2023 Consumer Confidence Report

WATER SYSTEM: Christian County Water District KY PWSID: KY0240521

CONTACT NAME: James Owen PHONE NUMBER: 270/886/3696 EMAIL: jameso@ccwd.net

PUBLIC MEETING LOCATION: 1940 Dawson Springs Road Hopkinsville, KY 42240 DATE & TIME: 1st Thursday each month at 6:00 pm

We test our drinking water as required by the state and federal regulations. This report shows the results of monitoring from January 2023 to December 2023. Christian County Water District is only required to test for some contaminants periodically, so the results listed in this CCR may not be from the previous year. Only detected contaminants are included in this report. For a list of all contaminants we test for please contact us.

WHERE DOES MY WATER COME FROM?

SOURCE(S) OF WATER: Hopkinsville Water Environment Authority / Barkley Lake Water District / Todd County Water District

TYPE OF WATER SOURCE: SURFACE WATER

SOURCE WATER ASSESSMENT/WELLHEAD PROTECTION PROGRAM INFORMATION: On page 2&3

WATER QUALITY TABLES

Table of Lead and Copper Detections

Contaminant (units) [Sample Year]	Action Level (AL)	MCLG	# of Individual Taps over AL	90% of taps tested were less than	Range of Samples	In Compliance?	Typical Source of Contamination
Lead (ppb) [2021]	15 ppb	0 ppb	0	2	2-3	yes	Corrosion of household plumbing systems; erosion of natural deposits
	0 out of 30 taps were found to have levels in excess of the lead action level of 15 ppb						
Copper (ppm) [2021]	1.3 ppm	1.3 ppm	0	.136	.003 - .559	yes	Corrosion of household plumbing systems; erosion of natural deposits
	0 out of 30 taps were found to have copper levels in excess of the copper action level of 1.3 ppm						

Important Information about Lead

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. Christian County Water District 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 Christian County Water District at 270-886-3696 or office@ccwd.net. 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.

Table of Disinfectants/Disinfection Byproducts and Precursors

Contaminant (*units*)	MCLG or MRDLG	MCL, TT*, or MRDL	Level Detected	Range	In Compliance?	Sample Year	Typical Source
Chlorine (*ppm*)	=4	=4	1.73 (*highest average*)	0.25-2.90	Yes	2023	Water additive used to control microbes
HAA (*ppb*) *[Haloacetic acids]*	N/A	60	41 (*high site average*)	29-57	Yes	2023	Byproduct of drinking water disinfection
TTHM (*ppb*) *[total trihalomethanes]*	N/A	80	48 (*high site average*)	31-65	Yes	2023	Byproduct of drinking water disinfection

*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average must be 1.00 or greater for compliance.

Hopkinsville Water Environment Authority Source Water Assessment

The final source water assessment with a summary of our system's susceptibility to potential sources of contamination has been completed. A brief summary of this assessment for HWEA (PWSID #KY0240201) (WW0251) is as follows:

An analysis of HWEA's water supply indicates that there are fifty-three potential contaminant sites with the possibility of contaminating the water supply located within the watershed. Sources of high potential impact include underground and above ground storage tank facilities, hazardous materials transfer and storage, and landfills, all of which share the possibility of leakage, spill, or leaching of unwanted contaminants. Sources of moderate to low potential impact include those from agricultural operations, an inactive rock quarry, and failing septic systems. The complete Susceptibility Analysis Report is available at the HWEA's main office located at 401 E. 9th Street, Hopkinsville. For more information, please call (270) 887-1680.

Although these potential contaminant sources are within the HWEA watershed, the Moss Water Treatment Plant is able to treat the drinking water for its customers in accordance with all EPA Standards.

If you suspect anyone discharging a contaminant in an unsafe manner, please call HWEA at (270) 887-1680 or the Division of Water at (270) 824-7532.

Barkley Lake Water District Source Water Assessment

The source of your drinking water is Lake Barkley, which is a surface water source. An analysis of Barkley Lake Regional Water District's water supply, indicates there are six types of potential contaminate sites with the possibility of contaminating the water supply located within the watershed are underground storage tanks, and rock quarries. Other areas of concern are the water treatment plant of the district, roads, bridges, and highways that pose a risk of the possibility of hazardous materials entering the water supply from traffic accidents, spills, and illegal dumping. In addition to households which are connected to the public waste system present a source of contamination due to the possibility of failing septic systems. Farms located within the watershed present the possibility of silation, pathogens, pesticides, and fertilizer entering the water supply. The completer plan is available at the Barkley Lake Regional Water district billing office at 1420 Canton Road, Cadiz, Ky. 42211.

Todd County Water District / Logan/Todd Regional Water Commission Source Water Assessment

Type and location of source water:

The Todd County Water District purchases all of its water from the Logan Todd Regional Water Commission (LTRWC). LTRWC produces treated water at the George W. Arnold Treatment Plant. The raw water intake is surface water located in the main channel of the Cumberland River, in Clarksville, Montgomery County, Tennessee. The protection area taken into consideration is from the LTRWC intake point to the Clarksville Water System intake upstream. Urban nonpoint source runoff may contribute contamination to the water supply by delivering sediment, oil and grease, road salt, fertilizer, pesticides, nutrients, and other contaminants to the Cumberland River. Transportation corridors pose a significant threat to water quality. Transportation accidents can release substances into the water supplies, threatening water quality. Tractor-trailers, Barges, rail cars and pipelines all have the potential for adverse impact to our water supply. A state primary road-TN 13- crosses the Cumberland River, as do the Cunningham Bridge and the L&N Railroad Bridge. Water sources have been rated as reasonably susceptible (high), moderately susceptible (moderate) or slightly susceptible (low) based on geologic factors and human activities in the vicinity of the water source. The water source for LTRWC is rated as reasonably susceptible to potential contamination. For more information regarding the LTRWC source water protection area and plan, contact LTRWC located at 248 Tower Street in Guthrie, Kentucky

Important Information about Your Drinking Water

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 can 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, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water 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 storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink the EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

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

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).

Definitions & Acronyms

Maximum Contaminant Level (MCL): *(required definition)*	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): *(required definition)*	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 contamination.
Treatment Technique (TT):	A required process intended to reduce the level of a contaminant in drinking water.
Action Level (AL):	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions:	State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
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.
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.

2023 Water Quality Data

The data presented in this report is from the most recent testing done in accordance with administrative regulations in 401 KAR Chapter 8. As authorized and approved by the 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.

	Allowable Levels	Highest Single Level	Lowest Monthly %	Violation	Likely Source
1. Turbidity (NTU) TT * Representative samples	No more than 1 NTU* Less than 0.3 NTU 95% of samples each month. (Population >10,000)	0.09	100%	No	Soil runoff
		Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration.			

Regulated Contaminant Test Results							
Contaminant [code] (units)	**MCL**	**MCLG**	**Report Level**	**Range**	**Date of Sample**	**Violation Yes/No**	**Likely Source of Contamination**
Microbial Contaminants							
E. coli Bacteria 0% positive samples	0%	0	0%	N/A	N/A	No	Human and animal fecal waste
Radioactive Contaminants							
Combined Radium (pCi/L)	5	0	0.7	0.7-0.7	February 2023	No	Erosion of natural deposits
Inorganic Contaminants							
Barium [1010] (ppm)	2.0	2.0	0.048	0.048 - 0.048	January 2023	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4.0	4.0	0.80	0.80 - 0.80	January 2023	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	2.63	1.52 - 2.63	January 2023	No	Fertilizer runoff; leaching from septic tanks; sewage; erosion of natural deposits

Maximum Contaminant Levels (MCLs) 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.

Contaminant	MCL	MCLG	Report Level	Range	Date of	Violation	Likely Source of
Disinfectants/Disinfection Byproducts and Precursors							
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio*)	TT	N/A	1.86 (lowest average)	0.80 - 2.67 (monthly ratios*)	2023	No	Naturally present in environment
*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Lowest annual average of the monthly ratios must be 1.00 or greater to meet the treatment technique.							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.44 (highest average)	0.21 - 2.53	2023	No	Water additive used to control microbes
Haloacetic acids or HAA (ppb) (Stage 2)	60	N/A	47 (high site average)	19 – 73	2023	No	By-product of drinking water disinfection
Total Trihalomethanes or TTHM (ppb) (Stage 2)	80	N/A	49 (high site average)	23 – 80	2023	No	By-product of drinking water disinfection

Secondary contaminants do not have a direct impact on the health of the consumers. They are being included to provide additional information about the quality of the water.

Secondary Contaminant	Maximum Allowable Level	Report Level	Range of Detection	Date of Sample
Aluminum	0.05 to 0.2 mg/l	0.04	0.04 to 0.04	March 2023
Chloride	250 mg/l	19.4	19.4 to 19.4	March 2023
Corrosivity	Noncorrosive	-0.568	-0.568 to -0.568	March 2023
Fluoride	2.0 mg/l	0.75	0.75 to 0.75	March 2023
pH	6.5 to 8.5	7.21	7.21 to 7.21	March 2023
Sulfate	250 mg/l	12.4	12.4 to 12.4	March 2023
Total Dissolved Solids	500 mg/l	207	207 to 207	March 2023

Unregulated Contaminants

Your drinking water has been sampled for a series of unregulated contaminants. Unregulated contaminants are those that 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. 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.

Unregulated Contaminants (UCMR 5)	Average (ppb)	Range (ppb)	Date of Sample
perfluorohexanoic acid (PFHxA)	0.003	0 to 0.0055	December 2023
1H,1H, 2H, 2H-perfluorooctane sulfonic acid (6:2FTS)	0.012	0 to 0.023	December 2023
perfluoropentanoic acid (PFPeA)	0.002	0 to 0.0049	December 2023

	Average (ppm)	Range of Detection
Fluoride (added for dental health)	0.8	0.70 - 0.93
Sodium (EPA guidance level = 20 mg/l)	7.1	6.66 - 7.56

Important Information about Lead

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http://www.epa.gov/safewater/lead

Lead and Copper Test Results

Contaminant (Units) [Sample Year]	Action Level (AL)	MCLG	Number of Individual Taps Over AL	90% of Taps Tested Were Less Than	Range of Samples	In Compliance?	Likely Source of Contamination
• Copper (ppm) [2021] (0 sites exceeded the AL)	1.3 ppm	1.3 ppm	0	0.0627	0.0017 - 0.128	Yes	Corrosions of household plumbing systems; erosion of natural deposits
	0 out of 30 taps were found to have levels in excess of the copper action level of 1.3 ppm						
• Lead (ppb) [2021] (0 sites exceeded the AL)	15 ppb	0 ppb	0	0.0	0.0 - 2.0	Yes	Corrosions of household plumbing systems; erosion of natural deposits
	0 out of 30 taps were found to have levels in excess of the lead action level of 15 ppb						
Lead and Copper monitoring is done together during the months of June, July, August and September.							

1 part per million (ppm)

4 drops of ink mixed in a 55 gallon barrel of water

1 part per billion (ppb)

1 drop of ink mixed in a 9000 gallon water tank truck

Logan/Todd Regional Water Commission 2023 Water Quality Data

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. Unless otherwise noted, the report level is the highest level detected.

	Allowable Levels	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source
Turbidity (NTU) TT * Representative samples of filtered water	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples	0.077	100	No	Soil runoff

Regulated Contaminant Test Results

Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Inorganic Contaminants							
Barium (ppm)	2	2	0.0239	0.0239 to 0.0239	Jun-23	No	Drilling wastes; metal refineries; erosion of natural deposits.
Fluoride (ppm)	4	4	0.804	0.804 to 0.804	Jun-23	No	Water additive which promotes strong teeth.
Nitrate (ppm)	10	10	0.321	0.321 to 0.321	Feb-23	No	Fertilizer runoff; leaching from septic tanks., sewage; erosion of natural deposits.
Disinfection/Disinfection Byproducts and Precursors							
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.79 (lowest average)	1.67 to 1.85	2023	No	Naturally present in environment.
*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average of the monthly ratios must be 1.00 or greater for compliance.							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	2.50 (highest average)	1.6 to 3.1	2023	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids] (Annual Sample)	60	N/A	30 (high site)	30 to 30	2023	No	Byproduct of drinking water disinfection.
TTHM (ppb) (Stage 2) [Total trihalomethanes] (Annual Sample)	80	N/A	45 (high site)	45 to 45	2023	No	Byproduct of drinking water disinfection.

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.

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.

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.

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

Logan/Todd Regional Water Commission

Water Quality Data 2023

	Average	Maximum	Minimum
pH	7.86	8.23	6.87
Alkalinity (ppm or mg/L)	87.33	108	68
Hardness (ppm or mg/L)	100.86	122	84
Chlorine (Total) (ppm or mg/L)	2.9	3.5	2.2
Chlorine (Free) (ppm or mg/L)	2.7	3.2	2.0
Turbidity (NTU)	0.023	.062	0.014
Fluoride (ppm or mg/L)	.85	1.12	.10
Iron (ppm or mg/L)	0.01	0.05	0
Manganese (ppm or mg/L)	0.011	0.120	0.000
Trihalomethanes (ppm or mg/L)	45	45	45
Haloacetic Acids (ppm or mg/L)	30	30	30
Total Organic Carbon	44.8% Removal	46.2% Removal	41.7% Removal
Conductivity (µS/cm)	248	292	219
Langlier Index	-0.064	0.337	-1.011

Todd County Water District 2023 Water Quality Data
KY1100944

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. The folowing contaminants were detected by Logan Todd Regional Water Commission, Turbidity,Barium,Floride, Nitrate and Total Orgainc Carbon. All other contaminants where detected by Todd County Water District.

	Allowable Levels	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source
Turbidity (NTU) TT * Representative samples of filtered water	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples	0.077	100	No	Soil runoff

Regulated Contaminant Test Results

Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Microbiological Contaminants							
Total Coliform Bacteria # or % positive samples	1	0	1	N/A	Aug-23	No	Naturally present in the environment
Inorganic Contaminants							
Barium [1010] (ppm)	2	2	0.0239	0.0239 to 0.0239	Jun-23	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	0.804	0.804 to 0.804	Jun-23	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	0.321	0.321 to 0.321	Feb-23	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Disinfectants/Disinfection Byproducts and Precursors							
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.79 (lowest average)	1.67 to 1.85 (monthly ratios)	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.							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.64 (highest average)	0.67 to 2.3	2023	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	(high site average) 0.038	0.027 to 0.052 (range of individual sites)	2023	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	(high site average) 61	37 to 82 (range of individual sites)	2023	No	Byproduct of drinking water disinfection.
Household Plumbing Contaminants							
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.066 (90^{th} percentile)	0.003 to 0.111	Sep-22	No	Corrosion of household plumbing systems

Unregulated Contaminants (UCMR 5)	Average	Range (ppb)	Date
PFBA	0.0074	0.0074	4/3/2023

Your drinking water has been sampled for a series of unregulated contaminants. Unregulated contaminants are those that EPA has not yet established drinking water standards, or limits to the amount of contaminant deemed safe for drinking water. The purpose of UCMR is to establish the presence of contaminants and determine if/when they will need to be removed from your drinking water.

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.

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 — Barkley Lake Regional Water District

Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Inorganic Contaminants							
Barium [1010] (ppm)	2	2	0.022	0.022 to 0.022	Aug-23	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	0.87	0.87 to 0.87	Aug-23	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	0.489	0.255 to 0.489	Feb.-23	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Disinfectants/Disinfection Byproducts and Precursors							
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	2.02 (lowest average)	1.00 to 3.41 (monthly ratios)	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.							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.44 (highest average)	0.69 to 2.2	2023	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	28 (high site average)	13 to 36 (range of individual sites)	2023	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	40 (high site average)	27 to 58 (range of individual sites)	2023	No	Byproduct of drinking water disinfection.
Household Plumbing Contaminants							
Copper [1022] (ppm) Round 1 sites exceeding action level 0	AL = 1.3	1.3	0.475 (90th percentile)	0.01 to 0.886	Aug-23	No	Corrosion of household plumbing systems
Lead [1030] (ppb) Round 1 sites exceeding action level 3	AL = 15	0	13 (90th percentile)	0 to 46	Aug-23	No	Corrosion of household plumbing systems

Other Constituents					
Turbidity (NTU) TT * Representative samples	**Allowable Levels**	**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% of monthly samples	0.1	100	No	Soil runoff

Your drinking water has been sampled for a series of unregulated contaminants. Unregulated contaminants are those that 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. 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.

	Average	Range of Detection
Fluoride (added for dental health)	0.9	0.84 to 1.03
Sodium (EPA guidance level = 20 mg/L)	4.4	4.39 to 4.39

Secondary contaminants do not have a direct impact on the health of consumers. They are being included to provide additional information about the quality of the water.

Secondary Contaminant	Maximum Allowable Level	Report Level	Range of Detection	Date of Sample
Aluminum	0.05 to 0.2 mg/l	0.06	0.06 to 0.06	Aug-23
Chloride	250 mg/l	11.9	11.9 to 11.9	Aug-23
Copper	1.0 mg/l	0.025	0.025 to 0.025	Aug-23
Corrosivity	Noncorrosive	-0.827	-0.827 to -0.827	Aug-23
Fluoride	2.0 mg/l	0.86	0.86 to 0.86	Aug-23
pH	6.5 to 8.5	7.21	7.21 to 7.21	Aug-23
Sulfate	250 mg/l	17.7	17.7 to 17.7	Aug-23
Total Dissolved Solids	500 mg/l	143	143 to 143	Aug-23