## CONNECTING THE COMMUNITY THROUGH WATER

### LOUISVILLE PURE TAP® TO GO

It's easy to get "back to the tap." Just fill and refill a reusable container at a faucet or fountain near you! Don't have a bottle? Get one for free, while supplies last. Send your name and mailing address by email to publicinfo@lwcky.com or mail to:

*Public Information*
*Louisville Water Company*
*550 S. Third Street*
*Louisville, KY 40202*


Louisville Water provides a variety of ways to serve water at venues throughout the service area. From coolers and cups to mobile stations that connect to the water main, Louisville Water works to accommodate large groups of people. Visit Louisvillepuretap.com to learn more about the Louisville pure tap® to GO program.

### LOUISVILLE PURE TAP® 5K

The Louisville pure tap® 5K debuted in 2011 as part of the Louisville Sports Commission's Fall Runathon. This family-friendly 3.1-mile race starts and finishes at the historic Louisville Water Tower on River Road.

It is the first of three races in the Fall Runathon that provide unique courses and quality experiences for runners and walkers, while promoting healthy lifestyles for people of all ages and fitness levels.

Join Louisville Water on September 10, 2016 at Louisville Water Tower Park for the Louisville pure tap® 5K. Learn more and register online at Fallrunathon.com.


### DISCOVER HOW WATER WORKS

The WaterWorks Museum at Louisville Water Tower Park provides visitors with an opportunity to learn how Louisville Water turns Ohio River water into clean drinking water.

The museum hosts student field trips utilizing curricula aligned to Kentucky Common Core Standards. Tours focus on the science of drinking water as well as the importance of the architecture and engineering innovation involved in supplying safe, high-quality water to the community.


The museum is housed in the west wing of a National Historic Landmark, Pumping Station No. 1, which includes the iconic Louisville Water Tower. Located at 3005 River Road in Louisville, Louisville Water Tower Park is open to the public and available for rental. Learn more at LouisvilleWaterTower.com or call 502.897.1481.

### PURELY LOCAL BUSINESS INITIATIVE

The "purely local" initiative is a partnership between Louisville Water and local businesses to promote the health benefits and economic value of tap water and the value of local businesses. Since the program launch in 2014, almost 100 businesses have joined the partnership.

Louisville Water knows that its product is a lifeline to the community. Through the partnership, local businesses receive branded signage and easy-to-use containers, such as pitchers, compostable cups and refillable bottles that make it easy to serve Louisville pure tap®.

Are you ready to become a purely local partner? Visit Louisvillepuretap.com/purelylocal and join today!

### QUESTIONS ABOUT THIS REPORT?

Contact Kelley Dearing Smith, Public Information Officer, by phone at 502.569.3695 or send an email to ksmith@lwcky.com.

### CUSTOMER INPUT

The Board of Water Works meets the third Tuesday of each month at 11:00am at 550 South Third Street in Louisville.

### PUBLIC INFORMATION

Louisville Water provides tours, education programs and guest speakers. For more information, email publicinfo@lwcky.com or call 502.569.3600.

### ACCOUNT SERVICES

Access your account online at LouisvilleWater.com, by phone at 502.583.6610 or toll free at 888.535.6262. To speak with a Customer Care Representative, please call during business hours, Monday-Friday, 8am – 6pm. Be sure to have your account number handy.

### WALK-IN CUSTOMER SERVICE

Monday - Friday
8am - 5pm
Corporate Headquarters
550 South Third Street
Louisville, KY 40202

Monday - Friday
8am - 1pm & 1:30pm - 4pm
Shepherdsville Govt. Center
634 Conestoga Parkway
Shepherdsville, KY 40165

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Follow us on Twitter at LouisvilleWater.

LouisvilleWater.com

LOUISVILLE WATER COMPANY

# ANNUAL WATER QUALITY REPORT

PWSID: KY0560258
LouisvilleWater.com

## ABOUT YOUR DRINKING WATER

Louisville Water Company's Annual Water Quality Report provides information about your drinking water—Louisville pure tap®. Louisville Water prepares this report to meet Environmental Protection Agency (EPA) requirements under the Safe Drinking Water Act Amendment. Scientists in an EPA-certified laboratory conduct over 200 tests a day to ensure Louisville pure tap® is safe and high quality. It's important to know your drinking water meets and exceeds the EPA's strict health standards.

### AWARD-WINNING WATER TREATMENT

Louisville Water provides Louisville pure tap® to more than 850,000 people in Louisville Metro and parts of Bullitt, Nelson, Oldham, Shelby and Spencer counties every day.

Louisville Water has two treatment plants using the Ohio River as a source. The B.E. Payne Water Treatment Plant, the first plant to have a combined tunnel and collector-well system, pulls up to 60 million gallons of water through the aquifer with riverbank filtration. The Crescent Hill Filtration Plant can supply up to 180 million gallons of drinking water daily.

Both of Louisville Water's treatment plants have received the Phase IV "Excellence in Water Treatment" award from the Partnership for Safe Drinking Water: Crescent Hill in 2015 and B.E. Payne in 2010. The award signifies the facilities have the highest possible level of performance and produce water quality that surpasses the required federal standards. These two plants are in an elite class—only 14 plants in the United States have achieved this recognition.

### MANAGING WATER QUALITY FOR PUBLIC HEALTH

Lead is not a public health concern as it relates to Louisville's drinking water. Louisville's drinking water does not contain lead when it leaves the treatment plants. Lead can become a potential risk for drinking water at customers' taps with lead pipes and plumbing.

Managing the water chemistry and treating the water to make it less likely that lead will dissolve into the water are crucial. Louisville Water's scientists manage the corrosion control and continually do research on water treatment strategy.




Louisville Water began as Kentucky's first public water provider in 1860 and until around 1950, it was common for water utilities to install lead service lines that connect to the customer's private service line.

Louisville Water began replacing its lead service lines in the 1980s. Today, less than 3 percent of the company's service lines are lead. Louisville Water will replace 1,000 of its lead service lines in 2016 and the company has a goal to finish removal by 2025.

To learn more about lead and the company's replacement program visit LouisvilleWater.com/LeadServices.

## LOUISVILLE WATER COMPANY 2015 WATER QUALITY DATA

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.

*Regulated Contaminants - Substances subjected to a Maximum Contaminant Level (MCL), Action Level (AL) or Treatment Technique (TT)*. These standards protect drinking water by limiting the amount of certain substances that can adversely affect public health.*

### REGULATED SUBSTANCES - TREATMENT PLANTS

| | | | Crescent Hill Filter Plant (CHFP) | | | B. E. Payne Water Treatment Plant (BEP) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Substance (units)** | **MCL** | **MCLG** | **CHFP Average** | **Highest Level Detected** | **Range of Detections** | **BEP Average** | **Highest Level Detected** | **Range of Detections** | **Compliance Achieved** | **Typical Source of Contamination (for more details, visit www.epa.gov/safewater/hfacts.html)** |
| **INORGANIC** | | | | | | | | | | |
| Fluoride (ppm) | 4 | 4 | 0.9 | 0.9 | one measure | 0.9 | 0.9 | one measure | YES | Additive that promotes strong teeth. Fertilizer & aluminum factories. Erosion of natural deposits. |
| Nitrate (ppm) | 10 | 10 | 1.0 | 1.5 | 0.7 - 1.5 | 0.3 | 0.4 | 0.1 - 0.4 | YES | Runoff from fertilizer & leaching from septic tanks. Erosion of natural deposits. |
| Turbidity (NTU) | TT 100% ≤ 1.0 and 95% ≤ 0.3 | n/a | 0.04 | 0.06 (100% ≤ 0.3) | BDL - 0.06 | 0.04 | 0.07 (100% ≤ 0.3 ) | BDL - 0.07 | YES | Soil runoff. |
| **ORGANIC** | | | | | | | | | | |
| Total Organic Carbon (Removal Ratio) | TT (≥ 1.00) | n/a | 1.52 | Lowest RAA Removal Ratio 1.26 | 1.15 - 1.80 | 1.00 | Lowest RAA Removal Ratio 1.00 | 1.00 - 1.00 | YES | Naturally present in the environment. |
| **RADIONUCLIDES** | | | | | | | | | | |
| Combined Radium (pCi/L) (measured as Radium-226 & -228) | 5 | 0 | BDL | BDL | one measure | 1.1 | 1.1 | one measure | YES | Erosion of natural deposits. |

Total Organic Carbon (TOC) occurs in source waters from natural substances such as decayed leaves and animal wastes. It can combine with chlorine used in disinfection to form disinfection byproducts. TOC is measured in parts per million (ppm) but compliance with the treatment technique (TT) is based on a running annual average (RAA) of the monthly ratios of the percent TOC treatment removal compared to the required removal. A minimum annual average ratio of 1.00 is required. In 2015, Louisville Water met the TOC treatment technique requirement.

### REGULATED SUBSTANCES - DISTRIBUTION SYSTEM

| **Substance (units)** | **MCL** | **MCLG** | **Highest Level Detected** | **Range of Detections** | **Compliance Achieved** | **Typical Source of Contamination (for more details, visit www.epa.gov/safewater/hfacts.html)** |
|---|---|---|---|---|---|---|
| Total Trihalomethanes (ppb) (Stage 2 DBPR) | 80 | n/a | 27.0 (LRAA) | BDL - 35.8 | YES | Byproduct of drinking water disinfection. |
| Haloacetic Acids (ppb) (Stage 2 DBPR) | 60 | n/a | 19.8 (LRAA) | 3.5 - 27.1 | YES | Byproduct of drinking water disinfection. |
| Chloramines (ppm) | MRDL = 4 | MRDLG = 4 | 2.8 (RAA) | 1.1 - 3.6 | YES | Water additive used to control microbes. |

### REGULATED SUBSTANCES - AT CUSTOMER'S TAP

| **Substance (units)** | **AL** | **MCLG** | **Highest Single Result** | **# Results Exceeding AL** | **90th Percentile** | **Range of Detections** | **Compliance Achieved** | **Typical Source of Contamination (for more details, visit www.epa.gov/safewater/hfacts.html)** |
|---|---|---|---|---|---|---|---|---|
| Copper (ppm) | AL 90% ≤ 1.3 | 1.3 | 0.13 | 0 | 0.06 | BDL - 0.13 | YES | Corrosion of household plumbing systems. Erosion of natural deposits. |
| Lead (ppb) | AL 90% ≤ 15 | 0 | 13.5 | 0 | 6.2 | BDL - 13.5 | YES | Corrosion of household plumbing systems. Erosion of natural deposits. |

Lead and copper results are from 2014 and the most recent required testing done in accordance with the regulation. All samples were taken at customer's taps meeting lead and copper plumbing and water holding time criteria. Fifty (50) sites were tested, zero (0) samples exceeded the Action Level for lead and zero (0) samples exceeded the Action Level for copper.

### CRYPTOSPORIDIUM:

*Louisville Water monitors the Ohio River for Cryptosporidium, a tiny intestinal parasite often found in surface waters. Cryptosporidium can cause flu-like symptoms if ingested. In 2015, Louisville Water analyzed 18 Ohio River samples. We detected low levels of Cryptosporidium in 1 sample with levels ranging from 0 oocysts/L to 0.1 oocysts/L. These detections were within ranges typically measured in the Ohio River. Louisville Water optimizes its treatment processes to help ensure removal.*

*Spanish (Español): Este informe contiene información muy importante sobre la calidad de su agua beber. Tradúzcalo o hable con alguien que lo entienda bien. (This pamphlet contains important information about your drinking water. Please have this information translated.)*

## MESSAGE FROM THE EPA

To ensure that tap water is safe to drink, U.S. EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that shall provide the same protection for public health.

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 can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 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 can 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, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also come from gas stations, urban stormwater runoff, and septic systems; and
- Radioactive contaminants, which may be naturally-occurring or be the result of oil and gas production and mining activities.

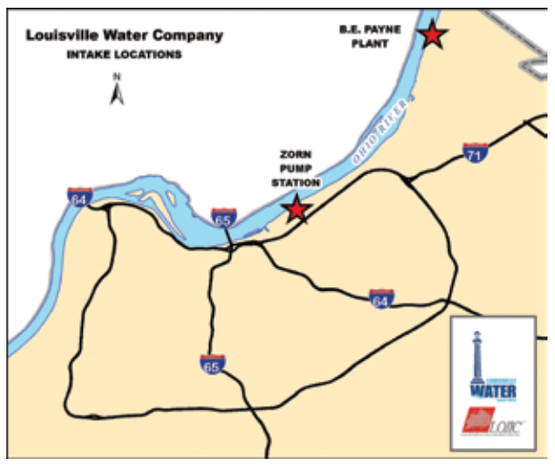
*Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune systems disorders, some elderly, and infants can be particularly at risk for infections. These people should seek advice about drinking water from their health care providers. EPA and Centers for Disease Control (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 at 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. Louisville Water 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 SOURCE

Louisville Water is the public water supplier of Louisville Metro and parts of Bullitt and Oldham Counties. The Ohio River is the source for your drinking water. Louisville Water operates a surface water treatment plant and a ground water treatment plant, both with intakes on the Ohio River. In October 2003, the Kentucky Division of Water approved a Source Water Assessment and Protection Plan for Jefferson County. The plan looks at Louisville Water's susceptibility to potential sources of contamination. The plan identified spills of hazardous materials on the Ohio River and permitted discharges of sanitary sewers as the highest contamination risks. In Jefferson County, land use in the protection area is primarily zoned for residential and commercial use, with only a few industrial sites. In Oldham and Trimble Counties (areas bordering the Ohio River to the north of our intakes) land use is primarily zoned for residential and agricultural use. Therefore, source water contamination risks are relatively low. Louisville Water maintains an




Emergency Preparedness and Disaster Services Plan to address potential contamination risks. To view the entire Source Water Assessment and Protection Plan, contact Jeremy Raney at 502.569.3600 x2328.

Louisville Water also draws water through the aquifer with riverbank filtration wells at the B.E. Payne Water Treatment Plant. The Kentucky Division of Water approved Louisville Water's Wellhead Protection Plan (WHPP) in 2014. The goal is to safeguard groundwater feeding into the wells from contamination within the Wellhead Protection Area (WHPA) in Prospect. Louisville Water continually updates the plan. New residents and businesses in the WHPA receive information about the WHPP and educational materials. To view the entire Wellhead Protection Plan, contact Kay Ball at 502.569.3688.

### ADDITIONAL WATER QUALITY DATA

Alkalinity (as CaCO3) - 65 mg/L
pH - 8.7 (SU)
Calcium (as Ca) - 31 mg/L
Magnesium (as Mg) - 12 mg/L
Sodium (as Na) - 27 mg/L
Sulfate - 59 mg/L
Bicarbonate (as CaCO3) - 55 mg/L
Chloride - 42 mg/L
Hardness (as CaCO3) - 127 mg/L (7.4 grains/gallon)

*Data is an average of Crescent Hill Filter Plant and B.E. Payne Water Treatment Plant.*

## *TABLE DEFINITIONS

*Action Level (AL):* The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

*Below Detection Levels (BDL):* Laboratory analysis indicates that the contaminant is not present.

*Disinfection By-Products Rule (DBPR).*

*Liter (L).*

*Locational Running Annual Average (LRAA).*

*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 the 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.

*Not applicable (n/a):* Does not apply.

*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.

*Picocuries per liter (pCi/L):* A measure of the radioactivity in water.

*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 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.

*Running Annual Average (RAA).*

*Standard Units (SU).*

*Total Organic Carbon (TOC).*

*Treatment Technique (TT):* A required process intended to reduce the level of a contaminant in drinking water.

**View this report online at LouisvilleWater.com.**