

Maintaining water quality from our tap to yours.

AT THE PLANT:



Public health is at the core with

water quality tests daily.

200

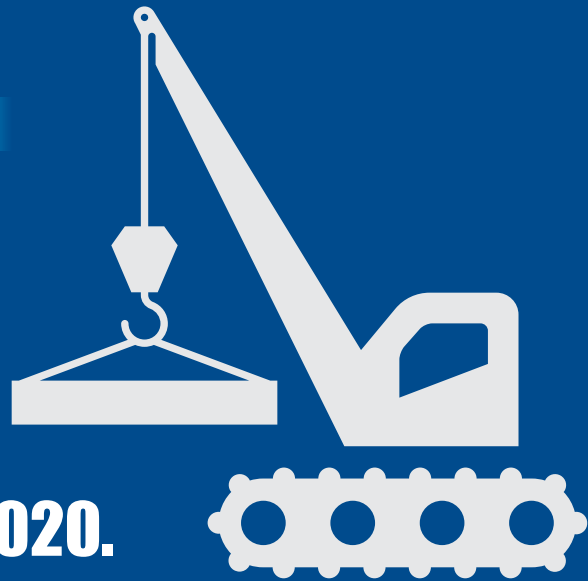
Louisville Water's treatment plants are rated as:

216 of the top in North America.

IN THE COMMUNITY:



Investing **\$40.5 million** to inspect, repair and replace water mains that deliver water from the plant to your home.



Replacing remaining **6,500** lead lines by **2020.**

IN YOUR HOME:

Know the location of the water **shut-off** valve, test it and tag it.



Be Green -

get back to the tap with a reusable bottle.



Curious how we make Louisville's drinking water?

- Visit the WaterWorks Museum at Louisville Water Tower Park.
- Walk around the Crescent Hill Reservoir.

LouisvilleWater.com



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.

WE LOVE TO TALK ABOUT WATER

Invite Louisville Water to your neighborhood meeting or club. We'll share information on water quality, fun history facts and more. 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 Service 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 John L. Huber Building 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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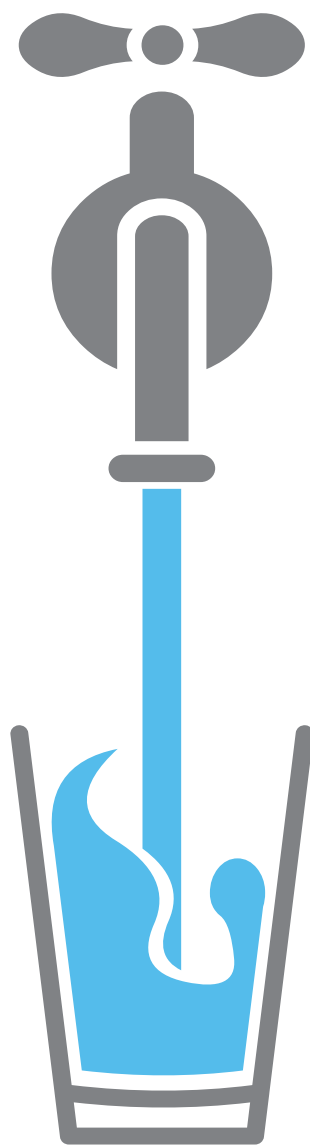
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LOUISVILLE WATER COMPANY 2017 ANNUAL WATER QUALITY REPORT



PWSID: KY0560258
LouisvilleWater.com

ABOUT YOUR DRINKING WATER

Louisville Water Company'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.

Louisville Water provides pure tap® to nearly one million people in Louisville Metro and parts of Bullitt, Hardin, Nelson, Oldham, Shelby and Spencer counties every day. Louisville's drinking water is regarded as some of the highest quality in the United States.

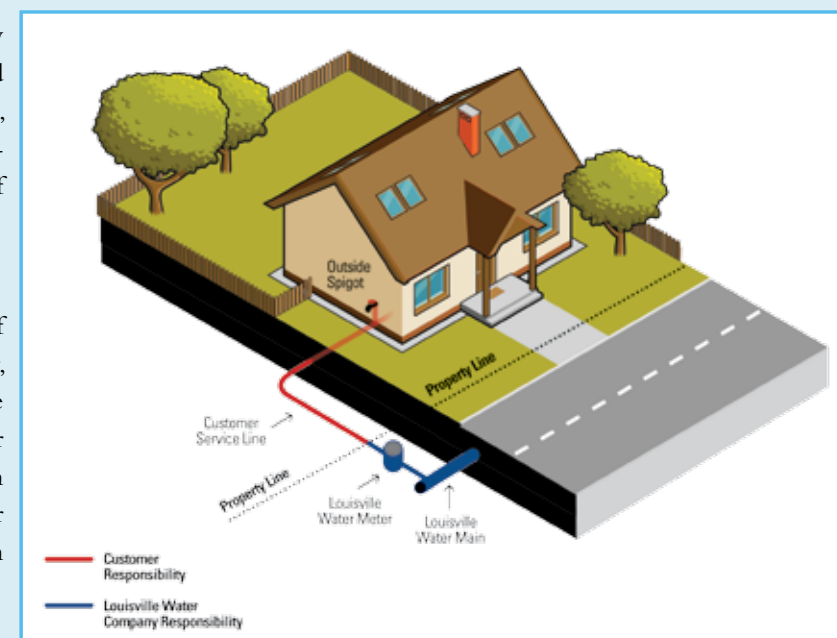
MAINTAINING GOOD WATER QUALITY

There's an increased focus on the risk of lead in drinking water. At Louisville Water, providing customers with safe, reliable water is the top priority. The drinking water Louisville Water produces does not contain lead. Lead can become a potential risk for drinking water if the water travels through lead pipe or plumbing.

Louisville Water has a three-part approach to managing potential risk for lead:

1. Balance the water chemistry: At the treatment plant, scientists treat the water to make it less likely that lead or other particles will dissolve into the water.
2. Eliminate lead service lines: Before 1950, it was common for water utilities to install lead service lines to connect from the water main to the customer's property. Louisville Water began replacing its lead service lines in the 1980s and plans to eliminate the remaining 6,500 lines by 2020.

3. Inform customers: Using your account number, customers can check LouisvilleWater.com to see if the Louisville Water service line at their property is made of lead. The water lines from the water meter to your home and inside the home are your responsibility. Older homes, constructed before 1950, could have lead service lines. A licensed plumber can help you determine if you have



a lead service line. As Louisville Water replaces its lead lines in a neighborhood, we'll let customers know if their private line is lead. Customers can choose to take advantage of a new program where Louisville Water helps cover the cost of replacing a private lead service line.

Louisville Water offers customers free water quality tests for lead. Visit LouisvilleWater.com or call 502.583.5610 to learn more.

LOUISVILLE WATER COMPANY 2016 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

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 www.epa.gov/safewater/hfacts.html)
			CH Average	Highest Level Detected	Range of Detections	BEP Average	Highest Level Detected	Range of Detections		
INORGANIC										
Fluoride (ppm)	4	4	0.6	0.6	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	1.2	1.5	1.0 - 1.5	0.13	0.3	BDL - 0.3	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	0.07 (100% ≤ 0.3)	BDL - 0.07	0.05	0.13 (100% ≤ 0.3)	0.03 - 0.13	YES	Soil runoff.

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

ORGANIC

Total Organic Carbon (Removal Ratio)	TT (≥ 1.00)	n/a	1.54	Lowest RAA Removal Ratio 1.54	1.13 - 2.16	1.02	Lowest RAA Removal Ratio 1.00	1.00 - 1.18	YES	Naturally present in the environment.
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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 2016, 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	28.6 (LRAA)	10.9 - 46.2	YES	By-product of drinking water disinfection.
Haloacetic Acids (ppb) (Stage 2 DBPR)	60	n/a	21.7 (LRAA)	5.0 - 39.0	YES	By-product of drinking water disinfection.
Chloramines (ppm)	MRDL = 4	MRDLG = 4	2.9 (RAA)	1.3 - 3.7	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 2016, Louisville Water analyzed 24 Ohio River samples. We detected low levels of Cryptosporidium in 1 sample with levels ranging from 0 oocysts/L to 0.093 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

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in the water provided by public water systems. FDA 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 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 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 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 system 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/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 five 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 CaCO ₃) - 73 mg/L
pH - 8.6 (SU)
Calcium (as Ca) - 28 mg/L
Magnesium (as Mg) - 14 mg/L
Sodium (as Na) - 30 mg/L
Sulfate - 58 mg/L
Bicarbonate (as CaCO ₃) - 70 mg/L
Chloride - 45 mg/L
Hardness (as CaCO ₃) - 130 mg/L (7.6 grains/gallon)

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

*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 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 part per million is equal to one milligram per liter.

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): 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.