



Lawrenceburg Water and Sewer Water Quality Report for year 2016

KY0030239

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Meetings: City Hall 100 N. Main St.

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Meeting Dates and Time: Second Monday of month

7:00 PM

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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 our customers with 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 is the most indispensable product in every home and we ask everyone to be conservative and help us in our efforts to protect the water source and the water system.

Lawrenceburg treats surface water from the Kentucky River. The susceptibility to contamination of the raw water is moderate. However, there are a few areas of high concern. There are a number of bridges in the immediate area of the intake. Should an accidental release of contaminants occur from any of these sites it could reach the intakes. Also, an impaired stream and tributary to the Kentucky River occurs just upstream of the intake. There are other contaminant sources including everything from large capacity septic systems, to major roads and railways, to underground storage tanks. These activities, and how they are conducted, are of interest to the entire community because they potentially affect your health and cost of treating your water. A complete source water assessment can be obtained or reviewed at City Hall at the address above.

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).

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

Information About Lead:

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

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.

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.

| | Allowable Levels | Highest Single Measurement | Lowest Monthly % | Violation | Likely Source |
|--|--|----------------------------|------------------|-----------|---------------|
| Turbidity (NTU) TT * Representative samples of filtered water | No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples | 0.07 | 100 | No | Soil runoff |

Regulated Contaminant Test Results

| 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 | 1.7 | 1.7 to 1.7 | Oct-08 | No | Erosion of natural deposits |
| Combined radium (pCi/L) | 5 | 0 | 0.7 | 0.7 to 0.7 | Oct-08 | No | Erosion of natural deposits |
| Uranium (µg/L) | 30 | 0 | 0.33 | 0.33 to 0.33 | Oct-08 | No | Erosion of natural deposits |

Inorganic Contaminants

| | | | | | | | |
|--|----------|-----|------------------------------------|--------------|--------|----|--|
| Barium [1010] (ppm) | 2 | 2 | 0.02 | 0.02 to 0.02 | Mar-16 | No | Drilling wastes; metal refineries; erosion of natural deposits |
| Copper [1022] (ppm) sites exceeding action level 0 | AL = 1.3 | 1.3 | 0.02 (90 th percentile) | 0 to 0.03 | Aug-16 | No | Corrosion of household plumbing systems |
| Fluoride [1025] (ppm) | 4 | 4 | 0.8 | 0.8 to 0.8 | Mar-16 | No | Water additive which promotes strong teeth |
| Lead [1030] (ppb) sites exceeding action level 0 | AL = 15 | 0 | 2 (90 th percentile) | 0 to 3 | Aug-16 | No | Corrosion of household plumbing systems |
| Nitrate [1040] (ppm) | 10 | 10 | 0.4 | 0.4 to 0.4 | Nov-16 | No | Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits |

Disinfectants/Disinfection Byproducts and Precursors

| | | | | | | | |
|---|-----|-----|----------------------|-------------------------------|------|----|-----------------------------------|
| Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio) | TT* | N/A | 2.9 (lowest average) | 1.00 to 4.78 (monthly ratios) | 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.

| | | | | | | | |
|--|----------|-----------|------------------------|--|------|------|---|
| Chlorine (ppm) | MRDL = 4 | MRDLG = 4 | 1.59 (highest average) | 0.51 to 2.24 | 2016 | No | Water additive used to control microbes. |
| HAA (ppb) (Stage 2) [Haloacetic acids] | 60 | N/A | 69 (high site average) | 11 to 62 (range of individual sites) | 2016 | Yes* | Byproduct of drinking water disinfection |
| TTHM (ppb) (Stage 2) [total trihalomethanes] | 80 | N/A | 57 (high site average) | 18.6 to 86.7 (range of individual sites) | 2016 | No | Byproduct of drinking water disinfection. |

Other Contaminants

| | | | | | | | |
|--------------------------------|---|---------------------|-------------------------|-----------------------|------|---------------------|---------------------------------|
| Cryptosporidium [oocysts/L] | 0 | TT (99% removal) | 2 (positive samples) | 9 (no. of samples) | 2016 | See note below** | Human and animal fecal waste |
|--------------------------------|---|---------------------|-------------------------|-----------------------|------|---------------------|---------------------------------|

| | Average | Range of Detection | |
|---------------------------------------|------------------------------------|--------------------|-------|
| | Fluoride (added for dental health) | 0.8 | 0.7 |
| Sodium (EPA guidance level = 20 mg/L) | 19.0 | 19 | to 19 |

*During the fourth quarter of 2015, laboratory analysis revealed elevated levels of HAA in the distribution system above the MCL standard. A Notice of Violation regarding the MCL Locational Running Annual Average was received by the Kentucky Division of Water in March 2016, July 2016, and August 2016 with Public Notices being sent out to all customers shortly after each was received. People who drink water containing HAA in excess of the MCL over many years may have an increased risk of getting cancer. In an effort to eliminate and reduce the formation of HAA, the Water Plant has increased frequencies of routine preventative maintenance and improved regular monitoring of precursors DPB production.

**Cryptosporidium. We are required to monitor the source of your drinking water for Cryptosporidium in order to determine whether treatment at the water treatment plant is sufficient to adequately remove Cryptosporidium from your drinking water. Two of the nine raw water samples tested during the past year indicated the presence of Cryptosporidium.

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing life threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

| HAA(ppb) Individual Site | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | Violation |
|--------------------------|-------|-------|-------|-------|-----------|
| 139 | 42 | 40 | 33.5 | 31.25 | |
| 157 | 62 | 53.75 | 38.75 | 35.25 | Yes |
| 202 | 58 | 53.25 | 41 | 40 | |
| 210 | 69.25 | 61.25 | 51.5 | 38.5 | Yes |

Secondary contaminants do not have a direct impact on the health of consumers and are not required in the Consumer Confidence Report. They are being included to provide additional information about the quality of the water.

| Secondary Contaminant | Maximum Allowable Level | Report | Range | | Date of |
|------------------------|-------------------------|--------|-------|---------|---------|
| Chloride | 250 mg/l | 26 | 26 | to 26 | Mar-16 |
| Fluoride | 2.0 mg/l | 0.8 | 0.8 | to 0.8 | Mar-16 |
| Foaming Agents | 0.5 mg/l | 0.06 | 0.06 | to 0.06 | Mar-16 |
| pH | 6.5 to 8.5 | 7.56 | 7.56 | to 7.56 | Mar-16 |
| Sulfate | 250 mg/l | 55 | 55 | to 55 | Mar-16 |
| Total Dissolved Solids | 500 mg/l | 160 | 160 | to 160 | Mar-16 |

Notice by Lawrenceburg Water and Sewer – System ID#: KY0030239

Our water system violated a drinking water requirement over the past year. Even though this was not an emergency, as our customers, you have a right to know what happened and what we did to correct the situation.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During June 2016 we did not complete all monitoring for Total Coliforms and therefore cannot be sure of the quality of your drinking water during that time.

Coliforms are indicator organisms for E. coli which is a disease-causing microorganism that may be present in our raw water source.

There is nothing you need to do at this time. You may continue to drink the water. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

We collected and analyzed a sample from an unapproved compliance sampling site. This unapproved site did not count towards the total number of monthly compliance samples ran. We have reviewed our approved compliance sampling sites for Total Coliforms and are no longer using unapproved sampling sites such as the Water Plant for compliance sampling. We will continue to follow our required monitoring schedule.

For more information, please contact Monty Rhody at 502-839-5372 or 100 North Main Street, Lawrenceburg, KY 40342.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.