

City of St. Louis Water Division

Consumer Confidence Report

2023



City of St. Louis Water Division – Department of Public Utilities
1640 S. Kingshighway – St. Louis, MO 63110-4399 314-633-9000

Curtis B. Skouby P.E. – Director of Public Utilities

Curtis B. Skouby P.E. – Water Commissioner

stlwater.com



In compliance with the Safe Drinking Water Act, the City of St. Louis Water Division is delivering this Water Quality Report to all its customers who receive water bills. **We ask that landlords, employers, and anyone else who receives the water bill for other water users share this report with them.** To obtain additional copies, call (314) 771-2255.

The web address of the CCR on the internet is: <http://www.stlwater.com/confidence.php>

The report summarizes information that your water system collects to comply with regulations, including information on water from the Missouri and Mississippi Rivers, the levels of detected contaminants, and compliance with drinking water rules.

ST. LOUIS CITY WATER - A HISTORY OF EXCELLENCE

The Water Division is a branch of the St. Louis City government's Department of Public Utilities. Since 1835, it has been our mission to provide a reliable supply of high-quality, safe drinking water to our customers.

Our scientists constantly monitor and test the water for over 150 possible contaminants. We analyze the Mississippi and Missouri river water as it enters each plant, at points throughout the treatment process and at multiple locations throughout the city. The frequency and thoroughness of these tests exceed federal regulations for water quality monitoring.

In 2023, we are proud to say that laboratory test results of your drinking water complied with all state and federal drinking water standards. In our 119 years of testing, we have never exceeded a Maximum Contaminant Level for any regulated contaminant.

The City of St. Louis Water Division is a charter member of the Partnership for Safe Water. In 1994, this organization was formed by 187 surface water utilities, several drinking water organizations, including the American Water Works Association and the Environmental Protection Agency. The Partnership's goal is to provide a new measure of safety to millions of Americans by improving water quality nationwide.

We are proud to share that we received the "Phase III 20 Year Directors Award for Water Treatment" for our Chain of Rocks and Howard Bend Water Treatment Plants.

WHERE DOES THE WATER COME FROM?

The City of St. Louis Water Division has two water treatment plants. The Howard Bend Plant sources water from the Missouri River. The Chain of Rocks Plant is located on the Mississippi River, south of the confluence of the Missouri and Mississippi Rivers. The water reaching our intakes at the Chain of Rocks Plant is primarily Missouri River water as the two rivers have not fully mixed prior to the intake.

In 2023, we produced an average of 124 million gallons of high-quality, safe drinking water per day from our plants.

SOURCE WATER ASSESSMENT INFORMATION

In 2004, the Missouri Department of Natural Resources (DNR) conducted a source water assessment to determine susceptibility of our source water to contamination. You can acquire the complete results by calling DNR at 1-800-361-4827 or the information can be viewed on the internet at: <https://drinkingwater.missouri.edu>. Our system I.D. is: 6010715. The assessment has determined that our river water source is susceptible due to the presence of potential contaminant sources. The City of St. Louis employs all available measures at its disposal to remove contamination at intakes and during the treatment process. The drinking water produced at our facilities consistently meets or exceeds all Safe Drinking Water Standards.

WHAT ABOUT CONTAMINANTS?

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. A contaminant is any physical, chemical, biological or radiological substance or matter in water. 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 (800-426-4791).

GIARDIA AND CRYPTOSPORIDIUM

Giardia and Cryptosporidium are microscopic parasites that, when ingested, can result in fever, diarrhea, and other gastrointestinal complications. These organisms are found in all rivers and streams and come from animal wastes in the watershed. They are removed by effective treatment including deactivation with chlorine along with precipitative softening, sedimentation, flocculation, and filtration. Previous monitoring performed monthly did not detect any Cryptosporidium or Giardia in samples collected after the first stage of our multi-stage, multiple barrier treatment process at either of the City's water purification plants. Prior monitoring showed that neither cysts nor oocysts were detected in our finished water.

HEALTH RISKS

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as a person with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants are particularly at risk from infections. These people should seek advice about drinking tap 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) or on EPA's website epa.gov/safewater.

LEAD IN DRINKING WATER

The City of St. Louis Water Division has optimized its treatment process so that the corrosion of internal plumbing is minimized. However, if present, elevated levels of lead can cause serious health problems.

IMPORTANT INFORMATION ABOUT LEAD IN YOUR DRINKING WATER

THE CITY OF ST. LOUIS WATER DIVISION found elevated levels of lead in drinking water in some homes/buildings. Lead can cause serious health problems, especially for pregnant people, and young children. Please read this information closely to see what you can do to reduce lead in your drinking water.

There is no safe level of lead in drinking water. Exposure to lead in drinking water can cause serious health effects in all age groups, especially pregnant people, infants (both formula-fed and breastfed), and young children. Some of the health effects to infants and children include decreases in IQ and attention span. Lead exposure can also result in new or worsened learning and behavior problems. The children of persons who are exposed to lead before or during pregnancy may be at increased risk of these harmful health effects. Adults have increased risks of heart disease, high blood pressure, kidney or nervous system problems. Contact your health care provider for more information about your risks.

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of St. Louis Water Division 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 cold water tap for 5 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.

For more information , call us at (314) 633-9000 or visit our website at <http://stlwater.com/lead> . For more information reducing lead exposure around your home/building and the health effects of lead, visit EPA’s website <https://www.epa.gov/lead> or contact your health care provider.

Our most recent Lead and Copper Program results are listed below:

LEAD AND COPPER PROGRAM (100 samples minimum collected at customer’s tap every 6 months)					
Detected Contaminants (units)	MCL	MCLG	Maximum Level Detected	Range Detected	Major Sources of Contaminants
Lead (ppb)* 2022 (Jan-Jun)	AL = 15	0	90 th Percentile = 0.89	Number of samples above AL=1 Range: ND - 49.2	Corrosion of household plumbing systems
Copper (ppm)* 2022 (Jan-Jun)	AL = 1.3	1.3	90 th Percentile = 0.0163	Number of samples above AL=0 Range: ND - 0.0741	Corrosion of household plumbing systems
Lead (ppb)* 2022 (Jul-Dec)	AL = 15	0	90 th Percentile = 2.12	Number of samples above AL =0 Range: ND-6.75	Corrosion of household plumbing systems
Copper (ppm)* 2022 (Jul-Dec)	AL = 1.3	1.3	90 th Percentile = 0.0176	Number of samples above AL=1 Range: ND - 0.0426	Corrosion of household plumbing systems

FLUORIDATION

Fluoride can occur in drinking water naturally because of the geological composition of soils and bed-rock. Since 1953, in accordance with St. Louis City Revised Code Chapter 11.26, the City of St. Louis Water Division has been fluoridating our customers' drinking water. Our goal was to provide fluoridated drinking water to a target level of 1 ppm. In December 2010, the United States Department of Health and Human Services released a report recommending that fluoridation levels in drinking water should be set at 0.7 ppm. In January 2012, the City of St. Louis Water Division under the direction of the City of St. Louis Health Department reduced the fluoridation goal to 0.6 ppm.

Our fluoride results for 2023 are listed below:

REGULATED COMPOUND (Samples collected at each treatment facility)					
Detected Contaminants (units)	MCL	MCLG	Maximum Level Detected	Range Detected	Major Sources of Contaminants
Fluoride (ppm)	4	4	0.73	0.46-0.73	Water additive for dental health



PFAS

Per- and polyfluoroalkyl substances (PFAS) are manufactured chemicals that have been used in industry and consumer products since the 1940s. Because of their widespread use and their persistence in the environment, many PFAS are found in the blood of people and animals all over the world. There are thousands of different PFAS, some of which have been more widely used and studied than others. The two most commonly known PFAS substances are perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) which have been replaced in the United States with other PFAS in recent years.

The City of St. Louis Water Division is committed to protecting public health. We have performed voluntary sampling of PFAS along with other unregulated contaminants to better understand their occurrences.

In September 2023, monitoring was conducted for 29 PFAS contaminants that are currently unregulated by the USEPA. 28 of the 29 tested contaminants were below the minimum reporting level (MRL) of 2.0 ppt. Although unregulated, the USEPA has set health advisories for 4 of the contaminants: PFOA (.004 ppt), PFOS (0.02 ppt), GenX (10ppt) and PFBS (2,000 ppt).

More information concerning PFAS can be found at: <https://www.epa.gov/pfas>.

Our PFAS results for 2023 are listed below:

UNREGULATED PFAS CONTAMINANTS (Samples collected from treatment plants)			
Contaminants	Average Level Detected	Range	Typical Source
Perfluorobutanoic Acid (PFBA) (ppt)	3.9	3.9 -4.2	manufactured chemicals that have been used in industry and consumer products
Perfluorooctanoic Acid (PFOA) (ppt)	< MRL of 2.0	N/A	manufactured chemicals that have been used in industry and consumer products
Perfluorooctane Sulfonic Acid (PFOS) (ppt)	< MRL of 2.0	N/A	manufactured chemicals that have been used in industry and consumer products
GenX (ppt)	< MRL of 2.0	N/A	manufactured chemicals that have been used in industry and consumer products
Perfluorobutane Sulfonic Acid (PFBS) (ppt)	< MRL of 2.0	N/A	manufactured chemicals that have been used in industry and consumer products

WATER QUALITY REPORT

READING THE TABLES

The following tables list all drinking water contaminants detected during 2023 not previously listed. The Missouri Department of Natural Resources has reduced the frequency for monitoring requirements for certain contaminants to less than once per year because levels do not vary often. **All contaminants were detected in concentrations well below safe and acceptable limits.**

REGULATED COMPOUNDS (Samples collected at each treatment facility)					
Detected Contaminants (units)	MCL	MCLG	Maximum Level Detected	Range Detected	Major Sources of Contaminants
Antimony (Total, ppb)	6	6	0.46	0.44-0.46	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic (ppb)	10	0	0.77	0.61-0.77	Erosion of natural deposits
Atrazine (ppb)	3	3	0.52	ND-0.52	Runoff from herbicide used on row crops
Barium (ppm)	2	2	0.03	0.02-0.03	Erosion of natural deposits
Chromium (Total, ppb)	100	100	1.28	1.28	Erosion of natural deposits, Industrial discharge
Selenium (ppb)	50	50	1.65	1.60-1.65	Erosion of natural deposits, Industrial discharge
Nickel (ppb)	100	100	0.50	0.50	Erosion of natural deposits, Industrial discharge
Nitrate+Nitrite (as ppm N)	10	10	1.49	0.99-1.49	Natural Deposits; Fertilizer runoff



MICROBIAL DATA
(Samples collected at each treatment facility)

Detected Contaminants (units)	MCL	MCLG	Result	Major Sources of Contaminants
Total Coliform Bacteria (% positive samples)	5% of monthly samples positive	0	No Positive Results	Naturally present in the environment

TURBIDITY
(Continuously monitored at each treatment facility)

Detected Contaminants (units)	MCL	MCLG	Maximum Level Detected	% Samples ≤ 0.15	Major Sources of Contaminants
Turbidity (NTU)	TT (1NTU)** TT = 95% of monthly samples <0.15	N/A	0.09	100%	Soil runoff

Percentage of Turbidity Samples Below 0.15 = 100%

TOTAL ORGANIC CARBON (TOC)
(Samples collected at each treatment facility)

Detected Contaminants (units)	MCL	MCLG	Maximum Level Detected	Range	Major Sources of Contaminants
TOC (ppm)	TT (Required min. 15% removal from source water)	N/A	4.78	2.29-4.78	Naturally present in the environment

Annual Average Percent Removal from Source Water = 24.4%

DISINFECTANTS
(Samples collected at each treatment facility and distribution system)

Detected Contaminants (units)	MRDL	MRDLG	Maximum Level Detected	Range Detected	Major Sources of Contaminants
Chloramines (ppm) Treatment Plant	4	4	3.44	2.04-3.44	Water additive used to treat water
Chloramines (ppm) Distribution System	4	4	3.18	2.41-3.18	Water additive used to treat water

DISINFECTION BYPRODUCTS
(Samples collected at each Treatment Facility)

Detected Contaminants (units)	MCL	MCLG	Maximum Level Detected	Range Detected	Major Sources of Contaminants
Total Trihalomethanes (TTHMs) (ppb)	80	N/A	25.6	3.2-25.6	Byproduct of disinfection
Haloacetic Acids (5) (HAA5) (ppb)	60	N/A	34.1	5.1-34.1	Byproduct of disinfection

DISINFECTION BYPRODUCTS—Samples Collected throughout the Distribution System

Disinfection Byproducts	Sample Point	LRAA	Range	Unit	MCL	MCLG	Typical Source
(HAA5)	DBPDUAL01	15.9	5.6-23.3	ppb	60	0	Byproduct of disinfection
(HAA5)	DBPDUAL02	14.7	5.9-20.7	ppb	60	0	Byproduct of disinfection
(HAA5)	DBPDUAL03	18.8	6.9-33.5	ppb	60	0	Byproduct of disinfection
(HAA5)	DBPDUAL04	16.9	6.0-25.9	ppb	60	0	Byproduct of disinfection
(HAA5)	DBPDUAL05	19.7	6.6-34.1	ppb	60	0	Byproduct of disinfection
(HAA5)	DBPDUAL06	15.6	5.3-22.7	ppb	60	0	Byproduct of disinfection
(HAA5)	DBPDUAL07	16.7	5.7-25.3	ppb	60	0	Byproduct of disinfection
(HAA5)	DBPDUAL08	17.3	5.9-28.2	ppb	60	0	Byproduct of disinfection
(HAA5)	DBPDUAL09	15.3	5.2-22.3	ppb	60	0	Byproduct of disinfection
(HAA5)	DBPDUAL10	19.2	6.9-30.5	ppb	60	0	Byproduct of disinfection
(HAA5)	DBPDUAL11	15.0	5.4-20.7	ppb	60	0	Byproduct of disinfection
(HAA5)	DBPDUAL12	15.2	5.1-21.4	ppb	60	0	Byproduct of disinfection
TTHM	DBPDUAL01	9.8	3.6-14.9	ppb	80	0	Byproduct of disinfection
TTHM	DBPDUAL02	10.10	3.2-13.2	ppb	80	0	Byproduct of disinfection
TTHM	DBPDUAL03	11.68	4.7-25.6	ppb	80	0	Byproduct of disinfection
TTHM	DBPDUAL04	11.15	3.5-18.3	ppb	80	0	Byproduct of disinfection
TTHM	DBPDUAL05	11.30	3.9-23.4	ppb	80	0	Byproduct of disinfection
TTHM	DBPDUAL06	10.38	3.2-14.1	ppb	80	0	Byproduct of disinfection
TTHM	DBPDUAL07	11.28	3.5-16.9	ppb	80	0	Byproduct of disinfection
TTHM	DBPDUAL08	11.08	3.6-20.8	ppb	80	0	Byproduct of disinfection
TTHM	DBPDUAL09	10.65	3.2-14.1	ppb	80	0	Byproduct of disinfection
TTHM	DBPDUAL10	10.20	4.5-21.4	ppb	80	0	Byproduct of disinfection
TTHM	DBPDUAL11	10.08	3.5-12.7	ppb	80	0	Byproduct of disinfection
TTHM	DBPDUAL12	9.70	3.4-13.2	ppb	80	0	Byproduct of disinfection

RADIOACTIVE CONTAMINANTS
(Samples collected at each treatment facility)

Detected Contaminants (units)	MCL	MCLG	Maximum Level Detected	Range Detected	Major Sources of Contaminants
Gross Alpha Particle Activity, Total (pCi/L) Year 2022 *	15	0	ND	N/A	Erosion of natural deposits
Total Uranium (ppb) Year 2022*	30	0	ND	N/A	Erosion of natural deposits

OPTIONAL MONITORING
(Not Required by EPA)

Secondary Contaminants	MCL	Average Level Detected	Range
Alkalinity, Total (ppm)	N/A	58	12-100
Aluminum (ppb)	N/A	2.54	0.75-4.55
Calcium (ppm)	N/A	25.1	17.6-60.8
Chloride (ppm)	250	27.5	21.4-35.2
Conductivity (µS/cm)	N/A	529	279-701
Hardness, Total (ppm as CaCO ₃)	N/A	138	76-190
Iron (ppm)	0.3	ND	ND
Magnesium (ppm)	N/A	18.1	0-29.9
Manganese (ppb)	50	0.20	0.20
Non-Carbonate Hardness (ppm as CaCO ₃)	N/A	79	35-133
pH	N/A	9.55	8.49-10.07
Potassium (ppm)	N/A	5.32	3.70-6.33
Sodium (ppm)	N/A	49.3	22.3-75.7
Solids, Total Dissolved (TDS) (ppm)	500	337	217-417
Sulfate (ppm)	250	151.3	79.9-215.9

DEFINITIONS:

Action Level (AL): The concentration of a compound that triggers a treatment technique or other requirement that a water system must follow.

Herbicide: Any chemical(s) used to control undesirable vegetation.

Locational Running Annual Average (LRAA)

Maximum Contaminant Level (MCL): The highest level of a compound allowed in drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known risk to health.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water.

Maximum Residual Disinfectant Level Goal (MCDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health.

(ppm as CaCO₃): Expressed as the equivalent in ppm of Calcium Carbonate.

(as N ppm): Expressed as the total amount of Nitrogen in ppm.

Parts per Million (ppm): The measurement of the quantity of a substance of water. A concentration of one ppm means that there is one part of that substance for every one million parts of water.

Parts per Billion (ppb): The measurement of the quantity of a substance of water. A concentration of one ppb means that there is one part of that substance for every one billion parts of water.

Parts per Trillion (ppt): The measurement of the quantity of a substance of water. A concentration of one ppt means that there is one part of that substance for every one trillion parts of water.

Picocuries per liter (pCi/L): The measurement of radioactivity in water.

Pesticide: Generally, any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest.

None Detected (ND): The concentration of a compound is less than the smallest amount that can be measured by the test method used.

Not Applicable (N/A): This heading is not needed for this contaminant.

Nephelometric Turbidity Units (NTU): The measurement of the amount of light scattered when a beam of light is directed through a water sample.

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

***The State of Missouri** has reduced monitoring requirements for certain contaminants to less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. The Lead and Copper Survey is repeated every three years. These results are the 90th percentile of the Lead and Copper Survey samples tested in 2022 for the Lead and Copper Rule. The 90th percentile means 90 percent of the samples had levels less than the values shown. Radioactive Contaminants are monitored once every nine years.

****Turbidity:** Turbidity is a measure of the cloudiness of water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants. The maximum turbidity allowable is 1 NTU for a single sample and 0.15 NTU at the 95th percentile.