Columbia Water
Drinking Water • Wastewater • Stormwater

Este informe contiene información muy importante sobre el agua que usted toma. Para obtener una versión de este documento en español, visite: **www.colaccr-esp.com**.

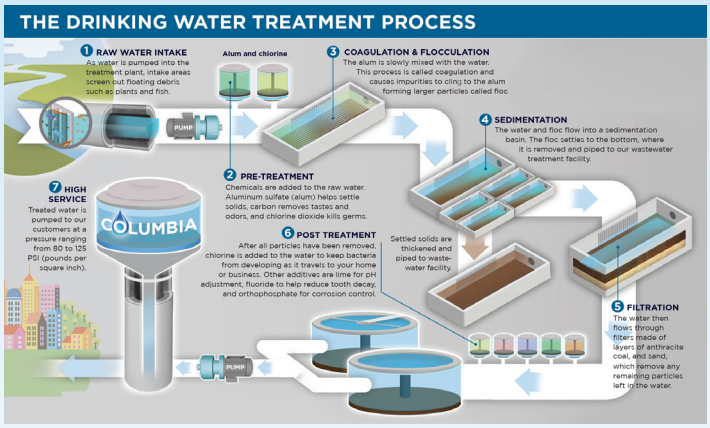
CITY OF COLUMBIA 2024 WATER QUALITY REPORT

PUBLIC WATER SYSTEM 4010001 • COLUMBIA, SC • CITY OF COLUMBIA, SOUTH CAROLINA

A Publication of the City of Columbia's Department of Utility Operations

Columbia Water Treatment

Columbia Water has offered quality at your tap since 1835. Our treatment process illustrates the numerous steps source water undergoes before it makes it to every customer's tap. Our team of dedicated water professionals ensures that water is treated, tested, distributed, and continues flowing 24/7, 365 days a year.



Learn more: **www.columbiascwater.net/about-drinking-water**

Canal Restoration Projects Update

City of Columbia Resilient Water Supply

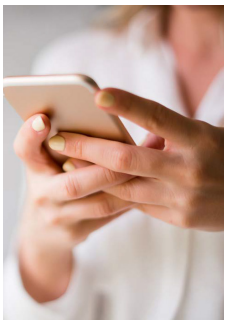
As part of the Columbia Canal recovery due to the flood in October 2015, we have begun construction of the alternate water intake for our Columbia Canal Water treatment plant. This new intake will allow for water supply from the Congaree River, providing up to 80 million gallons per day of pumping capacity, thereby minimizing reliance solely on the Columbia Canal. The design has been completed and work began in late winter on this 46.6 million dollar infrastructure investment with 32.6 million in funding through a Federal Emergency Management Agency (FEMA) Building Resilient Infrastructure and Communities Grant. Learn more about the Columbia Canal repairs here: **https://columbiascwater.net/columbiacanalproject/**

CAP Provides Help to Customers

The City of Columbia Customer Assistance Program (CAP) is available to Columbia Water customers in critical financial need to help pay their past-due water and sewer bills. From July 1, 2024 to May 29, 2025, 796 clients were assisted with $411,093.55 of funding for past due bills. For more information, please visit our website at **columbiascwater.net/billing-assistance** or contact Customer Care at **(803) 545-3300** or by email at **customercare@columbiasc.gov**.

INFORMATION ABOUT YOUR DRINKING WATER

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 **U.S. EPA's Safe Drinking Water Hotline (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 radioactive material, and can pick up substances resulting from the presence of animals or from human activity.



Columbia Water regularly flushes fire hydrants to keep water moving through the system and to improve water quality. Want to receive boil water alerts and advisories from Columbia Water? Residents can sign up to receive notices for their area at: **publicsafety.columbiasc.gov/citizens-alerts/**.

Want to see your water use? Want to set a leak alert? Download the free EyeOnWater app now!

EyeOnWater

Columbia Water's advanced meter upgrade project is one of the largest cellular deployment of smart meters in North America with over 150,000 meters installed. This project allows customers to receive fewer estimated bills, real-time alerts about possible leaks, and the ability to better manage water use. If you have a new meter, please download our EyeOnWater app which allows you to track your water usage in real time and set up leak notifications. Go to **columbiascwater.eyeonwater.com/signin** for more details.

Google Play

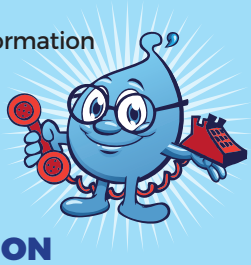
For additional information:

City of Columbia Water Quality Complaints, Billing, & Customer Care Center
803-545-3300
customercare@columbiasc.gov
columbiascwater.net/customer-care

SCDES - Bureau of Water
803-898-4300

National Lead Information Center
800-424-LEAD

Consumer Product Safety Commission
800-638-2772



FOLLOW US ON SOCIAL MEDIA!

Columbia Water can now be found on Facebook **(ColumbiaWater)**, Instagram, and X **(ColumbiaSCWater)**.

What is in Columbia's Drinking Water?

The City's South Carolina Department of Environmental Services (SCDES) – certified laboratory performs more than 200,000 analyses each year to ensure that the water the City supplies to its customers meets all U.S. EPA and SCDES standards. Additional analyses are performed by SCDES, the state agency that regulates and oversees public water systems (PWSs). Samples are tested at every stage of the treatment process and at hundreds of points throughout more than 2,600 miles of pipeline that make up the City's distribution system. The City also conducts additional testing in response to customer water quality concerns. The sources of Columbia's drinking water are two surface waters, the Broad River (via the Columbia Canal) and Lake Murray. The regulated substances listed below were detected in the City's water supply during 2024. **City of Columbia 2024 Sampling Results:**

U.S. EPA REGULATED PRIMARY DRINKING WATER PARAMETERS

Substance	Highest Level Allowed (MCL)	Highest Level Detected	Range of Levels Detected	Goal (MCLG)	Violations	Last Year Sampled	Source of Contaminant
INORGANIC COMPOUNDS							
Lead (1)	15 ppb (90th%) (Action Level)	6 ppb (90th%)	0-25 ppb (1 of 50 sites sampled exceeded the action level)	0	None	2023	Corrosion of household plumbing systems; erosion of natural deposits (1)
Copper	1.3 ppm (90th%) (Action Level)	0.17 ppm (90th%)	0.007-0.531 ppm (0 of 50 sites sampled exceeded the action level)	1.3 ppm	None	2023	Corrosion of household plumbing systems; erosion of natural deposits
Fluoride	4 ppm	0.83 ppm	0-0.83 ppm	4 ppm	None	2024	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate/Nitrite (as Nitrogen)	10 ppm	0.43 ppm	0-0.43 ppm	10 ppm	None	2024	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Chlorite (Lake Plant)	1.0 ppm	0.487 ppm	0-0.487 ppm	0.8 ppm	None	2024	By-product of drinking water disinfection
Chlorite (Canal Plant)	1 ppm	1.32 ppm	0-1.32 ppm	0.8 ppm	Yes	2024	By-product of drinking water disinfection
Selenium	50 ppb	3.60 ppb	0-3.60 ppb	50 ppb	None	2024	Discharge from petroleum and metal refineries. Erosion of natural deposits. Discharge from inlet.
ORGANIC COMPOUNDS							
Total Trihalomethanes (TTHM)	80 ppb (LRAA - Locational Running Annual Average)	34 ppb (LRAA)	15-67 ppb	0	None	2024	By-product of drinking water chlorination; formed when chlorine reacts with organic matter
Haloacetic Acids (HAA5)	60 ppb (LRAA)	29 ppb (LRAA)	11-65 ppb	0	None	2024	By-product of drinking water chlorination; formed when chlorine reacts with organic matter
Total Organic Carbon (TOC)	TT (35% or 45% removal, depending on source water TOC)	The TT requirement for TOC requires the running annual average of the TOC removal percentage achieved to be at least as great as the TOC removal percentage required. Compliance is judged quarterly, and the City met the requirement for all four quarters in 2024.		N/A	None	2024	Naturally present in the environment
DISINFECTANTS							
Chloramines	4 ppm (RAA)	2.7 ppm (Highest quarterly RAA)	0.01-4.3 ppm	4 ppm	None	2024	Water additive to control microbial growth
Chlorine Dioxide (Lake Plant)	800 ppb (MRDL)	552 ppb	0-552 ppb	800 ppb	None	2024	Water additive to control microbial growth
Chlorine Dioxide (Canal Plant)	800 ppb (MRDL)	514 ppb	0-514 ppb	800 ppb	None	2024	Water additive to control microbial growth
MICROORGANISMS							
Turbidity (Lake Plant)	<0.3 NTU TT	0.076 NTU - Highest single measurement 100%-Lowest monthly percentage meeting standard		N/A	None	2024	Naturally occurring in the environment
Turbidity (Canal Plant)	<0.3 NTU TT	0.240 NTU - Highest single measurement 100%-Lowest monthly percentage meeting standard		N/A	None	2024	Naturally occurring in the environment
Total Coliform Bacteria	5% of monthly samples are positive	2.6% (Highest monthly percentage positive)	0-2.6%	0	None	2024	Naturally occurring in the environment

(1) 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. The City of Columbia 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 in your pipes 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 at (800) 426-4791 or online at www.epa.gov/safewater/lead. City of Columbia water customers can call (803) 545-3300 to find out about free lead testing.

(2) The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/L of beta particles to be the level of concern associated with this MCL.

Substance	Highest Level Allowed (MCL)	Highest Level Detected	Range of Levels Detected	Goal (MCLG)	Violations	Last Year Sampled	Source of Contaminant
RADIOACTIVE SUBSTANCES							
Beta/Photon Emitters	50 pCi/L (2)	5.36 pCi/L	4.73-5.36 pCi/L	0	None	2021	Decay of natural and man-made deposits
Combined Radium	5 pCi/L	0.735 pCi/L	0-0.735 pCi/L	0	None	2021	Erosion of natural deposits
Gross Alpha Excluding Radon and Uranium	15 pCi/L	0.872 pCi/L	0-0.872 pCi/L	0	None	2021	Erosion of natural deposits

VIOLATIONS			
Violation Type	**Violation Begin**	**Violation End**	**Violation Explanation**
Chlorite (Disinfection Byproduct Rule)	12/13/2024	12/14/2024	Chlorite above the MCL was found in our drinking water during the period indicated, in violation of the State Primary Drinking Water Regulation (SPDWR) standard. City of Columbia system had an arithmetic average of three sample sets that exceeded the MCL for chlorite (1.0 mg/L) in the portion of the water distribution system supplied by the Canal Water Treatment Plant. The City of Columbia quickly evaluated the elevated chlorite levels in the water supply and took immediate action to resolve the issue. Steps included shutting down the chlorine dioxide production system at the Canal Water Treatment Plant, increasing pumping from the Lake Murray Water Treatment Plant to enhance water quality, and implementing more frequent chlorite testing. The issue was effectively addressed and resolved within a day. Prolonged exposure to chlorite in excess of the MCL is thought to effect the nervous systems of infants and young children and possibly the fetuses of pregnant women. Some people may experience anemia.

DEFINITIONS OF TERMS IN TABLE

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

Detected Level – The concentration of a substance detected in a water sample. The detected levels specified in the table are the highest levels detected if multiple samples were collected, except for Total Organic Carbon (TOC) or unless specified otherwise. For TOC, the specified removal rate is the rate required by SC DHEC based on data reported by the City.

HFPO-DA (GenX chemicals) – hexafluoropropylene oxide dimer acid

LCRR – Lead and Copper Rule Revisions

LRAA (Locational Running Annual Average) – an average at each sample point for four quarters in the calendar year.

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. Expressed as a number >1.0.

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. Same units as MCL.

mrem – milli Roentgen equivalent man (unit of radiation dosage)

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.

MRL (Minimum Reporting Level) – The lowest concentration that laboratories may report as a quantified value for a contaminant.

N/A (Not Applicable) – does not apply

NTU (Nephelometric Turbidity Unit) – units of measure for amount of particles in water.

pCi/L – picocuries/Liter (a measure of radioactivity)

PFAS – Per- and Polyfluoroalkyl Substances

PFBS – perfluorobutanesulfonic acid

PFHxS – perfluorohexanesulfonic acid

PFNA – perfluorononanoic acid

PFOA – perfluorooctanoic acid

PFOS – perfluorooctane sulfonic acid

ppb (parts per billion or micrograms per liter) – one part in a billion parts (equivalent to one penny in $10,000,000).

ppm (parts per million or milligrams per liter) – one part in a million parts (equivalent to one penny in $10,000).

PWS (Public Water System) – a public water system provides water for human consumption through pipes or other constructed conveyances to at least 15 service connections or serves an average of at least 25 people for at least 60 days a year. A public water system may be publicly or privately owned.

SCDES – South Carolina Department of Environmental Services.

SMCL – Secondary maximum contaminant level.

SPDWR – State Primary Drinking Water Regulation.

U.S. EPA – United Sates Environmental Protection Agency

TT (Treatment Technique) – a required process intended to reduce the level of a contaminant in drinking water. If no MCL.

90th% (90th Percentile) – the Action Level for lead and copper for a water system that serves more than 100,000 people.

< Less than

> Greater than

REGULATORY NEWS

LCRR (Lead and Copper Rule Revisions)

In order to minimize exposure to lead and copper in drinking water, the US EPA revised their 1991 rule. By proactively sampling the system, Columbia Water complies with new regulation by developing an inventory of service line materials (having no lead service lines). Customers are able to access the inventory viewer here: **www.columbiascwater.net/lcrr/**

Information on Lead

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. The City of Columbia 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 City of Columbia at **CustomerCare@Columbiasc.gov**. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at: **www.epa.gov/safewater/lead**.

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney or nervous system problems.

For More Information: Customers who need additional water quality information can contact Dr. Alejandra Beier, Drinking Water Compliance Manager, at **Alejandra.Beier@columbiasc.gov** or **(803) 733-8211**.

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, stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organics, 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.

In order to ensure that tap water is safe to drink, the U.S. EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. 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 are available from the **Safe Drinking Water Hotline (800-426-4791)**. Testing since 1994 has revealed no signs of Cryptosporidium in Columbia's treated water.

City of Columbia water customers can call **803-545-3300** for more information about water testing or to have your home water tested by our laboratory staff.

Secondary Drinking Water Parameters

Some substances in water, listed in the table to the right, affect the taste, odor, and hardness of our drinking water. Because these substances do not impact a person's health, the U.S. EPA has established secondary parameters that are non-enforceable, recommended guidelines. The City meets these guidelines in addition to the regulations set forth by the U.S. EPA. See U.S. EPA Regulated Secondary Drinking Water Standards for details; visit: **https://www.epa.gov/sdwa/secondary-drinking-water-standards-guidance-nuisance-chemicals**

U.S. EPA REGULATED SECONDARY DRINKING WATER PARAMETERS

Parameter	Units	SMCL	Range	Average	Noticeable effects above the SMCL
Chloride	ppm	250	4.9-12.8	10.8	Salty taste
Color	Color units*	15	0	0	Visible tint
Iron (Total)	ppb	300	0-92.0	92.0	Rusty color; sediment; metallic taste; reddish or orange staining.
Manganese	ppb	50	5.0-35.0	14.6	Black to brown color; black staining; bitter metallic taste.
pH	Standard Units** (SU)	TT	7.3-9.0	8.0	**Low pH:** bitter metallic taste; corrosion. **High pH:** slippery feel; soda taste; deposits.
Sulfate	ppm	250	15.3-33.2	21.6	Salty taste

* A standard unit for measuring color intensity
**pH is measured on a logarithmic scale from 0 to 14 SU, with 7 SU being neutral pH

ADDITIONAL MONITORING Non-Regulated Parameters

The City also collects information about additional parameters that are not regulated by the US EPA. While these parameters do not impact a person's health, they may be useful for those using water for specialized purposes like brewing, or maintaining equipment like chillers and boilers. See the Non-Regulated Parameters table below for details.

2024 NON-REGULATED PARAMETERS

Parameter	Units	Range	Average
Sodium	ppm	5.4-9.7	8.1
Calcium	ppm	12.0-14.0	12.6
Magnesium	ppm	1.5-2.1	1.9
Total Hardness ($CaCO_3$)	ppm	24-53	36
Total Alkalinity	ppm	16-34	26
Total Phosphate	ppm	0.6-1.4	1.0

KNOWLEDGE ON TAP

PROBLEMS with your water or sewer lines?

Contact the City at 803-545-3300, and we will address it.

UCMR 5 (Unregulated Contaminant Monitoring Rule 5)

Unregulated contaminants are those for which U.S. EPA has not yet established drinking water standards. The purpose of unregulated contaminant monitoring is to assist U.S. EPA in determining the occurrence of these contaminants in drinking water and deciding whether the contaminants should have a standard. In 2024 and 2025, City of Columbia participated in the fifth round of the UCMR 5. More information about UCMR 5 can be found at: **https://www.epa.gov/dwucmr/fifth-unregulated-contaminant-monitoring-rule** and **https://www.epa.gov/dwucmr/data-summary-fifth-unregulated-contaminant-monitoring-rule**. As part of the UCMR 5, we began quarterly sampling for 29 PFAS (Per- and Polyfluoroalkyl Substances) and lithium in December 2024. See the Unregulated Contaminants results table showing data measured at or above the minimum reporting levels (MRLs) below for more details.

UNREGULATED CONTAMINANTS

Parameter	Units	Range	Average	Sample Year*
PFBS (Canal Plant)	ppb	0.0035-0.0046	0.0040	2024-2025
PFOS** (Canal Plant)	ppb	0.0062-0.0071	0.0067	2024-2025
PFOS** (Lake Plant)	ppb	0.0066-0.0072	0.0069	2024-2025
PFOA** (Canal Plant)	ppb	0.0048-0.0061	0.0055	2024-2025
PFOA** (Lake Plant)	ppb	0.0042-0.0045	0.0044	2024-2025
PFxA** (Canal Plant)	ppb	0.0035-0.0054	0.0045	2024-2025
PFxA** (Lake Plant)	ppb	0.0037-0.0039	0.0038	2024-2025
HFPO-DA** (Lake Plant) (GenX Chemicals)	ppb	0.0082-0.0092	0.0087	2024-2025
PFPeA (Canal Plant)	ppb	0.0035-0.0057	0.0046	2024-2025
PFPeA (Lake Plant)	ppb	0.0038-0.0041	0.0040	2024-2025

** In 2024, the U.S. EPA issued drinking water standards referred to as maximum contaminant levels, or "MCLs") for PFOS, PFOA, PFHxS, PFNA, and HFPO-DA, as well as a "Hazard Index" which proposed to regulate mixtures of two or more of PFHxS, PFNA, HFPO-DA, and PFBS. These regulations were finalized in 2024, but public water systems have until at least 2029 to implement solutions that reduce these contaminants and other PFAS. Recently, the EPA announced plans to revise these drinking water standards. More information about these recent changes can be found here: https://www.epa.gov/newsreleases/epa-announces-it-will-keep-maximum-contaminant-levels-pfoa-pfos
Columbia Water is actively monitoring the changes in regulations pertaining to PFAS, and actively studying available technologies to reduce or remove PFAS from source water. Columbia Water is committed to taking any and all steps necessary to maintain compliance with the EPA's drinking water standards.