

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.

**Variations & 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.

## Lyon County Water District Water Quality Report 2021

To request a paper copy call (270) 388-0271.



### Water System ID: KY0720933

Manager: Mathew Blanc  
CCR Contact: Mathew Blanc  
270-388-0271

Mailing address:  
P.O. Box 489  
Kuttawa, KY 42055

Meeting location and time:  
Water District Office – 5464 U.S. Hwy 62 West  
2nd Tuesday each month at 8:00 AM

This report is designed to inform the public about the quality of water and services provided on a daily basis. Our commitment is to provide a safe, clean, and reliable supply of drinking water. We want to assure that we will continue to monitor, improve, and protect the water system and deliver a high quality product.

Lyon County Water District purchases water from five different suppliers. Princeton, Eddyville, Kuttawa, and Barkley Lake Water District treat surface water from Lake Barkley. Crittenden-Livingston Water District treats surface water from the Cumberland River. Each of these suppliers has conducted an analysis of susceptibility to contamination and the overall susceptibility is generally moderate. Areas of high concern include highway and marine transportation corridors, underground storage tanks, agricultural land use, and waste generators. The respective Source Water Assessment Plans are available for review at each of the water producers. Contact information for our suppliers can be obtained by calling our office at 270-388-0271.

For specific service areas contact the Lyon County Water District. General service areas of the county for each supplier:

Princeton – serves east central  
Kuttawa – serves area near Kuttawa and northwest  
Eddyville – serves area near Eddyville and northeast  
Barkley Lake Water District – serves southeast  
Crittenden-Livingston Water District – serves north

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).

#### Information About Lead:

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>.

<b>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.</b>								
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. <b>Copies of this report are available upon request by contacting our office during business hours.</b>								
<b>Regulated Contaminant Test Results - Princeton (P); Kuttawa (K); Eddyville (E); Lyon Co (L)</b>								
Contaminant [code] (units)	MCL	MCLG	Source	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Combined radium (pCi/L)	5	0	P	0.545	0.545 to 0.545	2021	No	Erosion of natural deposits
Barium [1010] (ppm)	2	2	P K E	0.027 0.024 0.023	0.027 to 0.027 0.024 to 0.024 0.023 to 0.023	2021	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	P K E	0.8 0.74 0.72	0.8 to 0.8 0.74 to 0.74 0.72 to 0.72	2021	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	P K E	0.595 0.317 0.0735	0.595 to 0.595 0.317 to 0.317 0.0735 to 0.0735	2021	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios)	TT*	N/A	P K E	1.27 1.87 3.75	1 to 2 1.43 to 4 2.22 to 5.06	2021	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.								
Chlorine (ppm)	MRDL = 4	MRDLG = 4	L	1.21 (highest average)	0.44 to 2.20	2021	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	L	58 (average)	10.9 to 73.2 (range of individual sites)	2021	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	L	59 (average)	28 to 100 (range of individual sites)	2021	No	Byproduct of drinking water disinfection.
<b>Household Plumbing Contaminants</b>								
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	L	0.095 (90 <sup>th</sup> percentile)	0.004 to 0.14	2021	No	Corrosion of household plumbing systems
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	L	0 (90 <sup>th</sup> percentile)	0 to 5	2021	No	Corrosion of household plumbing systems
<b>Other Constituents</b>								
Turbidity (NTU) TT	Allowable Levels	Source	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity		
* Representative samples	No more than 1 NTU* Less than 0.3 NTU in 95% monthly samples	P K E	0.21 0.297 0.09	100	No	Soil runoff		

<b>Regulated Contaminant Test Results - Barkley Lake Water District (BL); Crittenden-Livingston W.D. (CL)</b>								
Contaminant [code] (units)	MCL	MCLG	Source	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Combined radium (pCi/L)	5	0	CL	0.42	0.42 to 0.42	2017	No	Erosion of natural deposits
Barium [1010] (ppm)	2	2	BL	0.028	0.028 to 0.028	2021	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	BL CL	0.84 0.79	0.84 to 0.84 0.79 to 0.79	2021	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	BL CL	0.567 0.26	0.259 to 0.567 0.26 to 0.26	2021	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios)	TT*	N/A	BL CL	1.77 0.81	1.52 to 2.07 -6.22 to 2.12	2021	No Yes	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.								
<b>Other Constituents</b>								
Turbidity (NTU) TT	Allowable Levels	Source	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity		
* Representative samples	No more than 1 NTU* Less than 0.3 NTU in 95% monthly samples	BL CL	0.1 0.13	100	No	Soil runoff		

TOC violation – Crittenden-Livingston received a violation for failing to meet the treatment technique for TOC. They believe this was due to a lab error and are considering contracting with another lab. Total organic carbon (TOC) has no health effects. However, total organic carbon, provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes, or THMs, and haloacetic acids, or HAAs. Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

Violation 2022-9517323  
We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During September 2021, we did not complete all monitoring or testing for total coliform bacteria, and therefore cannot be sure of the quality of your drinking water during that time.

Each month we are required to collect and send eight bacteriological samples to a certified laboratory for analysis. We inadvertently failed to collect four of the samples on one of our scheduled weeks. There is nothing you need to do at this time. You may continue to drink the water. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

For more information, please contact Mathew Blane at 270-388-0271 or P.O. Box 489, Kuttawa, KY 42055

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 a public place or distributing copies by hand or mail.