

? QUESTIONS ABOUT THIS REPORT?

Contact Kelley Dearing Smith, VP of Strategic Communications and Marketing, by phone at **502.569.3695** or send an email to ksmith@louisvillewater.com. Visit LouisvilleWater.com/RequestWQReport or call **502.583.6610** to request a copy. View this report online at LouisvilleWater.com/WaterQualityReport.

➔ CUSTOMER INPUT

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

i 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™. To schedule a speaker for your organization or have questions about our community education program, email questions@louisvillewater.com.

\$ ACCOUNT SERVICES

Louisville Water Pure ConnectSM is a new way to view and pay your bill. It's convenient and a better customer experience.

Learn more at LouisvilleWater.com/PureConnect. You can also access your account 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



ABOUT YOUR DRINKING WATER

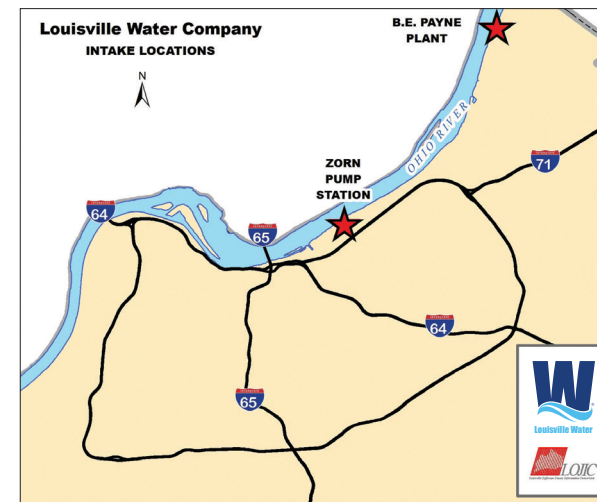
Louisville Water Company's Annual Water Quality Report includes information about your drinking water—Louisville Pure Tap™. And it's all good news.

Louisville Water prepares this report to meet Environmental Protection Agency (EPA) requirements under the Safe Drinking Water Act. We are proud to report that Louisville Water received no violations and meets all state and federal requirements. In fact, Louisville Water is among the nation's top water utilities.

Louisville Water performs more than 200 tests per day on your drinking water. It is tested at the treatment plants, throughout the distribution system and at many customer taps. The data in this report shows some of the testing that we do.

WHERE DOES MY DRINKING WATER COME FROM?

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 people in Louisville Metro and parts of Bullitt and Oldham Counties. Louisville Water operates two treatment plants. The majority of your drinking water comes from the Crescent Hill Water Treatment Plant, which treats water that is pumped 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.

PROTECTING OUR SOURCE



Louisville Water maintains a Source Water Assessment and Protection Plan (SWAPP) that outlines the steps 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 contamination risks to our wellhead protection area.

For questions related to the SWAPP or WHPP send an email to waterquality@louisvillewater.com.

TREATMENT MODIFICATION

This summer, Louisville Water will adjust its treatment strategy to continue to improve the quality of your drinking water. We will begin adding low levels of chlorine dioxide at the B.E. Payne Water Treatment Plant. Chlorine dioxide is a form of chlorine that is used for disinfection and helps ensure the water quality as it travels through water mains in the distribution system. You will not notice any changes in your drinking water; it will be the same high-quality, great-tasting Louisville Pure Tap. Louisville Water continues to use chlorine (sodium hypochlorite) as the primary disinfectant and chloramine as a secondary disinfectant.

Customers on dialysis should contact their physician for the appropriate steps to accommodate the change in water treatment to include the addition of chlorine dioxide, as chlorine dioxide and its byproducts may have similar effects as chloramines. Customers who have fish tanks or keep aquatic species should contact their pet store or aquarium dealer to address any potential concerns with using chlorine dioxide in the water treatment process.



LouisvilleWater.com

PWSID: KY0560258 LouisvilleWater.com



HOW WE MAKE SAFE DRINKING WATER - LOUISVILLE PURE TAP™



OHIO RIVER



COAGULATION

Louisville Water adds coagulants to the water to help natural particles such as clay and silt stick together.



SEDIMENTATION

As the particles get bigger and heavier, they settle to the bottom and are removed from the water.



DISINFECTION

Chlorine is added to eliminate any remaining risk from pathogens present in the water. Ammonia is added to stabilize the disinfectant and keep the water safe.



FILTRATION

Finally, the water passes through filters containing sand and anthracite to remove any remaining particles. The finished water—Pure Tap—is pumped out into the distribution system.



ADDITIONAL WATER QUALITY DATA*

pH (SU)	8.7
Alkalinity (as CaCO ₃) (ppm)	69
Hardness (as CaCO ₃) (ppm)	123 (7.2 grains per gallon)
Calcium (as Ca) (ppm)	29
Magnesium (as Mg) (ppm)	12
Sodium (as Na) (ppm)	24
Chloride (ppm)	33
Sulfate (ppm)	53
Total Dissolved Solids (ppm)	220

*These are an average of the concentrations in Crescent Hill and B.E. Payne finished water.

TABLE DEFINITIONS

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

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

LRAA: Locational Running Annual Average.

MCL: Maximum Contaminant Level. 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.



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 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.

MCLG: Maximum Contaminant Level Goal. 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.

MRDL: Maximum Residual Disinfectant Level. 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.

MRDLG: Maximum Residual Disinfectant Level Goal. 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.

n/a: Not Applicable.

NTU: Nephelometric Turbidity Unit. A measure of the clarity of water.

ppb: Parts per billion or micrograms per liter, µg/L.

ppm: Parts per million or milligrams per liter, mg/L.

RAA: Running Annual Average.

SU: Standard Units.

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



LOUISVILLE WATER COMPANY WATER QUALITY DATA JAN. 1 - DEC. 31, 2021

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 WATER TREATMENT PLANT (CH)			B. E. PAYNE WATER TREATMENT PLANT (BEP)				Typical Source of Contamination (for more details, visit www.epa.gov/safewater)
Substance (units)	MCL	MCLG	CH Average	Highest Level Detected	Range of Detections	BEP Average	Highest Level Detected	Range of Detections	Compliance Achieved	
INORGANIC										
Fluoride (ppm)	4	4	0.7	0.7	one measure	0.6	0.6	one measure	YES	Additive that promotes strong teeth. Fertilizer & aluminum factories. Erosion of natural deposits.
Nitrate (ppm)	10	10	1.0	1.4	0.6 - 1.4	0.2	0.4	0.1 - 0.4	YES	Runoff from fertilizer & leaching from septic tanks. Erosion of natural deposits.
Nitrite (ppm)	1	1	BDL	0.011	BDL - 0.011	BDL	BDL	BDL	YES	Runoff from fertilizer & leaching from septic tanks. Erosion of natural deposits.
Turbidity (NTU)	TT 100% ≤ 1.0 and 95% ≤ 0.3	n/a	0.06	0.09 (100% ≤ 0.3)	0.03 - 0.09	0.04	0.07 (100% ≤ 0.3)	0.03 - 0.07	YES	Soil runoff.

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.

ORGANIC										
2,4-D (ppb)	70	70	BDL	0.29	BDL - 0.29	BDL	BDL	BDL	YES	Runoff from herbicide used on row crops.
Total Organic Carbon (Removal Ratio)	TT (≥ 1.00)	n/a	1.37	Lowest RAA Removal Ratio 1.36	0.72 - 2.04	n/a	n/a	n/a	YES	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 2021, 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)
Total Trihalomethanes (ppb)	80	n/a	33.7 (LRAA)	11.5 - 52.0	YES	By-product of drinking water disinfection.
Haloacetic Acids (ppb)	60	n/a	29.1 (LRAA)	4.3 - 49.0	YES	By-product of drinking water disinfection.
Chlorine Residual (Chloramines) (ppm)	MRDL = 4	MRDLG = 4	2.62 (RAA)	1.52 - 3.60	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)
Copper (ppm)	AL 90% ≤ 1.3	1.3	0.091	0	0.051	0.007 - 0.091	YES	Corrosion of household plumbing systems. Erosion of natural deposits.
Lead (ppb)	AL 90% ≤ 15	0	12.7	0	1.1	BDL - 12.7	YES	Corrosion of household plumbing systems. Erosion of natural deposits.

Lead and copper results are from 2020 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-three (53) sites were tested, zero (0) samples exceeded the Action Level for lead; zero (0) samples exceeded the Action Level for copper.



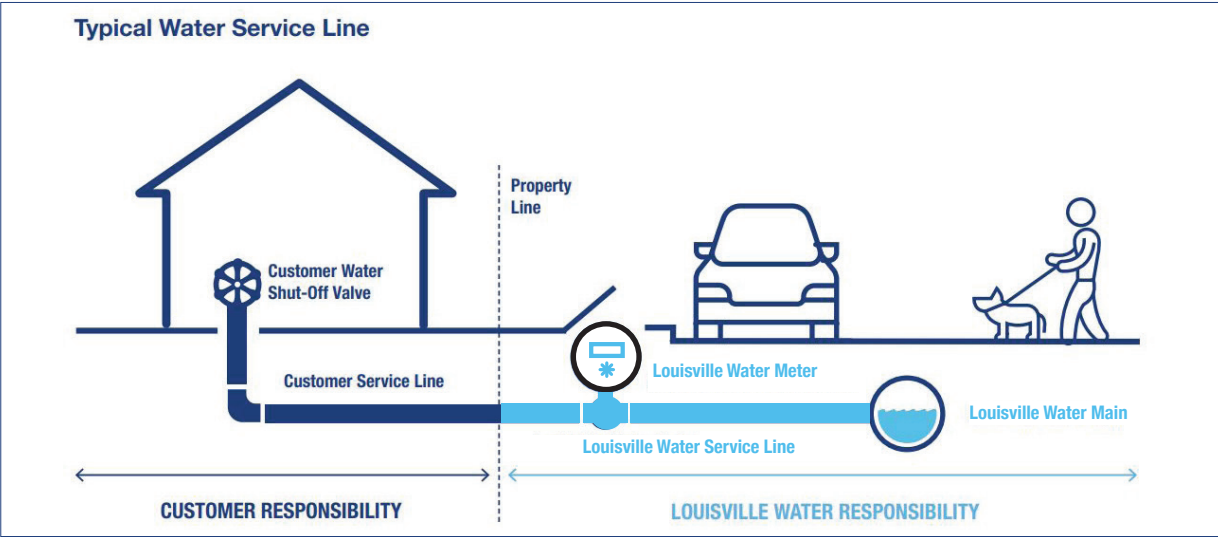
LEAD AWARENESS

WHAT TO KNOW ABOUT LEAD

Protecting public health is at the core of what we do at Louisville Water. Louisville’s drinking water does not contain lead when it leaves our treatment plants. The risk for lead to get into the water is from pipes and plumbing in your home that are made of lead. We use corrosion control to protect the water as it travels through pipes, but it is important to eliminate the risk: lead pipes, faucets and solder.

CUSTOMERS MIGHT HAVE A PRIVATE LEAD LINE

While Louisville Water replaced all its known lead service lines, older homes (those typically built before 1950) may still have a privately owned lead or galvanized line. These lines connect to Louisville Water lines. They are on your property and are your responsibility.



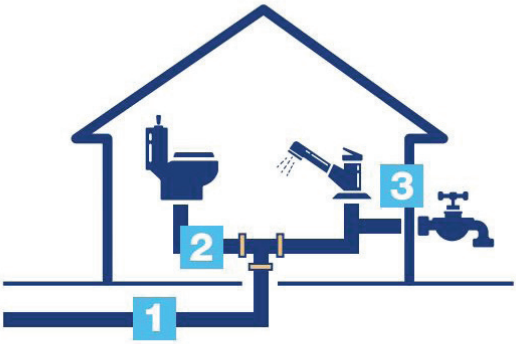
We can help you determine if there’s a lead or galvanized line on your property. Use the Private Service Line Lookup tool on our website, LouisvilleWater.com/Lead-Awareness, to see if we have information for your property.

LOUISVILLE WATER WILL HELP REPLACE YOUR LEAD SERVICE LINE

If you have a private outdoor lead or galvanized service line, we want to help! Louisville Water will pay 50 percent of the cost for a licensed plumber to replace your service line, up to \$1,500. Most private outdoor service lines can be replaced for less than \$3,000. If you need assistance with the remaining cost, the Louisville Water Foundation grant program may provide support if you meet eligibility requirements.

If you’d like to take advantage of the replacement program, please visit LouisvilleWater.com/Lead-Awareness. You’ll be asked to fill out and submit a request form. Once it is received, someone from Louisville Water will contact you.

How can lead get into drinking water?



- 1. Lead or galvanized service line
- 2. Copper pipe with lead solder
- 3. Faucets

LEAD IN HOME PLUMBING

Prior to 1986, it was common for contractors to use lead solder and fixtures containing lead. Until 2014, brass faucets and fixtures labeled as “lead-free” plumbing could contain up to 8 percent lead.

After water has been sitting for several hours, flushing pipes for five minutes can reduce the potential for lead exposure. If you feel this applies to your home, please visit LouisvilleWater.com/Flushing for customer tips on flushing your pipes. The diagram above shows possible sources of lead in your home plumbing.

If you are concerned about lead in your drinking water, we’ll test your water for free. To order a water quality test kit please call 502.569.0897 or visit LouisvilleWater.com/Water-Quality-Lead-Test-Kit.

LEAD AND YOUR HEALTH

The following health information is from the EPA. 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 and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing.

You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family’s risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes.



You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, please visit LouisvilleWater.com/Lead-Awareness to request a free water quality test kit for your home. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <http://www.epa.gov/safewater/lead>.