PWSID # KY0240201

Hopkinsville Water Environment Authority

2023 Water Quality Report

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What's Inside?

In compliance with the federal Drinking Water Act Amendments, the Hopkinsville Water Environment Authority (HWEA) is providing its customers with our annual Water Quality Report. Some language in this report is mandated by the EPA and is included verbatim from federal regulations. This report explains where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and State standards for the period of January 1, 2023 to December 31, 2023. We are pleased to supply you with this report that shows that HWEA produced drinking water in 2023 consistently in compliance with EPA's most stringent standards. For more information about your drinking water, please contact us at (270) 887-1680.

Our Public Meetings are held at 12 pm the last Thursday of each month at 401 E. 9th Street in Hopkinsville. For more information about our public meetings, please call (270) 887-4237.

Celebrating 125 Years

HWEA Est. 1895

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

A Special Note

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, persons 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 /Center for Disease Control and Prevention (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** :

1 (800) 426-4791

Substances Expected to be in 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 may pick up substances resulting from the presence of animal and human activities.

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:

1 (800) 426-4791

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

Contaminants that may be present in source water before it is treated 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, 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.

Area Wide Optimization Program (AWOP)

The Hopkinsville Water Environment Authority is proud to announce that the McKenzie T. Moss Water Treatment Plant has received the 2023 AWOP Microbial Certification from the Kentucky Division of Water. The AWOP certification encourages water systems to optimize turbidity removal and reduce Disinfection By-Product (DBP) formation. The AWOP goals are more stringent than the standard regulations; thus, providing many health benefits.

HWEA's water treatment plant is operated 24 hours per day, 7 days per week by staff who conduct 125 quality control tests each day in order to produce safe, reliable drinking water.

2012 - 2013 - 2017 - 2018 - 2019 - 2020 - 2021 - 2022 - 2023

Water Sources

Hopkinsville's raw water supply is composed of three surface water sources, namely, Lake Barkley, the North Quarry and the South Quarry.

Lake Barkley is a surface water impoundment located in Livingston, Lyon and Trigg counties. Created in 1966 by impounding the Cumberland River, Lake Barkley has a surface area of almost 58,000 acres at it's summer pool elevation of 359 feet mean sea level. The North and South Quarries have capacities of over 1.2 billion and 280 million gallons, respectively.

HWEA regulates how much water is withdrawn from these sources by operating raw water pumps located at each impoundment. HWEA typically withdraws raw water from Lake Barkley and pumps the water directly to the South Quarry. From the South Quarry, water is pumped into the Moss Water Treatment Plant for treatment.

On average HWEA produces an average of 6.79 million gallons per day of drinking water for the City of Hopkinsville and Christian County. The peak demand for water was 10.16 million gallons per day.

HWEA's Moss Water Treatment Plant

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.

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

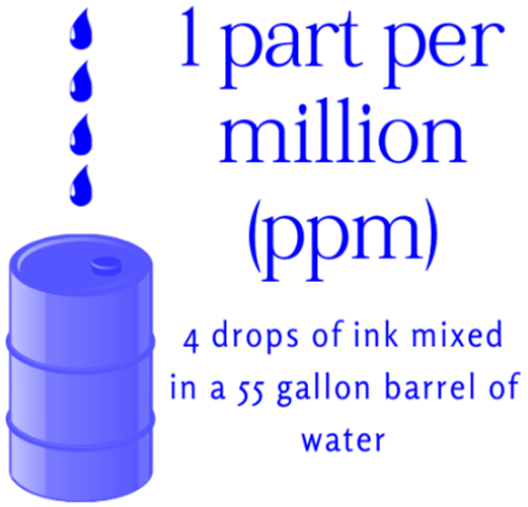
Important Information about Lead

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. HWEA 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 HWEA at (270) 887-4232. 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

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.							



Definitions

These definitions may help you better understand the information provided in the data table. If you would like more information regarding any contaminant or help understanding what the numbers mean for you, please call our main office at (270) 887-1680.

Below Detection Limit (BDL) - Laboratory analysis indicates that the contaminant is not present.

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 (ug/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.

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

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

90th Percentile – 90 % of the collected samples had detectable levels at or below the indicated value.

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

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.

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.

If the amount of a contaminant exceeds a safe level in your drinking water, the Hopkinsville Water Environment Authority will notify you via newspaper, radio, social media and via our website. With notification, you will be instructed on what appropriate actions you can take to protect your family's health.

 or 

If you are interested in learning more about your water system and water quality, there are a number of opportunities available.

Check out our website:

www.hwea-ky.com

Call (270) 887-4246 to:

- Report a water main leak or suspected meter tampering
- Ask a billing question
- Get copies of this report
- Schedule a service call
- **Before** you call a plumber for sewer obstructions.

Call (270) 887-4232 to:

- Ask about water quality
- Report any after hours, weekend or holiday emergencies
- Contact the Moss Water Treatment Plant

This report contains important information about your drinking water. To request a paper copy, please call (270) 887-1680

MISSION STATEMENT

Our mission at the Hopkinsville Water Environment Authority is to produce safe, clean, high quality water, while pursuing **EXCELLENCE** in customer service.

We dedicate ourselves to this mission by producing outstanding drinking water and treating wastewater with **INTEGRITY**, professionalism and pride in order to enhance the quality of life for our customers and protect our environment for future generations.

We support the economic development and growth of our **COMMUNITY** by providing these services at fair, reasonable rates in our effort to be the leader and premier water and wastewater utility in the region.

Celebrating 125 Years

HWEA

Est. 1895