Cumberland County Water District
Water Quality Report 2023

Water System ID: KY0290271 Manager: Matthew Dyer 270-864-3133	CCR Contact: Matthew Dyer 270-864-3133 cumberlandcowater@gmail.com	Mailing Address: 133 Lower River Street Burkesville, KY 42717	Meeting location and time: 133 Lower River Street 2nd & 4th Monday at 6:00 PM

Cumberland County Water District purchases water from Burkesville and Albany. Generally, customers north of the Cumberland River receive water from Burkesville and south of the river from Burkesville and/or Albany. Burkesville treats surface water from the Cumberland River. The protection zones lie mostly within forested and agricultural land. There is small potential for pollution due to the rural nature of the community and the high volume of water flow in the Cumberland River. The highest potential for contamination is from the major highways, bridges, culverts, oil and gas wells, and agricultural activities within the drainage area above the intake.
Albany treats surface water from Lake Cumberland. An analysis of the susceptibility of the water source to contamination indicates that this susceptibly is low. Non-point source contamination from a golf course, land cover, bridges, and oil wells are the main sources of potential contamination for this water system. A small concern however is the large concentration of recreational watercraft that are drawn to the 76 Falls location during the summer months and the large number of permitted, non-permitted, and abandoned oil wells in the three protection zones. The respective Source Water Assessment Plans are available for viewing at the Water District office, Burkesville City Hall, or Albany City Hall. Test results within this report: (A) Albany; (B) Burkesville; (C) Cumberland County Water District.

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).

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 water system is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact your local water system. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available 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.
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.

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.

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.

Regulated Contaminant Test Results			**Cumberland County Water District**				
Contaminant [code] (units)	**MCL**	**MCLG**	**Report Level**	**Range of Detection**	**Date of Sample**	**Violation**	**Likely Source of Contamination**
Microbiological Contaminants							
E.coli Bacteria % positive samples	0%	0	2	N/A	2023	Yes	Human and animal fecal waste
Disinfectants/Disinfection Byproducts and Precursors							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.25 (highest average)	0.48 to 2.79	2023	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	46 (high site average)	18 to 48 (range of individual sites)	2023	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	61 (high site average)	36.3 to 72.6 (range of individual sites)	2023	No	Byproduct of drinking water disinfection.
Household Plumbing Contaminants							
Copper [1022] (ppm) Roun sites exceeding action level 0	AL = 1.3	1.3	0.053 (90^{th} percentile)	0 to 0.107	Jul-22	No	Corrosion of household plumbing systems
Lead [1030] (ppb) Round 1 sites exceeding action level 0	AL = 15	0	0 (90^{th} percentile)	0 to 6	Jul-22	No	Corrosion of household plumbing systems

Violation 2023-9953261 - On 6/14/2023 one of our routine bacteriological samples tested positive for E.coli. A sample collected on 6/15/2023 downstream from the original site also tested positive for E.coli. On 6/16/2023 a set of three repeat samples indicated no presence of the bacteria. We received a violation for exceeding the MCL for E.coli. E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems. A public notice was issued on 6/16/2023. This issue was resolved after all required repeat sampling was completed.

Violation 2023-9953262 - We received another violation because our public notification certification documents for violation 2023-9953261 were not submitted to the Kentucky Division of Water within 10 days of distributing the public notice. The certification documents were submitted but were not received by the Division of Water within the time period required.

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system. During the past year we were required to conduct one Level 1 assessment. One Level 1 assessment was completed. In addition, we were required to take one corrective action and we completed one action.

Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions. We were required to complete a Level 2 assessment because we found E. coli in our water system. In addition, we were required to take one corrective action and we completed one action.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We found E. coli bacteria, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

Regulated Contaminant Test Results - Albany (A); Burkesville (B)								
Contaminant [code] (units)	**MCL**	**MCLG**	**Source**	**Report Level**	**Range of Detection**	**Date of Sample**	**Violation**	**Likely Source of Contamination**
Barium [1010] (ppm)	2	2	A B	0.023 0.023	0.023 to 0.023 0.023 to 0.023	2023	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	A B	0.38 0.82	0.25 to 0.5 0.82 to 0.82	2023	No	Water additive which promotes strong teeth
Nickel (ppb) (US EPA remanded MCL in February 1995.)	N/A	N/A	A	2.5	2 to 3	2023	No	N/A
Nitrate [1040] (ppm)	10	10	A B	0.251 0.1	0 to 0.251 0.1 to 0.1	2023	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Disinfectants/Disinfection Byproducts and Precursors								
Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios)	TT*	N/A	A B	1.09 1.13	1 to 1.63 1 to 1.52	2023	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 Constituents								
Turbidity (NTU) TT * Representative samples	**Allowable Levels**		**Source**	**Highest Single Measurement**	**Lowest Monthly %**	**Violation**	**Likely Source of Turbidity**	
Turbidity is a measure of the clarity of the water and not a contaminant.	No more than 1 NTU Less than 0.3 NTU in 95% monthly samples		A B	0.18 0.09	100	No	Soil runoff	

Copies of this report are available at our office. To request a copy call 270-864-3133.