastewater dischargers, landfills, dumps, land farms, underground storage tanks, onsite wastewater treatment, and straight pipes. Activities and land uses upstream of the source of water can pose potential risks to your drinking water. The complete Source Water Assessments are available at the Cumberland Valley Area Development District office in London, KY.

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. Copies of this report are available upon request by contacting our office during business hours.

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.

A = Williamsburg Water Department B = Corbin Utilities Commission C = Wood Creek Water District

	Allowable Levels	Source	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity
Turbidity (NTU) TT	No more than 1 NTU*	A=	0.31	99	No	Soil runoff
* Representative samples	Less than 0.3 NTU in	B=	0.25	100	No	
of filtered water	95% monthly samples	C=	0.09	100	No	

Regulated Contaminant Test Results

Contaminant [code] (units)	MCL	MCLG	Source	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Inorganic Contaminants								
Barium			A=	0.022	0.022 to 0.022	Apr-18	No	Drilling wastes; metal refineries; erosion of natural deposits
[1010] (ppm)	2	2	B=	0.015	0.015 to 0.015	Feb-18	No	
			C=	0.011	0.011 to 0.011	Aug-18	No	
Cyanide [1024] (ppb)	200	200	C=	20	20 to 20	Aug-18	No	Discharge from steel/metal factories; plastic and fertilizer factories
Fluoride			A=	0.89	0.89 to 0.89	Apr-18	No	Water additive which promotes strong teeth
[1025] (ppm)	4	4	B=	0.8	0.8 to 0.8	Feb-18	No	
			C=	0.7	0.7 to 0.7	Aug-18	No	
Nickel (ppb) (US EPA remanded MCL in February 1995.)	N/A	N/A	A=	2	2 to 2	Apr-18	No	N/A
Nitrate			A=	0.12	0.12 to 0.12	Jul-18	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
[1040] (ppm)	10	10	B=	0.5	0.5 to 0.5	May-18	No	
			C=	0.21	0.21 to 0.21	Feb-18	No	
Disinfection Byproducts Precursor								
Total Organic Carbon (ppm)			A=	1.29	1.00 to 1.67	N/A	No	Naturally present in environment.
(report level=lowest avg.	TT*	N/A	B=	1.45	1.14 to 3.42	N/A	No	
range of monthly ratios)			C=	1.08	1 to 1.67	N/A	No	

*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	0	TT	A=	2	9	2018	See note below	Human and animal fecal waste
[oocysts/L]			B=	2	24	2018		
		(99% removal)		(positive samples)	(no. of samples)			

Cryptosporidium. We constantly monitor the water supply for various contaminants. We have detected cryptosporidium in some of the samples tested. We believe it is important for you to know that cryptosporidium may cause serious illness in 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. These people should seek advice from their health care Cryptosporidium is a microbial pathogen found in surface water. Cryptosporidium was detected in 2 samples of 9(Williamsburg) and 2 of 24 Samples (Corbin) collected from the raw water source for our suppliers. 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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Inorganic Contaminants								
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3		0.185 (90^{th} percentile)	0.0238 to 0.407	Sep-17	No	Corrosion of household plumbing systems
Disinfectant(s) & Disinfection Byproducts								
Chlorine (ppm)	MRDL = 4	MRDLG = 4		0.87 (highest average)	0.39 to 1.59	2018	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A		58 (high site average)	17.1 to 59.4 (range of individual sites)	2018	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A		72 (high site average)	21.8 to 96.3 (range of individual sites)	2018	No	Byproduct of drinking water disinfection.

PUBLIC NOTICE REGARDING UNREGULATED CONTAMINANT MONITORING

Your drinking water has been sampled for a series of unregulated contaminants. Unregulated contaminants are those for which EPA has not established drinking water standards. There are no MCLs and therefore no violations if found. The purpose of monitoring for these contaminants is to help EPA determine where the contaminants occur and whether they should have a standard. Rattlesnake Ridge also tested for Unregulated Contaminants, but none were found at detectable levels. As our customers, you have a right to know that these data are available. If you are interested in examining the results, please contact our office during normal business hours.

This report will not be mailed unless requested. Please contact our office if you would like to receive a copy.