

**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.

## *North Mercer Water District Water Quality Report 2016*



Water System ID: KY0840321  
Manager: Mischell Lee, 859-865-2292  
CCR Contact: Mischell Lee, 859-865-2292

Mailing address:  
PO Box 79, Salvisa, KY 40372

Meeting location and time:  
Water Office - 108 Main Street, Salvisa, KY  
Third Wednesday each month at 9:00 AM

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.

North Mercer Water District purchases water from the City of Harrodsburg. The following is a summary of the Harrodsburg water systems susceptibility to contamination. The Harrodsburg Water Department treats surface water from the Kentucky River near High Bridge. The susceptibility analysis indicates that this susceptibility is generally moderate although there are a few areas of high concern. Herrington Lake, a tributary to the Kentucky River, has been identified as impaired. The condition of this lake may indicate conditions in the watershed that could adversely affect source water quality. Other areas of high concern include a railroad bridge, a highway bridge, areas of row crops, a waste generator or transporter and a KPDES permitted discharger. Finally, there are numerous permitted operations and activities and other potential contaminant sources of moderate concern within the greater watershed that increase the potential for the release of contaminants within the area. These potential contaminant sources include large capacity septic systems, major roads, underground storage tanks, & Tier II hazardous chemical users.

North Mercer Water District also purchases a minimal amount of water from South Anderson Water District. Water from South Anderson is purchased water from the Lawrenceburg Water Department which treats surface water from the Kentucky River. The same susceptibilities to contamination exist as mentioned for the City of Harrodsburg. 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 859-865-2292.

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>.

### Harrodsburg and Lawrenceburg Results

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	H= L=	0.25 0.07	100	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	H= L=	0.02 0.02	0.02 to 0.02 0.02 to 0.02	2016	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	H= L=	0.8 0.8	0.8 to 0.8 0.8 to 0.8	2016	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	H= L=	0.6 0.4	0.6 to 0.6 0.4 to 0.4	2016	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	H= L=	1.30 2.9	1 to 1.82 1 to 4.78	2016	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 Contaminants

Cryptosporidium [oocysts/L]	0	TT	H= L=	2 2	9 9	2016	See Note Below	Human and animal fecal waste
	(99% removal)			(positive samples)	(no. of samples)			

Fluoride (added for dental health)	Average	Range of Detection
Harrodsburg	0.90	0.7 to 1
Lawrenceburg	0.80	0.7 to 0.9

Harrodsburg and Lawrenceburg were required to monitor the source of your drinking water for Cryptosporidium in order to determine whether treatment at the water treatment plants is sufficient to adequately remove Cryptosporidium from your drinking water. Each had two of the nine raw water samples tested during the past year that indicated the presence of Cryptosporidium.

### North Mercer Results

#### Regulated Contaminant Test Results

Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Total Coliform Bacteria # or % positive samples	TT	N/A	1	N/A	2016	No	Naturally present in the environment
Copper [1022] (ppm) sites exceeding action level 1	AL = 1.3	1.3	0.28 (90 <sup>th</sup> percentile)	0 to 2.04	Aug-16	No	Corrosion of household plumbing systems
Lead [1030] (ppb) sites exceeding action level 2	AL = 15	0	9 (90 <sup>th</sup> percentile)	0 to 75	Aug-16	No	Corrosion of household plumbing systems
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.17 (highest average)	0.57 to 1.85	2016	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	70 (high site average)	12 to 100 (range of individual sites)	2016	YES	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	69 (high site average)	18 to 105.2 (range of individual sites)	2016	No	Byproduct of drinking water disinfection.

### Violation 2016-9950418

North Mercer exceeded the MCL for haloacetic acids (HAA) during the first and third quarters of 2016. The standard for haloacetic acids is 0.060 mg/L. Listed below are the periods and values for each quarter. Public notices were distributed for each violation.

1/1/2016 through 3/31/2016 0.065 mg/L

7/1/2016 through 9/30/2016 0.070 mg/L

Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

We are working with our wholesale providers to minimize the formation haloacetic acids while ensuring we maintain an adequate level of disinfectant. The Harrodsburg Water Plant is in the process of evaluating new treatment techniques for TOC removal, enhanced coagulation, pre-oxidation, and proper point of chlorination to reduce DBP formation. We returned to compliance during the 4th quarter of 2016.