

## 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](mailto:ksmith@lwcky.com). To request copies, visit [LouisvilleWater.com/RequestWQReport](http://LouisvilleWater.com/RequestWQReport) or call **502.583.6610**.

## CUSTOMER INPUT

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

## WE LOVE TO TALK ABOUT WATER

Ever wonder why Louisville's drinking water is so good? We'd like to tell you the story of the history, science and innovation behind Louisville pure tap®—visit the WaterWorks Museum at Louisville Water Tower Park (3005 River Road). For more information, visit [LouisvilleWater.com/WaterTowerPark](http://LouisvilleWater.com/WaterTowerPark). To schedule a speaker for your organization or have questions about our community education program, email [questions@lwcky.com](mailto:questions@lwcky.com).

## ACCOUNT SERVICES

Access your account online at [LouisvilleWater.com](http://LouisvilleWater.com), by phone at **502.583.6610** or toll free at **888.535.6262**. To speak with a Customer Service Representative, please call during business hours, Monday - Friday, 8 a.m. - 6 p.m. Be sure to have your account number handy.

## WALK-IN CUSTOMER SERVICE

Monday - Friday 8 a.m. - 4:30 p.m.	Monday - Friday 8 a.m. - 1 p.m. & 1:30 p.m. - 4 p.m.
John L. Huber Building 550 South Third Street Louisville, KY 40202	Shepherdsville Govt. Center 634 Conestoga Parkway Shepherdsville, KY 40165

## ANNUAL

WATER

QUALITY

REPORT



[LouisvilleWater.com](http://LouisvilleWater.com)



## ABOUT YOUR DRINKING WATER

Louisville Water's Annual Water Quality Report includes 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. It's important for you to know that your drinking water meets and exceeds the EPA's strict health standards.

Since 1860, Louisville Water has provided safe, high-quality drinking water to its customers. Louisville Water is a lifeline to the region, providing water to almost one million customers in Louisville Metro and several surrounding counties.

### NO MORE KNOWN LEAD SERVICE LINES IN OUR SYSTEM

Louisville Water has reached a major milestone in our history. As of March 2020, we are proud to announce that our distribution system is free of known lead service lines. This accomplishment took many decades of planning, managing and executing by our employees. We are only one of a handful of utilities in the country that have accomplished this feat.



Louisville Water installed approximately 74,000 lead service lines between 1860 and 1936 before switching to copper service lines. This replacement work started in the 1970s, but in recent years, it has been a major priority for the company. In the 1990s, the company began a focused approach to go block-by-block and replace the lead lines.

Swallowing lead paint chips or breathing in lead paint dust presents the biggest risk of exposure. Ingestion can cause health

concerns for people of all ages, particularly pregnant women, infants, and young children. In children, low exposure levels are linked to learning disabilities, behavioral problems, and other issues.

Louisville's drinking water does not contain lead when it leaves the treatment plants and meets all EPA standards for lead under the Lead and Copper Rule. Lead is rarely found in source water, however water can pick up lead particles in private service lines and fixtures containing lead (i.e. water pipes, fixtures, and plumbing). Replacing lead service lines in our system is just one part of the effort to minimize the risk for lead in drinking water.

Even though Louisville Water has removed all known lead service lines from our distribution system, some of our customers still have private lead lines. Louisville Water scientists balance the water chemistry to reduce corrosion in the pipes so that even if customers have private lead lines, the risk of lead leaching into the water is minimized.

However, no amount of lead is safe. The best way to eliminate lead from leaching into your water is to remove any sources of lead in plumbing materials that come in contact with your drinking water. Therefore, we recommend that customers replace their private outdoor lead service line too, if they have one.

Louisville Water has a program to help customers with the cost of replacing private outdoor lead service lines, and the Louisville Water Foundation may be able to offer further financial support as well if our customers need it. Now that we've concluded replacing our lines, we will increase our focus on helping customers replace their private outdoor lead service lines.

For more information on the program, visit [LouisvilleWater.com/Lead-Awareness](http://LouisvilleWater.com/Lead-Awareness).



## MESSAGE FROM THE EPA

In order to ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in the water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in the bottled water that must 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 EPA'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 materials, 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, which 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 can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can 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 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 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's drinking water does not contain lead when it leaves our treatment plants, and our distribution system is free of known lead service lines. 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 to Louisville Metro and parts of Bullitt and Oldham Counties. Louisville Water operates two water treatment plants with two sources. The Crescent Hill Water Treatment Plant treats water directly from the Ohio River. The B.E. Payne Water Treatment Plant treats groundwater collected from the surrounding aquifer through a process called riverbank filtration. Louisville Water maintains a Source Water Assessment and Protection Plan (SWAPP) that outlines the steps taken to address potential sources of



contamination along the Ohio River, such as spills of hazardous materials. We also maintain a Wellhead Protection Plan (WHPP), which outlines contaminant risks to our wellhead protection area. The WHPP is available online at: [LouisvilleWater.com/water-quality/wellhead-protection](http://LouisvilleWater.com/water-quality/wellhead-protection). In 2019, Louisville Water completed an EPA-certified risk and resiliency assessment and updated our Emergency Response Plan (ERP). For questions related to the SWAPP, WHPP, or ERP, please contact Chris Bobay at 502.569.3600 x2450.

### ADDITIONAL WATER QUALITY DATA

Alkalinity (as CaCO <sub>3</sub> ) - 73 mg/L
pH - 8.7 (SU)
Calcium (as Ca) - 30 mg/L
Magnesium (as Mg) - 14 mg/L
Sodium (as Na) - 27 mg/L
Sulfate - 61 mg/L
Bicarbonate (as CaCO <sub>3</sub> ) - 71 mg/L
Chloride - 37 mg/L
Hardness (as CaCO <sub>3</sub> ) - 130 mg/L (7.6 grains/gallon)

Data is an average of Crescent Hill and B.E. Payne Water Treatment Plants.

View this report online at [LouisvilleWater.com/WaterQualityReport](http://LouisvilleWater.com/WaterQualityReport)

### \*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).*

*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 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 benefits of the use of disinfectants to control microbial contaminants.*

*Milligrams per liter (mg/L): One milligram per liter is equal to one part per million.*

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

*Nephelometric Turbidity Unit (NTU): A measure of the clearness or 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.*

*Parts per billion (ppb) or micrograms per liter (µg/L): Equivalent to one microgram per liter, corresponds to one minute in 2,000 years.*

*Parts per million (ppm) or milligrams per liter (mg/L): Equivalent to one milligram per liter, corresponds to one minute in two years.*

*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.*

## LOUISVILLE WATER COMPANY WATER QUALITY DATA JAN. 1 - DEC. 31, 2019

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

Substance (units)	MCL	MCLG	Crescent Hill Water Treatment Plant (CH)			B. E. Payne Water Treatment Plant (BEP)			Compliance Achieved	Typical Source of Contamination (for more details, visit <a href="http://www.epa.gov/safewater">www.epa.gov/safewater</a> )
			CH Average	Highest Level Detected	Range of Detections	BEP Average	Highest Level Detected	Range of Detections		
<b>INORGANIC</b>										
Fluoride (ppm)	4	4	0.6	0.6	one measure	0.6	0.6	one measure	<b>YES</b>	Additive that promotes strong teeth. Fertilizer & aluminum factories. Erosion of natural deposits.
Nitrate (ppm)	10	10	1.0	1.1	0.9 - 1.1	0.3	0.5	0.2 - 0.5	<b>YES</b>	Runoff from fertilizer & leaching from septic tanks. Erosion of natural deposits.
Turbidity (NTU)	TT 100% ≤ 1.0 and 95% ≤ 0.3	n/a	0.05	0.07 (100% ≤ 0.3)	0.03 - 0.07	0.05	0.08 (100% ≤ 0.3)	0.03 - 0.08	<b>YES</b>	Soil runoff.
<b>ORGANIC</b>										
Total Organic Carbon (Removal Ratio)	TT (≥ 1.00)	n/a	1.51	Lowest RAA Removal Ratio 1.47		n/a	n/a	n/a	<b>YES</b>	Naturally present in the environment.

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 by-products. 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 2019, 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 <a href="http://www.epa.gov/safewater">www.epa.gov/safewater</a> )
Total Trihalomethanes (ppb)	80	n/a	28.1 (LRAA)	9.8 - 41.8	<b>YES</b>	By-product of drinking water disinfection.
Haloacetic Acids (ppb)	60	n/a	25.9 (LRAA)	3.2 - 32.6	<b>YES</b>	By-product of drinking water disinfection.
Chlorine Residual (Chloramines) (ppm)	MRDL = 4	MRDLG = 4	2.8 (RAA)	1.59 - 3.40	<b>YES</b>	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 <a href="http://www.epa.gov/safewater">www.epa.gov/safewater</a> )
Copper (ppm)	AL 90% ≤ 1.3	1.3	0.11	0	0.04	BDL - 0.11	<b>YES</b>	Corrosion of household plumbing systems. Erosion of natural deposits.
Lead (ppb)	AL 90% ≤ 15	0	10.2	0	4.7	BDL - 10.2	<b>YES</b>	Corrosion of household plumbing systems. Erosion of natural deposits.

Lead and copper results are from 2017 and the most recent required testing done in accordance with the regulation. All samples were taken at customers' 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; zero (0) samples exceeded the Action Level for copper.

*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.)*

### BOOK A GROUP TOUR OR FIELD TRIP!

Ever wonder how Louisville Water makes the best tasting tap water in the nation? Book a group tour or a school field trip to the WaterWorks Museum at Louisville Water Tower Park and discover how good, clean water is made! There's more than 160 years of history and innovation that goes into every glass of Louisville pure tap® and we're thirsty to share it with you.

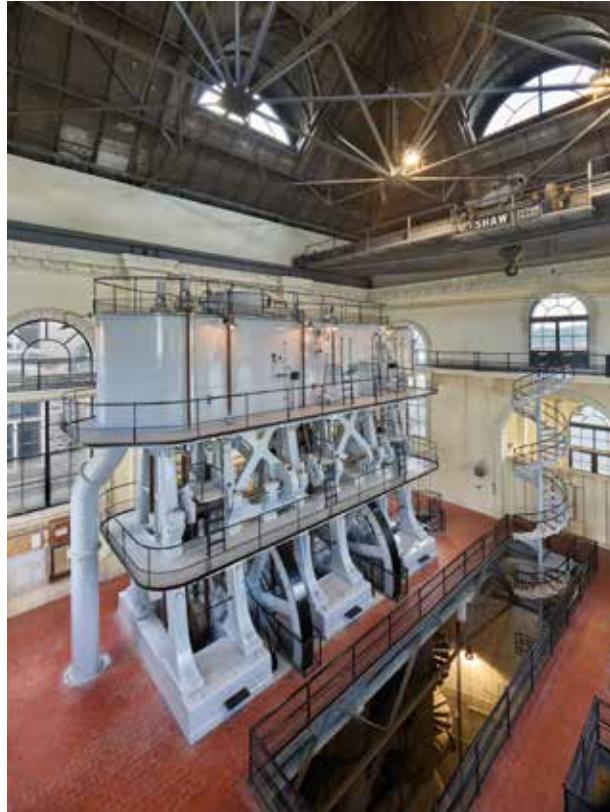
Located inside Louisville Water's original pumping station, the WaterWorks Museum houses the company's archives of historic photographs, films and memorabilia, some of which date back to 1860. Exhibits highlight our contribution to safe drinking water through advances in science and engineering.

Your tour would also include the recently renovated Pumping Station No. 3, complete with a 100-foot-tall restored steam engine. You will also see the iconic Louisville Water Tower and explore the grounds of the historic property, which sits on the banks of the Ohio River.

To schedule a field trip or to make a reservation for group tours (10 or more):

- Schedule online at [LouisvilleWater.com/WaterTowerPark](https://LouisvilleWater.com/WaterTowerPark)
- Email [zornrental@lwcky.com](mailto:zornrental@lwcky.com)
- Call **502.897.1481**

Also, one Sunday afternoon a month, we are open to the public. Visit [LouisvilleWater.com](https://LouisvilleWater.com) for information on the next open Sunday!



### PFAS MONITORING AND RESEARCH

There's a lot of national attention on a group of compounds called PFAS—perfluoroalkyl and polyfluoroalkyl substances. These substances have been detected in water supplies across the United States, including Louisville.

PFAS is a group of man-made compounds that the EPA is researching. They have been detected everywhere in our environment, including in lakes and rivers, wildlife, and our food supply. The EPA is evaluating drinking water standards for two of these compounds, PFOA and PFOS.

PFOA and PFOS have been widely used to make carpets, clothing, fabrics for furniture, paper packaging for food, and

other materials. They are also used for firefighting at airfields and in industrial processes.

Louisville Water's PFOA and PFOS levels remain much lower than the EPA's current health advisory level of 70 parts per trillion.

Louisville Water continues its own research on this evolving issue. Our scientists are monitoring PFAS closely to better understand the occurrence of these compounds in our environment. We are also working closely with state and federal partners to identify PFAS sources along the Ohio River and researching the best available treatment options.

For more information, visit [LouisvilleWater.com](https://LouisvilleWater.com).

## There's a Science to Great-Tasting Water



The Ohio River provides an **abundant source** for Louisville's drinking water.



Louisville Water scientists do **200 tests daily** on the river and the drinking water. One of the tests is for **taste and odor**.

When we know the river conditions can create potential taste and odor issues, we **increase our monitoring**.



The drinking water gets a final test **(and taste)** before it leaves the treatment plant.

Louisville Water's treatment plants are rated as:

**2 of the top 18** in North America

This ensures your drinking water is **high quality** and **tastes great**.



Troubleshoot **taste and odor** issues by visiting **LouisvilleWater.com/WaterQualityHelp**.

Sometimes all you need is a quick, simple answer!

