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.

City of Cynthiana

Water Quality Report for 2023

Water System ID: KY0490096
Manager: Todd Blanton
(859) 234-7159
CCR Contact: Todd Blanton
todd.blanton@cynthianaky.com

Mailing address:
P.O. Box 67
Cynthiana, KY 41031

Meeting location and time:
Harrison County Board of Education
308 Webster Avenue
First and Third Tuesdays each month at 5:30 PM

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.

The City of Cynthiana's water source is surface water. We have two sources of water. The primary source is the South Fork of the Licking River, which begins in Bourbon County with the confluence of Hinkston and Stoner Creeks at Ruddles Mill. The second source is the Main Licking River at the Devils Backbone. We have completed a Source Water Assessment Plan (SWAP) and the following is a summary of our system's susceptibility to contamination. An analysis of the susceptibility of the Cynthiana water supply to contamination indicates that this susceptibility is generally moderate. There are, however, a few areas of high concern. Several bridges, a railroad, areas of row crops, sewer lines, several firms that treat, store or dispose of hazardous waste, a historical landfill, an airport, a KPDES permitted discharger, several waste generators and/or transporters and recreational grasses are present in the vicinity of the intakes. There are numerous permitted operations and activities and other potential contaminant sources within the watersheds. These potential contaminant sources include underground storage tanks, forest areas, major roads and firms that handle hazardous wastes. The complete Source Water Assessment (SWAP) can be viewed at either the Water Treatment Plant, at 201 Waterworks/Abdallah Park Road, or the City Clerk's Office, at 141 East Pike Street, Suite One.

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:

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.

This report will not be mailed. If you would like a copy mailed to you, please contact our office.

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 — Cynthiana Municipal Water Works

Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Radioactive Contaminants							
Alpha emitters [4000] (pCi/L)	15	0	3.9	3.9 to 3.9	Apr-21	No	Erosion of natural deposits
Inorganic Contaminants							
Barium [1010] (ppm)	2	2	0.02	0.02 to 0.02	May-23	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	0.84	0.84 to 0.84	May-23	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	2.7	2.7 to 2.7	Jan-23	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Synthetic Organic Contaminants including Pesticides and Herbicides							
Atrazine [2050] (ppb)	3	3	BDL	BDL to 0.29	Jun-23	No	Runoff from herbicide used on row crops
Disinfectants/Disinfection Byproducts and Precursors							
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.58 (lowest average)	0.83 to 2.61 (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	1.05 (highest average)	0.2 to 2.15	2023	No	Water additive used to control microbes.
Chlorite (ppm)	1	0.8	0.81 (average)	0.37 to 0.84	2023	No	Byproduct of drinking water disinfection.
Chlorine dioxide (ppb)	MRDL = 800	MRDLG = 800	320	0 to 320	2023	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	44 (high site average)	26 to 49 (range of individual sites)	2023	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	54 (high site average)	14.6 to 111.4 (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	0.261 (90th percentile)	0.015 to 0.296	Jul-23	No	Corrosion of household plumbing systems
Lead [1030] (ppb) Round 1 sites exceeding action level 0	AL = 15	0	5 (90th percentile)	0 to 11	Jul-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	0.153	100	No	Soil runoff

	Average	Range of Detection
Fluoride (added for dental health)	0.8	0.62 to 0.94
Sodium (EPA guidance level = 20 mg/L)	13.0	13 to 13

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	0.09	0.09 to 0.09	May-23
Chloride	250 mg/l	26	26 to 26	May-23
Corrosivity	Noncorrosive	-0.44	-0.44 to -0.44	May-23
Fluoride	2.0 mg/l	1.08	1.08 to 1.08	May-23
Odor	3 threshold odor number	1	1 to 1	May-23
pH	6.5 to 8.5	7.31	7.31 to 7.31	May-23
Sulfate	250 mg/l	19.2	19.2 to 19.2	May-23
Total Dissolved Solids	500 mg/l	188	188 to 188	May-23

Interesting Facts and Tips

In 1900, 25,000 Americans died of typhoid. By 1960, thanks to the use of chlorine in water treatment, that number dropped to 20.

The average faucet flows at a rate of 2 gallons per minute. You can save up to four gallons of water every morning by turning off the faucet while you brush your teeth.

If you drink your daily recommended 8 glasses of water per day from the tap, it will cost you about 50 cents per year. If you choose to drink it from water bottles, it can cost you up to $1,400 dollars.

A running toilet can waste up to 200 gallons of water per day.

You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.

Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.

Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.

Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

Quality On Tap!
Our Commitment Our Profession