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 request a paper copy of this report contact our office at 270-351-3222.

Hardin County 1 Water District

"Serving Hardin County Since 1952"

Water Quality Report 2023

Water System IDs: KY0470393 & KY0470990 & KY0470455

General Manager: Justin Metz
270-351-3222
CCR Contact: Chris Gohman
270-862-4340

Mailing address:
1400 Rogersville Road
Radcliff, KY 40160

Meeting location and time:
1400 Rogersville Road
Last Tuesday each month at 11:30 AM

We supplement our demand with Louisville Water Company, their source being the Ohio River, and Hardin County Water District No.2, their sources being the City Spring of Elizabethtown and White Mills Spring. During 2023 West Point became a part of Hardin County Water District #1. The water quality data for these systems have been added to the report.

All of the sources of raw water for our system can be identified as surface water. Hardin County Water District No. 1 and Ft. Knox Water updated the Wellhead Protection Plans (WHPPs) in 2021. Earlier WHPP efforts included identifying the area basins that drain into our raw water sources, to identify possible types and sources of contamination, and then to develop programs or additional measures to better protect this source waters. Pirtle Spring WTP found that its two separate sources do not share the same water. The Pirtle Spring, located at the plant site, collects water from a 27-square-mile area. The Head of Rough Spring, located about 1.5 miles from the water plant, receives water from a 17-squaremile area. Both of these watersheds are in largely agricultural areas and subject our treatment process to contaminants from agricultural runoff including fertilizers, pesticides, and herbicides.

Fort Knox personnel conducted a comprehensive inventory of existing wells for the West Point well field and surrounding 5.5-square-mile protection area, which serves Muldraugh WTP, as well as the 19.4-square-mile recharge area for McCracken Springs, which serves Central WTP. These inventories identify and monitor potential sources of contamination to the water supply. One of the primary management strategies included in the Ft. Knox WHPP is the use of control wells to protect the groundwater supply from chloride intrusion from nearby abandoned oil and gas wells.
A copy of these reports is available by contacting us during regular business hours.

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.

Regulated Contaminant Test Results - Hardin County #1 (HC1); Fort Knox (FK); West Point (WP)							
Contaminant [code] (units)	MCL	MCLG	Source	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Barium [1010] (ppm)	2	2	HC1 FK	0.031 0.026	0.031 to 0.031 0.026 to 0.026	2023	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	HC1 FK	0.76 0.72	0.76 to 0.76 0.72 to 0.72	2023	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	HC1 FK	1.59 0.673	1.59 to 1.59 0.673 to 0.673	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	HC1	1.71	1 to 3.68	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.								
Chloramines (ppm)	MRDL = 4	MRDLG = 4	HC1 FK WP	2.62 2.44 2.12	0.6 to 3.6 0.84 to 3.60 1.6 to 2.4	2023	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	HC1 FK WP	29 14 30	16 to 49 0 to 31 15 to 35	2023	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	HC1 FK WP	32 16 28	16 to 43 3 to 31 19 to 45	2023	No	Byproduct of drinking water disinfection.
Household Plumbing Contaminants								
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	HC1 FK WP	0.192 0.048 0.041	0.016 to 0.269 0 to 0.165 0.006 to 0.073	2022 2023 2023	No	Corrosion of household plumbing systems
Lead [1030] (ppb) sites exceeding action level 1	AL = 15	0	HC1 FK WP	2 2 2	0 to 6 0 to 50 0 to 4	2022 2023 2023	No	Corrosion of household plumbing systems
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		HC1 FK	0.132 0.089	100 100	No	Soil runoff	

Regulated Contaminant Test Results - White Mills (HCA); City Springs (HCB); Louisville Water Co. (LWC)							
Contaminant [code] (units)	MCL	MCLG	Source	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Barium [1010] (ppm)	2	2	HCA HCB LWC	0.035 0.046 0.022	0.035 to 0.035 0.046 to 0.046 0.022 to 0.022	2023	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	HCA HCB LWC	0.81 0.64 0.63	0.81 to 0.81 0.64 to 0.64 0.63 to 0.63	2023	No	Water additive which promotes strong teeth
Nickel (ppb) (US EPA remanded MCL in February 1995.)	N/A	N/A	HCA LWC	3 1.5	3 to 3 1.5 to 1.5	2023	No	N/A
Nitrate [1040] (ppm)	10	10	HCA HCB LWC	2.62 1.2 1.2	2.62 to 2.62 1.2 to 1.2 0.85 to 1.2	2023	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite [1041] (ppm)	1	1	LWC	0.013	BDL to 0.013	2013	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
2,4-D [2105] (ppb)	70	70	HCA	BDL	BDL to 0.25	2023	No	Runoff from herbicide used on row crops
Atrazine [2050] (ppb)	3	3	HCA HCB LWC	BDL BDL BDL	BDL to 0.7 BDL to 0.3 BDL to 0.1	2023	No	Runoff from herbicide used on row crops
Di(2-ethylhexyl)phthalate [2039] (ppb)	6	0	HCB	BDL	BDL to 3	2023	No	Discharge from rubber and chemical factories
Disinfectants/Disinfection Byproducts and Precursors								
Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios)	TT*	N/A	HCA HCB LWC	2.12 1.30 1.35	1.18 to 4.50 1.00 to 2.08 1.00 to 1.86	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		HCA HCB LWC	0.031 0.055 0.08	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.

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.