

**Some or all of these definitions may be found in this report:**

**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.

**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.

## *Harrison Co. Water Association Water Quality Report 2018*



Water System ID: KY0490179

Manager: Mark Patrick

859-234-4284

CCR Contact: Mark Patrick

859-234-4284

Mailing address:

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Cynthiana, KY 41031

Meeting location and time:

Water Office – US 27 South

Third Wednesday each month at 7:30 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.

Harrison Co. Water Association provides purchased water from several suppliers. Some of our suppliers purchase water from other producers. All of the water for our system comes from producers that treat surface water. The producers and their sources include: City of Cynthiana withdraws from South Fork of Licking River; Kentucky-American Water withdraws from Kentucky River and Jacobson Reservoir; City of Paris withdraws from Stoner Creek; Nicholas County Water District purchases from Western Fleming Water District and the city of Carlisle which withdraws from Licking River. Each of the producers has conducted an analysis of susceptibility to contamination and the overall susceptibility is considered moderate to moderately high. Areas of high concern include transportation corridors, underground and above ground storage tanks, agricultural land use, industrial sites, and waste generators. The respective Source Water Assessment Plans are available for review at each of the water producers. Contact information for our suppliers can be obtained by calling our office at 859-234-4284.

For specific service areas contact the Harrison Co. Water Association. General service areas for each producer: Cynthiana, Western Fleming, and Carlisle – blended water serves all of Harrison County, parts of Nicholas County and parts of Scott County  
Kentucky-American Water – serves northern part of Bourbon County  
Paris– directly serves approximately 40 homes on Peacock and Coultard Roads. Central Bourbon County is indirectly served water by way of the Millersburg-Kentucky American system.

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>.

**Suppliers: Carlisle (C), Cynthiana (CY), Kentucky-American (KA), Paris (P), Western Fleming (WF)**

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.

	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	C= CY= KA= P= WF=	0.29 0.237 0.08 2.1 0.09	100 100 100 100 100	No No No YES No	Soil runoff

**Regulated Contaminant Test Results:**

Contaminant [code] (units)	MCL	MCLG	Source	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Barium [1010] (ppm)	2	2	C= CY= P= WF=	0.013 0.01 0.02 0.018	0.013 to 0.013 0.01 to 0.01 0.02 to 0.02 0.018 to 0.018	2018	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	C= CY= KA= P= WF=	1 0.81 0.89 0.59 0.6	1 to 1 0.81 to 0.81 0.89 to 0.89 0.59 to 0.59 0.6 to 0.6	2018	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	C= CY= KA= P= WF=	0.39 2.3 0.6 1 0.5	0.39 to 0.39 2.3 to 2.3 0.6 to 0.6 1 to 1 0.5 to 0.5	2018	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios)	TT*	N/A	C= CY= KA= P= WF=	1.55 1.40 1.61 1.5 1.49	1 to 2.59 0.65 to 2.96 1.25 to 2.42 0.88 to 2.54 1 to 3.33	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.

Chlorite (ppm)	1	0.8	CY=	0.820 (average)	0.25 to 0.87	2018	No	Byproduct of drinking water disinfection.
Chlorine dioxide (ppb)	MRDL = 800	MRDLG = 800	CY=	110	0 to 110	2018	No	Water additive used to control microbes.

**Other Contaminants**

Cryptosporidium [oocysts/L]	0	TT (99% removal)	C= CY= WF=	3 3 3	12 3 9	2018	See note on Crypto	Human and animal fecal waste
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Cryptosporidium is a microbial pathogen found in surface water. Cryptosporidium was detected in 3 samples of 3 collected from the raw water source for Cynthiana. It was detected in 3 samples of 9 collected from the raw water source for Western Fleming and in 3 samples of 12 collected from the raw water source for Carlisle. It was not detected in the finished water. Current test methods do not enable us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Cryptosporidium must be ingested to cause disease and it may be spread through means other than drinking water.

**Harrison County Data**

Regulated Contaminant Test Results			Harrison County Water Association				
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
<b>Inorganic Contaminants</b>							
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.1 (90 <sup>th</sup> percentile)	0.01 to 0.58	Jul-18	No	Corrosion of household plumbing systems
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	3 (90 <sup>th</sup> percentile)	0 to 10	Jul-18	No	Corrosion of household plumbing systems
<b>Disinfectants/Disinfection Byproducts and Precursors</b>							
Chloramines (ppm)	MRDL = 4	MRDLG = 4	1.00 (highest average)	0.64 to 1.91	2018	No	Water additive used to control microbes.
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.00 (highest average)	0.21 to 1.52	2018	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	37 (high site average)	13 to 50 (range of individual sites)	2018	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	49 (high site average)	15.8 to 69.6 (range of individual sites)	2018	No	Byproduct of drinking water disinfection.

Unregulated Contaminants (UCMR 4)	average	range (ppb)	date
Manganese	2.951	0 to 9.7	Dec-18
HAA5	39.500	19 to 63	Nov-18
HAA6Br	4.717	2.5 to 6.4	Nov-18
HAA9	44.083	21 to 68	Nov-18

**Unregulated Contaminant Monitoring**

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

The above table shows results from Harrison County's testing. Kentucky American, Carlisle, and Cynthiana also tested for unregulated contaminants, but none we found at detectable levels in their water.

**Violation from Paris Water Works**

On April 18, 2018, Paris Water Works measured a turbidity of 2.1 NTUs, which is in excess of the allowed 1.0 NTU limit. They had a faulty coagulant pump which was immediately repaired. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. These symptoms are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.

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