

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.



Water Quality Report 2018



To request a paper copy call (270) 422-5006.

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Manager: Tim Gossett

270-422-5006

CCR Contact: Tim Gossett

270-422-5006

Mailing address:

1003 Armory Place

Brandenburg, KY 40108

Meeting location and time:

Water District Office – 1003 Armory Place

Fourth Tuesday each month at 6:00 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.

Water Purchased From Hardin Co. #1

Hardin County Water District #1 owns and operates three treatment plants. The sources for the Pirtle Springs Plant is Pirtle Spring and Head of Rough Spring, both classified as groundwater under the influence of surface water. The sources for the Ft. Knox is surface water from McCracken Spring and groundwater from wells in the West Point aquifer. A small percentage (3.3%) of supplemental water was purchased from Hardin County #2 and Louisville Water Company. Hardin County #2 sources are City Spring of Elizabethtown and White Mills Spring and Louisville is the Ohio River. The overall susceptibility to contamination for these sources can be considered moderate but there are a few areas of concern. Potential contaminant sources include transportation corridors, urban areas, and agricultural activities. Potential contaminant sources for the wells include underground storage tanks, permitted outfalls, abandoned oil and gas wells, illegal dump sites, solvents, degreasing agents, and petroleum based products. Source Water Assessment Plans have been developed for each of these sources and are available for review at the respective water systems. Contact information for each water system may be obtained by calling our office.

Water Purchased From Brandenburg

The City of Brandenburg treats ground water from wells near the Ohio River in Flippin Run Park. A Wellhead Protection Plan and a Source Water Assessment has been completed for these wells. The susceptibility to contamination is considered moderate to high. Potential sources of contamination include above ground storage tanks and agricultural activities. The complete Source Water Protection Plan is available for review at Brandenburg City Hall.

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>.

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.

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.

	Allowable Levels	Source	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity
Turbidity (NTU) TT * Representative samples of filtered water	No more than 1 NTU* Less than 0.3 NTU in 95% monthly samples	H1 FK H2 LW	0.083 0.13 0.1 0.09	100	No	Soil runoff

Regulated Contaminant Test Results

Beta photon emitters (pCi/L)	50	0	FK	6.5	BDL to 6.5	2017	No	Decay of natural and man-made deposits
Alpha emitters [4000] (pCi/L)	15	0	FK	3.4	BDL to 3.4	2017	No	Erosion of natural deposits
Combined radium (pCi/L)	5	0	H1	1.3	1.3 to 1.3	2014	No	Erosion of natural deposits
Barium [1010] (ppm)	2	2	H1 BB H2	0.034 0.034 0.041	0.034 to 0.034 0.034 to 0.034 0.033 to 0.049	2018 2017 2018	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	H1 FK BB H2 LW	0.65 0.55 0.88 0.55 0.7	0.6 to 0.7 0.6 to 0.7 0.88 to 0.88 0.5 to 0.6 0.7 to 0.7	2018 2018 2017 2018 2018	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	H1 FK BB H2 LW	1.8 1.5 0.44 1.7 0.7	1.8 to 1.8 0.9 to 1.5 0.44 to 0.44 0.9 to 2.4 0.3 to 1.2	2018	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
2,4-D [2105] (ppb)	70	70	LW	0.3	BDL to 0.3	2018	No	Runoff from herbicide used on row crops
Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios)	TT*	N/A	H1 FK H2 LW	2.32 2.81 1.67 1.4	1.18 to 3.87 1 to 4.87 1 to 4.2 1 to 1.97	2018	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.

Unregulated Contaminants (UCMR 4)		average	range (ppb)		date
Manganese	L	1.6	0.6	to 2.4	2018
HAA6Br	L	5.33	0.94	to 12.39	2018
HAA9	L	27.54	3.48	to 60.03	2018
Manganese	FK	1.49	0.48	to 3.16	2018
HAA6Br	FK	2.14	0.905	to 4.07	2018
HAA9	FK	2.9	1.12	to 5.75	2018

Regulated Contaminant Test Results Meade County Water District

Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.387 (90 th percentile)	0.0077 to 0.769	Jul-16	No	Corrosion of household plumbing systems
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	3 (90 th percentile)	0 to 7	Jul-16	No	Corrosion of household plumbing systems
Chloramines (ppm)	MRDL = 4	MRDLG = 4	1.24 (highest average)	0.8 to 2.2	2018	No	Water additive used to control microbes.
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.24 (highest average)	0.42 to 2.2	2018	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	30 (high site average)	2 to 48 (range of individual sites)	2018	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	37 (high site average)	3 to 36 (range of individual sites)	2018	No	Byproduct of drinking water disinfection.

UCMR4 by Louisville and Fort Knox - 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.

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.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

During the past year we were required to conduct two Level 1 assessments. Two Level 1 assessments were completed. In addition, we were required to take two corrective actions and we completed two of these actions.

Violations:

2019-9668717 & 2019-9668718 – We failed to maintain the required chlorine residual throughout the distribution system on October 9, 14, and 27 and on November 3 and 4 of 2018. We have established procedures to maintain chlorine residuals at the required levels.

2019-9668719 - During the December 2018 compliance period, we did not complete all monitoring requirements by failing to correctly report our Level 1 Assessment on time. The Level 1 Assessment was submitted to Division of Water but not until after the 30 day time period that was required. No further actions are required at this time. A public notice was distributed for this violation.

Water Suppliers - Hardin Co. #1 (H1); Fort Knox (FK); Brandenburg (BB); Hardin Co. #2 (H2); Louisville Water Company (LW)