

# Our Water Sources



**LOUISVILLE WATER TANK**



**SOUTH BOULDER CREEK**

The City's constant goal is to provide you with a safe and dependable supply of drinking water.

Please contact **GREG VENETTE** at **303-335-4790** with any questions or for public participation.

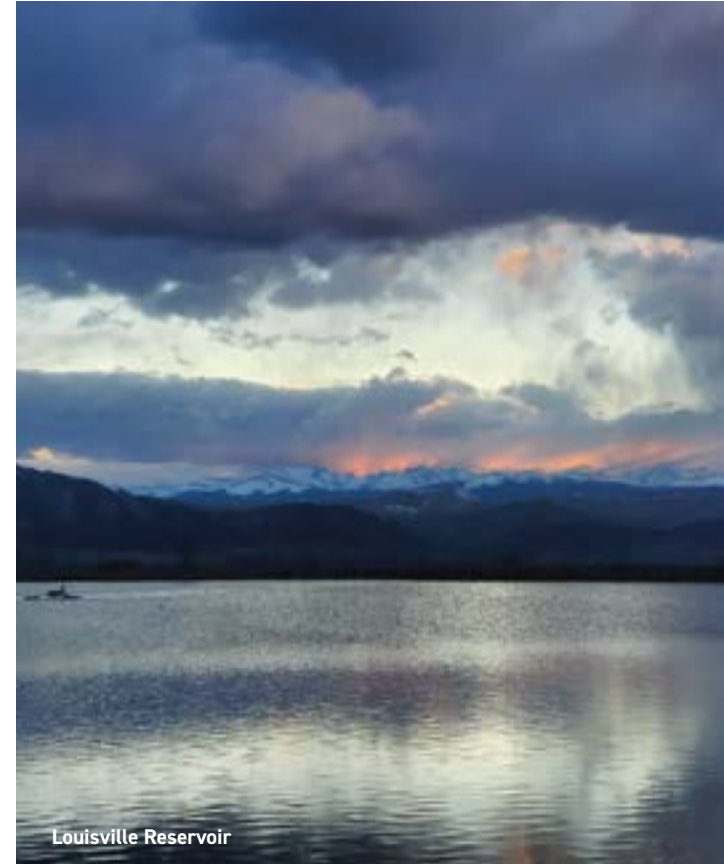
For more information visit: [LouisvilleCO.gov/Water](http://LouisvilleCO.gov/Water).

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**POSTAL CUSTOMER**



Louisville Reservoir

## 2024 Annual Drinking Water Quality Report

For calendar year 2023

*Esta es información importante. Si no la pueden leer, necesitan que alguien se la traduzca.*

## General Information

All 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 the 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 (1-800-426-4791) or by visiting [epa.gov/ground-water-and-drinking-water](http://epa.gov/ground-water-and-drinking-water).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 of infections. These people should seek advice about drinking water from their health care providers. For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and microbiological contaminants call the EPA Safe Drinking Water Hotline at (1-800-426-4791).

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: viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants: salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides: may come from a variety of sources, such as agriculture, urban storm water runoff, and residential uses.
- Radioactive contaminants: can be naturally occurring or be the result of oil and gas production and mining activities.
- Organic chemical contaminants: including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and also may come from gas stations, urban storm water runoff, and septic systems.

In order to ensure that tap water is safe to drink, the Colorado Department of Public Health and Environment prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

## Source Water Assessment and Protection (SWAP)

The Colorado Department of Public Health and Environment may have provided to the City with a Source Water Assessment Report for our water supply. For general information or to obtain a copy of the report please visit [wqcd.compliance.com/ccr](http://wqcd.compliance.com/ccr). The report is located under "Guidance: Source Water Assessment Reports". Search the table using our system name or ID, or by contacting Greg Venette at 303-335-4790. The Source Water Assessment Report provides a screening-level evaluation of potential contamination that could occur. It does not mean that the contamination has or will occur. The City can use this information to evaluate the need to improve our current water treatment capabilities and prepare for future contamination threats. This can help the City ensure that quality finished water is delivered to your homes. In addition, the source water assessment results provide a starting point for developing a source water protection plan. Potential sources of contamination in our source water area are listed on the next page.

Please contact the City to learn more about what you can do to help protect your drinking water sources, any questions about the Drinking Water Quality Report, to learn more about our system, or to attend scheduled public meetings. The City wants you, our valued customers, to be informed about the services the City provides and the quality water the City delivers to you every day.

## Lead in Drinking Water

Lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and



## BACKWASH PUMPS AT THE HOWARD BERRY WATER PLANT

components associated with service lines and home plumbing. The City 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, contact Greg Venette at 303-335-4790. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at [epa.gov/safewater/lead](http://epa.gov/safewater/lead).

## Terms and Abbreviations

**Maximum Contaminant Level (MCL)** – The highest level of a contaminant allowed in drinking water.

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

**Health-Based** – A violation of either a MCL or TT.

**Non-Health-Based** – A violation that is not a MCL or TT.

**Action Level (AL)** – The concentration of a contaminant which, if exceeded, triggers treatment and other regulatory requirements.

**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 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 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.

**Violation (No Abbreviation)** – Failure to meet Colorado Primary Drinking Water Regulation.

**Formal Enforcement Action (No Abbreviation)** – Escalated action taken by the State (due to the risk to public health, or number or severity of violations) to bring a non-compliant water system back into compliance.

**Variance and Exemptions (V/E)** – Department permission not to meet a MCL or treatment technique under certain conditions.

**Gross Alpha (No Abbreviation)** – Gross alpha particle activity compliance value. It includes radium-226, but excludes radon 222, and uranium.

**Picocuries per liter (pCi/L)** – Measure of the radioactivity in water.

**Nephelometric Turbidity Unit (NTU)** – Measure of the clarity or cloudiness of water. Turbidity in excess of 5 NTU is just noticeable to the typical person.

**Compliance Value (No Abbreviation)** – Single or calculated value used to determine if regulatory contaminant level (e.g. MCL) is met. Examples of calculated values are the 90th Percentile, Running Annual Average (RAA) and Locational Running Annual Average (LRAA).

**Average (x-bar)** – Typical value.

**Range (R)** – Lowest value to the highest value.

**Sample Size (n)** – Number or count of values (i.e. number of water samples collected).

**Parts per million = Milligrams per liter (ppm = mg/L)** – One part per million corresponds to one minute in two years or a single penny in \$10,000.

**Parts per billion = Micrograms per liter (ppb = ug/L)** – One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

**Part per trillion = Nanograms per liter (ppt = ng.L)** – One part per trillion corresponds to one second in 31,700 years, or a single penny in \$1,000,000,000,000.

**Not Applicable (N/A)** – Does not apply or not available.

**Level 1 Assessment** – A study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

**Level 2 Assessment** – A very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.



## 2023 Test Results

The City of Louisville routinely monitors for contaminants in your drinking water according to Federal and State laws. The following table(s) show all detections found in the period of January 1 to December 31, 2023 unless otherwise noted. The State of Colorado requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. Therefore, some of our data, though representative, may be more than one year old. Violations and Formal Enforcement Actions, if any, are reported in the next section of this report.

Note: Only detected contaminants sampled within the last 5 years appear in this report. If not tables appear in this section then no contaminants were detected in the last round of monitoring.

Our Water Sources	
Sources (Water Type - Source Type)	Potential Source(s) of Contamination
SOUTH BOULDER CREEK/ GROSS RESERVOIR (Surface Water-Intake) CARTER LAKE (Surface Water-Intake)	EPA Superfund Sites, EPA Hazardous Waste Generators, EPA Chemical Inventory/Storage Sites, EPA Toxic Release Inventory Sites, Permitted Wastewater Discharge Sites, Aboveground, Underground and Leaking Storage Tank Sites, Solid Waste Sites, Existing/Abandoned Mine Sites, Other Facilities, Commercial/Industrial/Transportation, Low Intensity Residential, Urban Recreational Grasses, Row Crops, Fallow, Small Grains, Pasture / Hay, Deciduous Forest, Evergreen Forest, Mixed Forest, Septic Systems, Oil / Gas Wells, Road Miles

Summary of Turbidity Sampled at the Entry Point to the Distribution System					
Contaminant Name	Sample Date	Level Found	TT Requirement	TT Violation	Typical Sources
Turbidity	Date/Month: Sep	Highest single measurement: 0.087 NTU	Maximum 1 NTU for any single measurement	No	Soil Runoff
Turbidity	Month: Dec	Lowest monthly percentage of samples meeting TT requirement for our technology: 100%	In any month, at least 95% of samples must be less than 0.3 NTU	No	

Radionuclides Sampled at the Entry Point to the Distribution System								
Contaminant Name	Year	Average	Range Low - High	Sample Size	MCL	MCLG	MCL Violation	Typical Sources
Gross Alpha	2020	0.8	0.7 to 0.9	2	15	0	No	Erosion of natural deposits
Combined Radium	2020	1.2	0.8 to 1.6	2	5	0	No	

Inorganic Contaminants Sampled at the Entry Point to the Distribution System								
Contaminant Name	Year	Average	Range Low - High	Sample Size	MCL	MCLG	MCL Violation	Typical Sources
Barium (ppm)	2023	0.03	0.02 - 0.04	2	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	2023	0.72	0.68 to 0.76	2	4	4	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Selenium (ppb)	2023	2	2 - 2	2	50	50	No	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines

Total Organic Carbon (Disinfection Byproducts Precursor) Removal Ratio of Raw and Finished Water								
Contaminant Name	Year	Average	Range Low - High	Sample Size	MCL	TT Minimum Ratio	TT Violation	Typical Sources
Total Organic Carbon Ratio	2023	1.42	1.26 to 1.71	7	ratio	1.0	No	Naturally present in the environment

\*If minimum ratio not met and no violation identified then the system achieved compliance using alternative criteria.

Disinfectants Sampled in the Distribution System							
TT Requirement: At least 95% of samples per period (month or quarter) must be at least 0.2 ppm OR If sample size is less than 40 no more than 1 sample is below 0.2 ppm							
Typical Sources: Water additive used to control microbes							
Disinfectant	Time Period	Results	Number of Samples Below Level	Sample Size	TT Violation	MRDL	Typical Sources
Chlorine	December 2023	Lowest period percentage of samples meeting TT requirement: 100%	0	23	No	4.0 ppm	Water additive used to control microbes

Lead and Copper Sampled in the Distribution System							
Contaminant Name	Time Period	90th Percentile	Sample Size	90th Percentile AL	Sample Sites Above AL	90th Percentile AL Exceedance	Typical Sources
Copper (ppm)	07/21/2023 to 08/21/2023	0.03	31	1.3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppm)	07/21/2023 to 08/21/2023	0.001	31	0.015	0	No	

Disinfection Byproducts Sampled in the Distribution System								
Contaminant Name	Year	Average	Range: Low - High	Sample Size	MCL	MCLG	MCL Violation	Typical Sources
Total Haloacetic Acids (HAA5)	2023	20.1	13.6 to 28.1	16	60	N/A	No	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM)	2023	34.52	10.1 to 65.1	16	80	N/A	No	Byproduct of drinking water disinfection
Chlorite	2023	0.04	0.26 to 0.61	12	1	0.8	No	Byproduct of drinking water disinfection

Violation Information						
Name	Description	Time Period	Health Effects	Compliance Value	TT Level or MCL	Additional Violation Information
CROSS CONNECTION RULE	FAILURE TO MEET CROSS CONNECTION CONTROL AND/OR BACKFLOW PREVENTION REQUIREMENTS - M614	10/21/2022 - 02/15/2023	The City had an inadequate backflow prevention and cross-connection control program. Uncontrolled cross connections can lead to inadvertent contamination of the drinking water. The City failed to ensure the testing requirements met the annual backflow assembly testing compliance ratio.	N/A	N/A	In 2021 the compliance testing ratio was 0.77, missing the requirement of 0.9, and a number of assemblies not tested in 2021 were not tested within 90-days of their use in 2022. A public notice was sent on 11/17/2022 with additional information. The City has improved system processes for the monitoring and management of the Backflow and Cross-Connection Program. Assemblies not tested in 2021 have been tested, suspended or cross-connection removed. There is nothing you need to do at this time. Water infrastructure is functioning properly and drinking water in Louisville is safe to drink. For more information please call 303-335-4790.
CROSS CONNECTION RULE	FAILURE TO MEET CROSS CONNECTION CONTROL AND/OR BACKFLOW PREVENTION REQUIREMENTS - M611	10/21/2022 - 02/15/2023	The City has an inadequate backflow prevention and cross-connection control program. Uncontrolled cross connections can lead to inadvertent contamination of the drinking water. The City failed to ensure the testing requirements were complete for assemblies that were not tested in 2022 within 90 days of their use in 2023.	N/A	N/A	

**VIOLATIONS, SIGNIFICANT DEFICIENCIES, AND FORMAL ENFORCEMENT ACTIONS:** Health-Based Violations Maximum contaminant level (MCL) violations: Test results for this contaminant show that the level was too high for the time period shown. Please read the information shown above about potential health effects for vulnerable populations. This is the same violation that the City told you about in a past notice. The City is evaluating, or the City already completed an evaluation, to find the best way to reduce or remove the contaminant. If the solution will take an extended period of time, the City will keep you updated with quarterly notices.

Secondary Contaminants*					
*Secondary standards are non-enforceable guidelines for contaminants that may cause cosmetic effects (such as skin, or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water..					
Contaminant Name	Year	Average	Range: Low - High	Sample Size	Secondary Standard
Sodium (ppm)	2023	18.15	17.8 to 18.5	2	N/A

**UNREGULATED CONTAMINANTS\*\*:** EPA has implemented the Unregulated Contaminant Monitoring Rule (UCMR) to collect data for contaminants that are suspected to be present in drinking water and do not have health-based standards set under the Safe Drinking Water Act. EPA uses the results of UCMR monitoring to learn about the occurrence of unregulated contaminants in drinking water and to decide whether or not these contaminants will be regulated in the future. The City performed monitoring and reported the analytical results of the monitoring to EPA in accordance with its Unregulated Contaminant Monitoring Rule (UCMR). Once EPA reviews the submitted results, the results are made available in the EPA's National Contaminant Occurrence Database (NCOD) ([epa.gov/dwucmr/nationalcontaminant-occurrence-database-ncod](http://epa.gov/dwucmr/nationalcontaminant-occurrence-database-ncod)) Consumers can review UCMR results by accessing the NCOD. Contaminants that were detected during our UCMR sampling and the corresponding analytical results are provided below.

Contaminant Name	Year	Average	Range: Low - High	Sample Size	Unit of Measure
NMeFOSAA	2023	Not Detected at the reporting limit	N/A	6	PPT
NEtFOSAA	2023	Not Detected at the reporting limit	N/A	6	PPT
PFTA	2023	Not Detected at the reporting limit	N/A	6	PPT
PFTrDA	2023	Not Detected at the reporting limit	N/A	6	PPT
PFHpS	2023	Not Detected at the reporting limit	N/A	6	PPT
PFPeS	2023	Not Detected at the reporting limit	N/A	6	PPT
NFDHA	2023	Not Detected at the reporting limit	N/A	6	PPT
PFEESA	2023	Not Detected at the reporting limit	N/A	6	PPT
PFMBA	2023	Not Detected at the reporting limit	N/A	6	PPT
PFPeA	2023	Not Detected at the reporting limit	N/A	6	PPT
PFMPA	2023	Not Detected at the reporting limit	N/A	6	PPT
8:2 FTS	2023	Not Detected at the reporting limit	N/A	6	PPT
4:2 FTS	2023	Not Detected at the reporting limit	N/A	6	PPT
6:2 FTS	2023	Not Detected at the reporting limit	N/A	6	PPT
PFBA	2023	Not Detected at the reporting limit	N/A	6	PPT
HFPO-DA	2023	Not Detected at the reporting limit	N/A	6	PPT
ADONA	2023	Not Detected at the reporting limit	N/A	6	PPT
9Cl-PF3ONS	2023	Not Detected at the reporting limit	N/A	6	PPT
11Cl-PF3OUdS	2023	Not Detected at the reporting limit	N/A	6	PPT
PFUnA	2023	Not Detected at the reporting limit	N/A	6	PPT
PFHxA	2023	Not Detected at the reporting limit	N/A	6	PPT
PFDoA	2023	Not Detected at the reporting limit	N/A	6	PPT
PFDA	2023	Not Detected at the reporting limit	N/A	6	PPT
PFOA	2023	Not Detected at the reporting limit	N/A	6	PPT
PFOS	2023	Not Detected at the reporting limit	N/A	6	PPT
PFNA	2023	Not Detected at the reporting limit	N/A	6	PPT
PFHxS	2023	Not Detected at the reporting limit	N/A	6	PPT
PFHpA	2023	Not Detected at the reporting limit	N/A	6	PPT
PFBS	2023	Not Detected at the reporting limit	N/A	6	PPT
Lithium	2023	Not Detected at the reporting limit	N/A	6	PPT

\*\*\* More information about the contaminants that were included in UCMR monitoring can be found at: [drinktap.org/Water-info/Whats-in-My-Water/Unregulated-Contaminant-Monitoring-Rule-UCMR](http://drinktap.org/Water-info/Whats-in-My-Water/Unregulated-Contaminant-Monitoring-Rule-UCMR). Learn more about the EPA UCMR at: [epa.gov/dwucmr/learn-about-unregulated-contaminant-monitoring-rule](http://epa.gov/dwucmr/learn-about-unregulated-contaminant-monitoring-rule) or contact the Safe Drinking Water Hotline at (800) 426-4791 or [epa.gov/ground-water-and-drinking-water](http://epa.gov/ground-water-and-drinking-water).