LOUDOUN WATER ANNUAL REPORT

CENTRAL SYSTEM

Drinking Water Quality

2023

Introduction

Loudoun Water is pleased to present your drinking water quality annual report. The information contained in this report is based on data collected and reported to Virginia Department of Health in 2023, unless otherwise noted.

Annual dissemination of this report is required under the federal Safe Drinking Water Act (SDWA). Established to safeguard the quality of drinking water across the United States, the SDWA establishes contaminant level limits in drinking water. These limits are represented in this report as MCLs, or Maximum Contaminant Levels. A glossary of helpful definitions is listed on the following page.

Based on rigorous sampling, the data tables prepared for this report provide important information about the quality of your drinking water throughout the year. On page 10, **Table One** shows the quality of the water as it flows within the Loudoun Water distribution system; and on page 11 **Table Two** shows the quality of the water as it leaves the treatment plants that supply our water.

If you have a question or concern that is not addressed in this report, please contact us at 571-291-7880. Our staff is available to assist you Monday through Friday between 8:00 a.m. and 5:00 p.m. You may also contact us at any time to obtain the latest drinking water quality data. Previous drinking water quality reports and additional water quality information can be found at **www.loudounwater.org**.

We also invite you to attend our monthly Loudoun Water Board Meetings, which are usually held on the second Thursday of each month in the Boardroom of our Dale C. Hammes Administration Building, located at 44865 Loudoun Water Way, Ashburn, VA 20147. To learn more about Loudoun Water's Board of Directors, please visit **www.loudounwater.org/about**.

Helpful Definitions

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

Level 1 Assessment: An evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and, when possible, the likely reason that the waterworks triggered the assessment.

Level 2 Assessment: An evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and, when possible, the likely reason that the waterworks triggered the assessment in a more comprehensive investigation than a Level 1 assessment.

Maximum Contaminant Level (MCL): The highest level of a contaminant that EPA allows in drinking water. MCLs are set as close to the MCLGs as possible 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 health risk. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL): The maximum permissible level of disinfectant residual in drinking water, based on a running annual average.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected health risk. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

mrems/year: Millirems per year. A measurement of radiation absorbed by the body.

N/A: Not applicable.

ND: Non-detect. Concentration levels so low they were not detectable.

Ninetieth (90th) Percentile: Represents the highest value found out of 90 percent of the samples taken in a representative group. If the 90th percentile is greater than the action level, it will trigger a treatment or other requirement that a water system must follow.

NTU: Nephelometric Turbidity Unit.

PCi/L: Picocuries per liter.

PMCL: Primary maximum contaminant level of a contaminant based on health considerations.

ppb: Parts per billion. One ppb is equal to one microgram per liter (ug/L).

ppm: Parts per million. One ppm is equal to one milligram per liter (mg/L).

Total Coliform: Bacteria that indicate whether other potentially harmful bacteria may be present.

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

Letter from the General Manager

I am pleased to present to you the Annual Drinking Water Quality Report for 2023. As stewards of the environment and precious water resources, it is our collective responsibility to ensure that everyone in our community enjoys access to safe and clean drinking water. I am proud to announce that together, we have upheld and even exceeded the highest standards in maintaining water quality throughout the year.

Our water quality report results reflect rigorous testing and monitoring procedures conducted throughout the year. These tests encompass various parameters, including but not limited to, microbiological contaminants, chemical pollutants, and physical characteristics of the water.

The results of these tests for 2023 indicate that our water meets or exceeds standards set by the EPA and administered by the Virginia Department of Health. This accomplishment is a testament to the dedication and hard work of our team, who are committed to safeguarding the health and well-being of our community.

In addition to meeting regulatory requirements, we are continuously striving to improve the quality of our water supply. This involves investing in infrastructure upgrades, implementing advanced treatment technologies, and adopting sustainable practices to protect our water sources.

I hope you will find our Annual Drinking Water Quality Report useful and informative. If you have any questions about this report or your drinking water quality, I encourage you to contact our Customer Relations team at 571-291-7880 or via email at **customerservice@loudounwater.org**. Our staff at Loudoun Water is always here for you and we are happy to help.

Sincerely,

Brian Carnes
General Manager

Letter from the Chairman

As Chair of the Loudoun Water Board of Directors, it is my pleasure to share Loudoun Water's Annual Drinking Water Quality Report for 2023. This report is developed each year to keep you informed about your water quality, what it contains, and how it compares to standards set by the U.S. Environmental Protection Agency and Virginia Department of Health.

Loudoun Water is committed to meeting the challenges of existing and future regulations while continuing to reliably and consistently serve the needs of our customers and growing communities. We value your trust and remain committed to providing exceptional drinking water and excellent service to you and your family.

I encourage you to review this report and reach out to the Loudoun Water staff with any questions you may have about your drinking water or utility operations. Your feedback is invaluable in helping us maintain the highest standards of water quality. Thank you for your continued support as we work together to ensure the safety and sustainability of our water supply. For additional information about Loudoun Water or projects in your community, please visit **www.loudounwater.org**.

Sincerely,

Terrence Allen
Chairman, Loudoun Water Board of Directors

About Loudoun Water

Our mission is to work to ensure a healthy environment and high quality of life through effective and sustainable management of resources entrusted to our care. Loudoun Water is committed to providing excellent water, wastewater and reclaimed water services for all our customers in a dynamic county that continues to grow and evolve at a rapid pace. Loudoun Water is preparing for the future; one of continued county expansion, economic growth, adaptable technologies, and enhanced public health and safety. With sustained regional growth, major investments in water infrastructure, and deployment of advanced operational and informational technologies, Loudoun Water remains a proactive resource and partner in our vibrant county.

To do this, Loudoun Water maintains over 1,400 miles of water distribution pipelines, over 1,200 miles of wastewater collection system pipelines and a growing reclaimed non-potable water system.

Loudoun Water is a political subdivision of the State and is not a department of Loudoun County. This means all Loudoun Water income is received either as user fees from customers, which go towards operating expenses or as developer fees which are used to pay for capital improvements.

Loudoun Water is governed by a Board consisting of nine members appointed by the Board of Supervisors. The Board members serve four-year terms and can be reappointed by the County. The Board appoints the General Manager, who is responsible for the daily management of Loudoun Water.

Loudoun County is a rapidly growing jurisdiction located in the northern tip of the Commonwealth of Virginia approximately 25 miles northwest of Washington, D.C. Loudoun County contains 521 square miles, making it one of the largest counties in the region. It has been one of the fastest growing counties in the country over the past decade. The County is expected to continue to have one of the highest population and employment growth rates in the entire Washington, D.C. region over the next 20 years. Loudoun Water continues to plan for this growth, which is outlined in our Capital Improvement Plan.

SOURCE WATER ASSESSMENT

Since the Loudoun Water system has two sources of water (Potomac River and Goose Creek), two source water assessment reports have been conducted by the Virginia Department of Health. These reports consist of maps showing the source water assessment areas, an inventory of known land-use activities of concern and documentation of any known contamination. Based on state criteria, both sources are considered to be highly susceptible to contamination. Additional information about these reports can be obtained by contacting us at 571-291-7880.

Your Water Sources

Your drinking water comes from the Potomac River and as needed Goose Creek. The Potomac River is augmented by reservoirs in Maryland, Virginia, and West Virginia through a shared supply agreement with neighboring water providers. Goose Creek receives water from Beaverdam Reservoir and Goose Creek Reservoir. Beaverdam Reservoir fills Goose Creek Reservoir when water levels get low and vice versa. Your drinking water from the Potomac River was fully treated by Loudoun Water and by our wholesaler, Fairfax Water. Drinking water from Goose Creek can be fully treated by Loudoun Water if supplemental drinking water is required.

What is in Your 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency (EPA) 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 radioactive material and can pick up substances resulting from the presence of animals or human activity. Contaminants that may be present in the water include:

- Microbes (viruses or bacteria) from septic systems, agricultural livestock operations, wildlife and wastewater treatment plants.
- Inorganics, such as salts and metals, which can occur naturally or result from stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides from agriculture, urban runoff and residential uses.

- Organics (like synthetic and volatile organic chemicals) from industrial processes and petroleum production, gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, either naturally occurring or the result of oil and gas production or mining activities.

What Do We Test For?

The Safe Drinking Water Act of 1974 (SDWA), which has been amended most significantly in 1986 and 1996, governs drinking water quality. It sets the limits for contaminants in drinking water. These limits are represented in this report as MCLs, or the Maximum Contaminant Levels. The Food and Drug Administration (FDA) establishes limits for contaminants in bottled water, which must provide the same protection for public health as tap water. Under the SDWA, Loudoun Water is required to test for the presence of a number of organisms and chemicals. We submit the results to the Virginia Department of Health.

- **Bacteriological analysis** is routinely performed. It is reported based on the presence or absence of total coliform and *Escherichia coliform* (*E. coli*). Their presence indicates potential health risks for individuals exposed to this water. Loudoun Water tested for coliform bacteria at a minimum of 180 locations monthly in 2023.
- **Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAA5)** analyses are a quarterly monitoring requirement. Both of these form in the water supply as chlorine reacts with organic matter. When ingested in large quantities, these chemicals are suspected human carcinogens, so we monitor for them closely. The legal limit for TTHMs is a specific location running annual average of 80 parts per billion (ppb). For HAA5, the limit is a specific location running annual average of 60 ppb. Loudoun Water tests for TTHMs and HAA5 at twelve locations throughout the distribution system.
- **Corrosion control parameters** (orthophosphate and pH) are a semiannual monitoring requirement. By dosing the drinking water with a minimum of 0.90 ppm orthophosphate and maintaining a minimum pH of 7.0, the potential for corrosion of lead, copper and other metals is greatly reduced. Loudoun Water monitors for these corrosion parameters at multiple locations throughout the distribution system

Lead in Drinking Water

WHAT IS THE EPA STANDARD FOR LEAD IN DRINKING WATER?

EPA has established an Action Level for lead in water of 15 parts per billion (ppb). When lead testing is performed as required by EPA, 90 percent of the samples must contain less than 15 ppb. This is usually referred to as the 90th percentile results being less than 15 ppb. The Action Level

was not designed to measure health risks from water represented by individual samples. Rather, it is a statistical trigger value that, if exceeded, may require more treatment, public education, and possibly lead to service-line replacement where such lines exist. (Loudoun Water does not have any lead service lines within its system.)

Loudoun Water has been testing for lead and copper in accordance with EPA's Lead and Copper Rule (LCR) since 1992. The 90th percentile value for lead was <2 ppb compared to the EPA action level of 15 ppb. Currently, the Virginia Department of Health requires Loudoun Water to monitor for lead and copper at 50 locations every three years.

WHERE DOES LEAD IN DRINKING WATER COME FROM?

Although some utilities use raw source waters that contain lead, Loudoun Water's sources do not contain lead. In 1986, lead was banned from being used in pipe and solder in home construction. In older homes, where lead is present in pipe and solder connections, it may dissolve into the water after the water sits for long periods.

Some household plumbing components may contain a small amount of lead and can contribute to lead concentrations at the tap. Our water supplier Fairfax Water and Loudoun Water add a corrosion inhibitor to slow this dissolution process.

WHAT CAN I DO IN MY HOME TO REDUCE EXPOSURE TO LEAD IN THE DRINKING WATER?

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. Loudoun Water is responsible for providing high-quality drinking water but cannot control the variety of materials used in plumbing components in home construction. 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 two minutes, or until it becomes cold or reaches a steady temperature before using the water for drinking or cooking. Use only cold water for drinking, cooking and making baby formula.

If you are concerned about lead in your water, you may wish to have your water tested. Information about lead in drinking water, testing methods and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800-426-4791) or at **www.epa.gov/safewater/lead**. Some people choose to install filters in their homes. If you choose to use a water filter, follow these three rules:

1. Choose one designed for the specific filtration desired (chlorine, lead, *Cryptosporidium*, etc.).
2. Make sure the filter is approved by the National Sanitation Foundation (**www.nsf.org**).
3. Maintain the filter as directed.

HOW CAN LOUDOUN WATER ASSIST IN HAVING THE WATER IN MY HOUSE TESTED?

For information on having a lead-level test conducted, call our Customer Relations Department at 571-291-7880.

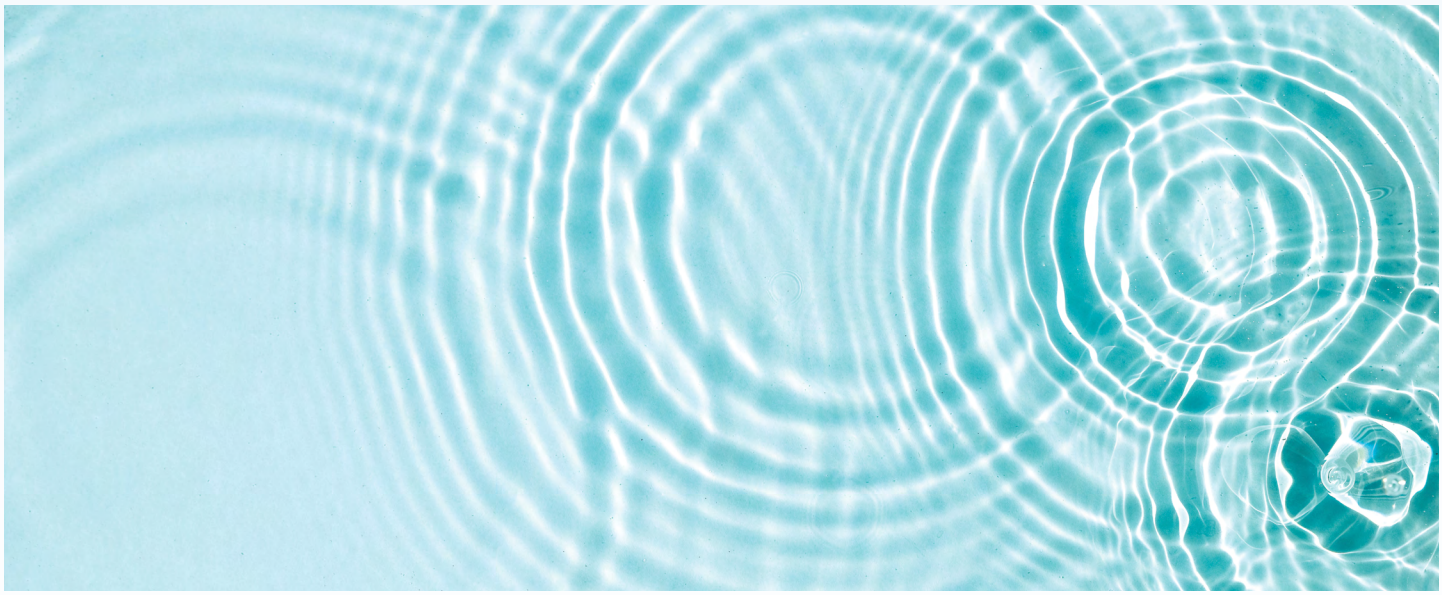
NOTICE TO CUSTOMERS OF LOUDOUN WATER CENTRAL SYSTEM

In keeping with National Primary Drinking Water Regulations, we are obliged to inform you that we may be in violation of state regulations.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the 2021-2023 compliance period, we did not complete all monitoring and testing for lead and copper during the required monitoring period, and therefore cannot be sure of the quality of our drinking water during that time. We were required to collect 50 samples between June 1 and September 30, 2023 and we did not do so. Our lead and copper monitoring schedule is on a triennial frequency, and we last conducted compliance lead and copper monitoring during July 2020. Loudoun Water collected 53 samples during October 2023, which was outside of the window for compliance with our required lead and copper monitoring schedule. These are considered special samples and do not satisfy the monitoring requirement, but are for general informational purposes. The results of the October 2023 samples are included in the Lead and Copper Table included on page 11. We will collect a complete set of 50 lead and copper samples for compliance purposes during the June 1 – September 30, 2024 monitoring period.

There is nothing you need to do at this time. There is no immediate concern of a risk to public health. If there had been an immediate risk, you would have been notified within 24 hours.

We are attempting to prevent further violations by ensuring that all required sampling in our distribution system is done in accordance with the state drinking water regulations. Future violations will be reported as required by state regulations in order to increase consumers' awareness of conditions that exist in their public water system.



ARE YOU VULNERABLE TO CONTAMINANTS?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer who are 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 healthcare providers. EPA and Centers for Disease Control and Prevention guidelines on appropriate means to lessen the risk of infections by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at 800-426-4791.

How is Your Water Treated?

The treatment process at both Fairfax Water and Loudoun Water includes chemical coagulation, flocculation, sedimentation, filtration and disinfection. Coagulation and flocculation help condition the raw water so that contaminants combine with particulate matter to form floc (large particles), which will settle out in the sedimentation process. Filtration removes the smaller, lighter particles. Disinfection with chlorine is the last step, which kills bacteria, viruses and other microbial contaminants. Sufficient chlorine is added to deter the growth of bacteria while water flows through the pipes to your home. Chlorine can be dangerous to human health in high amounts. EPA sets the safe limit for chlorine in your water at a running annual average of 4 ppm. The chlorine amount is maintained to be extremely effective at inactivating bacteria.

Chloramine, a type of chlorine, is used as the chlorine disinfectant for both treatment facilities. Chloramines are created by adding ammonia to chlorine. Chloramines break down much slower than free chlorine, minimizing the creation of TTHMs and maximizing the length of time the disinfectant remains in the water. One downside of chloramines is they may cause certain types of gaskets or toilet flappers to deteriorate faster, potentially causing leaks.

Fairfax Water and the Loudoun Water Trap Rock Water Treatment Facility also use ozone as another disinfectant. Ozone reduces the amount of chlorine needed to treat the water, offers additional barriers against waterborne pathogens and produces better tasting water. Orthophosphate is also added to the water to help coat the pipes and reduce the ability of the lead to leach out.

WATER QUALITY ANALYSIS AND RESULTS

We constantly monitor various components in the water supply to meet all regulatory requirements. The following tables list only those water quality parameters that are regulated and had some level of detection. If you have a question about a parameter not seen here, call us at 571-291-7880.

Turbidity

Turbidity is the clarity of the water. It is measured in Nephelometric Turbidity Units (NTU). Turbidity higher than 5 NTU is just visually noticeable to the average person. Turbidity has no health effects; however, it can interfere with the disinfection process and provide a medium for microbial growth. Turbidity is measured during the treatment process after the water has been filtered, but before disinfection. The turbidity level of filtered water must be less than or equal to 0.3 NTU in at least 95 percent of the measurements taken each month and no single measurement can exceed 1 NTU.

Turbidity	Average Annual Turbidity (NTU)	Highest Single Measurement (NTU)	Lowest % Of Samples Meeting TT Turbidity Limit	MCL	MCLG	Major Source in Drinking Water	Violation
Fairfax Water—Corbalis Water Treatment Plant	N/A	0.20	100%	TT	N/A	Soil Runoff	No
Loudoun Water—Trap Rock Water Treatment Facility	0.028	0.123	100%				No

Your water is tested for a large array of water quality parameters at locations as it enters into the distribution system. You'll find this data on what was detected in **Table Two**.

Loudoun Water also tests water from within the distribution system for the presence of bacteria, chlorine, total trihalomethanes, haloacetic acids, lead and copper and submits these results to the Virginia Department of Health regularly. This data is found in **Table One**.

The tables on these pages show the results of monitoring for the period of January 1, 2023 to December 31, 2023, unless otherwise noted.

TABLE ONE: Water Quality in the Distribution System

Microbial Parameters	Highest Monthly Result	MCL (Max Allowed)	MCLG (Goal)	Typical Source	Violation
Total Coliform Bacteria	0	TT	N/A	Naturally present in environment	No
E. coli Bacteria	0	Repeat sample is *E. coli* positive OR Routine sample is *E. coli* positive followed by Repeat sample that is Total Coliform positive OR System fails to take all required repeat samples following *E. coli* positive routine sample OR System fails to analyze for *E. coli* when any repeat sample tested positive for Total Coliform	0	Human and animal fecal waste	No

Chemical Parameters	Highest Quarterly System Running Annual Average	MRDL (Max Allowed, Compliance Based on System Running Annual Average)	MRDLG (Goal)	Typical Source	Violation
Total Chlorine (ppm)	2.91 **RANGE (individual test results)** 0.2–4.3	4	4	Water additive used to control microbes	No

Disinfection Byproducts	Highest Quarterly Locational Running Annual Average	MCL (Locational Running Annual Average)	MCLG (Goal)	Typical Source	Violation
Total Trihalomethanes (ppb)	40.4 **RANGE (individual test results)** 6.79–91.8	80	N/A	Byproduct of drinking water disinfection	No
Haloacetic Acids (ppb)	**Highest Quarterly Locational Running Annual Average** 19.29 **RANGE (individual test results)** 1.58–52.2	60	N/A	Byproduct of drinking water disinfection	No

Metals Parameters	90th Percentile Level	Action Level	Goal	Number of Sites Above Action Level	Typical Source	Violation
Copper (ppm)[1]	0.58	1.3	1.3	0	Corrosion of household plumbing; erosion of natural deposits	No
Lead (ppb)[1]	<2	15	0	0	Corrosion of household plumbing; erosion of natural deposits	No

1 Samples for 2023 were collected outside of the compliance window. Samples will be collected again in 2024.

TABLE TWO: Water Quality from Loudoun Water Supplier (Fairfax Water) and Loudoun Water

Water Quality Parameter	Average Amount Detected RANGE		MCL (Max Allowed)	MCLG	Typical Source	Violation
	Fairfax Water Corbalis Water Treatment Facility	Loudoun Water Trap Rock Water Treatment Facility				
Beta/photon emitters[1] (pCi/L)	2.06[2] RANGE ND	3.02[3]	50	0	Decay of natural and man-made deposits	No
Combined Radium 226 and 228 (pCi/L)	N/A	0.834[4] RANGE ND–0.834	5	0	Erosion of natural deposits	No
Chromium (ppb)	N/A	<0.002	100	100	Discharge from steel and pulp mills; erosion of natural deposits	No
Fluoride (ppm)	0.72 RANGE 0.68–0.76	0.68	4	4	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories	No
Nitrate [as Nitrogen] (ppm)	0.72 RANGE 0.22–1.60	N/A	10	10	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits	No
Nitrate-Nitrite [as Nitrogen] (ppm)	N/A	1.44	10	10	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits	No
Barium (ppm)	0.037 RANGE 0.028–0.045	0.037	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	No
Total Organic Carbon[5] (ratio)	1.2 RANGE 1.1–1.2	1.57 RANGE 1.00–3.06	TT	N/A	Naturally present in the environment	No

1 The MCL for Beta particles is 4 mrem/year. EPA considers 50 pCi/L to be the level of concern for Beta particles.
2 This radioactive contaminant result is above the analysis-specific detection limit but below the minimum detection limits prescribed in the Consumer Confidence Rule as stated in 40 CFR 141.151 (d).
3 Data is from 2022.
4 Data is from 2019.
5 Total Organic Carbon (TOC) has no health effects. However, it provides a medium for the formation of disinfection byproducts, including trihalomethanes and haloacetic acids. The maximum contaminant level for TOC is a Treatment Technique (TT), which means there is a required process needed to reduce the level of TOC in the water. The average level reported is a quarterly running average of the monthly ratio of actual TOC removal versus required TOC removal between source and treated waters. This Quarterly Running Annual Average value must be greater than or equal to 1 to be in compliance.

Unregulated Components	Average Amount Detected RANGE		MCL (Max Allowed)	MCLG (Goal)	Typical Source	Violation
	Fairfax Water Corbalis Water Treatment Facility	Loudoun Water Trap Rock Water Treatment Facility				
Sodium[1] (ppm)	17.2 RANGE 11.9–27.5	15.6	N/A[1]	N/A[1]	Erosion of natural deposits; runoff from road deicing chemicals; discharge from industrial sources; wastewater treatment plant effluent	N/A[1]

1 There are no State or Federal limits established for this parameter.

INFORMATION ABOUT THE UNREGULATED CONTAMINANT MONITORING RULE

WHAT IS THE UNREGULATED CONTAMINANT MONITORING RULE (UCMR)?

EPA uses 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 (SDWA).

The current fifth Unregulated Contaminant Monitoring Rule (UCMR 5) requires monitoring for 30 chemical contaminants between 2023 and 2025. This monitoring provides a basis for future regulatory actions to protect public health. For more information on the UCMR 5 and the complete list of components tested go to **UCMR 5 Basic Information Fact Sheet (PDF)**.

WHAT ARE THE PUBLIC HEALTH BENEFITS OF THE UCMR PROGRAM?

The UCMR program provides the EPA and other interested parties with nationally representative data on the occurrence of particular contaminants in drinking water, the number of people potentially being exposed and an estimate of the levels of that exposure. EPA will consider the occurrence data from UCMR 5 and other sources, along with the peer reviewed health effects assessments, to support a regulatory determination on whether to initiate the process to develop a national primary drinking water regulation.

Distribution System Components (ug/L)	Average	Minimum	Maximum	Use or Environmental Source
Perfluoro-n-pentanoic acid (PFPeA)	0.00068	<0.003	0.0034	Chemicals used in many consumer products

INFORMATION ABOUT *CRYPTOSPORIDIUM* IN THE SOURCE WATERS

THE FOLLOWING INFORMATION REFLECTS DATA GATHERED BY LOUDOUN WATER FOR THE POTOMAC RIVER.

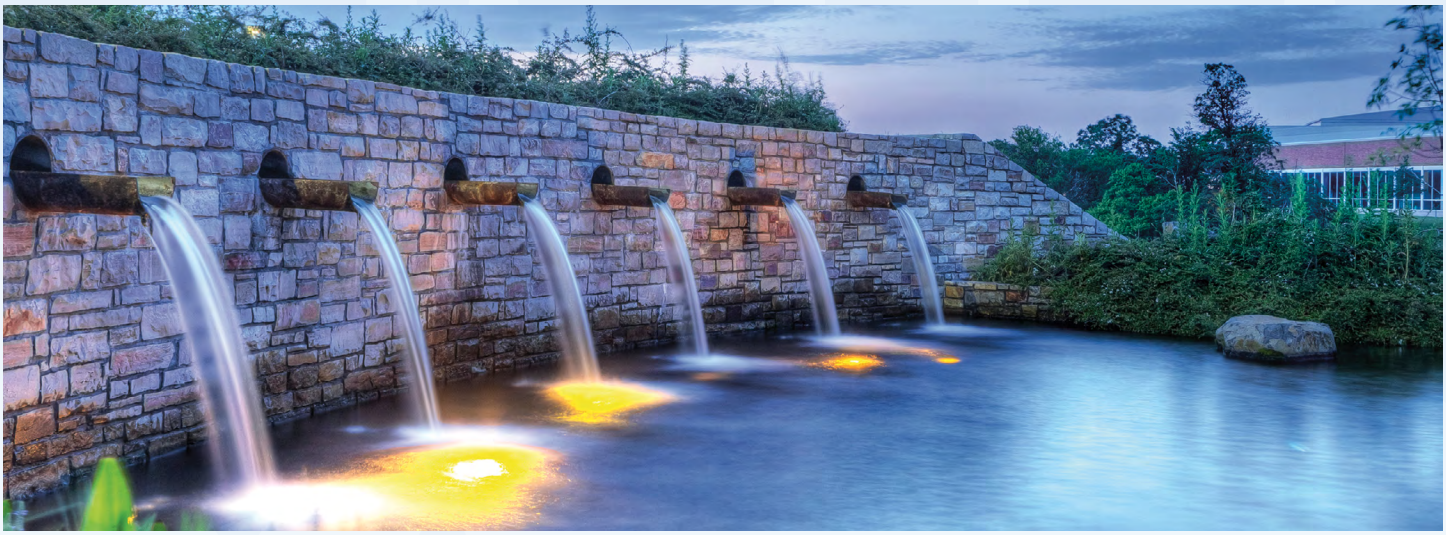
Cryptosporidium is a microbial pathogen sometimes found in surface water throughout the United States. Although filtration removes *Cryptosporidium*, the most commonly used filtration methods cannot guarantee 100 percent removal. Loudoun Water and Fairfax Water consistently maintain their filtration process in accordance with regulatory guidelines to maximize removal efficiency. The monitoring indicates the occasional presence of these organisms in the source water. Current test methods do not allow us to determine whether the organisms are dead or if they are capable of causing disease.

Ingestion of *Cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested in order to cause disease. It may be spread through means other than drinking water, such as other people, animals, water, swimming pools, fresh food, soils and any surface that has not been sanitized after exposure to feces.

In 2020, Loudoun Water completed monitoring of the Potomac River for compliance with Round 2 of the EPA Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR Round 2). The EPA created this rule to provide for increased protection against microbial pathogens, such as *Cryptosporidium*, in public water systems that use surface water sources. The LT2ESWTR Round 2 monitoring program involves the collection of one sample from water treatment plant sources each month for a period of two years. With the startup of the Loudoun Water Trap Rock Water Treatment Facility in 2018 Loudoun Water has now completed the two year monitoring phase of the Potomac River.

Under the LT2ESWTR Round 2, the average *Cryptosporidium* concentration determines whether additional treatment measures are needed. A *Cryptosporidium* concentration of 0.075 oocysts/liter or greater triggers additional water treatment measures. Loudoun Water and Fairfax Water's raw water *Cryptosporidium* concentrations have consistently remained below this threshold, therefore no additional treatment measures are required.

The final averaged results for the source water (prior to treatment) at the Potomac River Intakes are as follows:	*Cryptosporidium* Concentration (oocysts/liter)
Potomac River—Loudoun Water—2019–2020	0.008
Potomac River—Fairfax Water—2015–2017	0.000



POLY- AND PERFLUOROALKYL SUBSTANCES (PFAS)

What are PFAS?

Poly- and Perfluoroalkyl Substances, also known as PFAS, are a group of synthetic chemicals that have been in use since the 1940s and there are now more than 4,000 different chemicals in the PFAS family. A wide variety of products, including stain-resistant fabric coatings, non-stick coatings (Teflon), food packaging, and firefighting foam contain PFAS. PFAS manufacturing and processing facilities, facilities using PFAS in production of other products, airports, and military installations are some of the potential contributors of PFAS releases into the air, soil, and water. Due to their widespread use and persistence in the environment, most people in the United States have been exposed to PFAS. Exposure to humans can occur by eating, inhaling, or even touching the product. EPA reports that scientists have found traces of one or more PFAS in the blood of nearly all the people they tested. There is evidence that continued exposure above specific levels to certain PFAS may lead to adverse health effects.

How is Drinking Water Affected by PFAS?

PFAS can enter drinking water at sites where they are made, used, disposed of, or spilled. PFAS can be found in the air near manufacturing facilities and can enter rainwater. PFAS are very mobile and can be transported through rainwater run-off and enter surface water (rivers, lakes, ponds, etc.) or seep through the soil and migrate into ground water (underground sources of drinking water). Because PFAS are very long-lasting and are not easily broken down by sunlight or other natural processes, they may remain in the environment for many years.

What is Loudoun Water Doing about PFAS?

Loudoun Water has tested for PFAS beginning in 2013, when PFAS chemicals were included in the Unregulated Contaminant Monitoring Rule (UCMR 3) rule was put into effect. Additionally, as a wholesale

purchaser of drinking water from Fairfax Water, Loudoun Water is working closely in the region to understand PFAS implications as a regional initiative.

In addition to testing, Loudoun Water is paying close attention to US EPA's PFAS drinking water regulatory process. Twenty-nine PFAS chemicals are included in the current UCMR 5 testing, which Loudoun Water began in June 2023. In 2016, US EPA issued health advisories for PFOA and PFOS, two specific PFAS chemicals. Based on the new data and EPA's draft analyses, the levels at which negative health effects could occur are much lower than previously understood when EPA issued the 2016 health advisories for PFOA and PFOS. There are currently no enforceable federal drinking water regulations for PFAS chemicals.

Loudoun Water is evaluating and will continue to evaluate treatment processes to treat PFAS in water, and maintain high-quality drinking water for Loudoun Water customers.

As a Community Member, How Can I Reduce My PFAS Exposure?

- Check product labels for ingredients that include the words "fluoro" or "perfluoro."
- Be aware of packaging that contains grease-repellent coatings, such as microwave popcorn bags, fast food wrappers, and single serve convenience snack bags.
- Avoid or reduce use of non-stick cookware. Stop using products if non-stick cookware shows signs of wear.
- Avoid stain-resistance and water-proofing treatments. Choose furniture and carpets that aren't marketed as "stain-resistant," and don't apply finishing treatments to these or other items. Avoid clothing, luggage, camping, and sport equipment that were treated for water or stain resistance.

Explore LW Connect

LW Connect, Loudoun Water's interactive customer system, lets you conveniently access your Loudoun Water account information online.

- Log into your account so you can monitor your water use 24/7.
- Sign up for eBilling Text Alerts for text reminders and alerts.
- Go paperless! Enroll in eBilling and your bill will be emailed to you.

Not an LW Connect user yet? Register online at **lwconnect.org** to get started!

Learn With Us!

Partnering with area organizations, schools, community members and customers allows Loudoun Water staff to share their knowledge about water and wastewater treatment, conservation, wetlands and more.

Located inside of our Dale C. Hammes Administration Building in Ashburn is an interactive educational center with over 3,500 square feet of indoor exhibits. Come explore "The Aquiary," nearly one mile of outdoor trails on our Ashburn campus on your own. School groups, community organizations, scouting groups and HOAs are all welcome to schedule a speaker prior to visiting. Call us at 571-291-7880 for more information or visit our website at **www.loudounwater.org/community**.

Outdoor Water Use in The Summer

Loudoun Water recommends wise watering at home. This includes checking your sprinkler settings to avoid overwatering. **For most lawns, 15 minutes of watering is all it takes to maintain a healthy yard**. Too much watering does not help roots grow, promotes mold and wastes water. Excessive watering can also result in a much higher bill.

Loudoun Water recommends the watering schedule below to promote healthy plants and turf. The best time to water your yard is between 6:00 a.m. and 11:00 a.m. to avoid excess evaporation. This watering schedule also spreads out the water demand on our system.

Even Number Home Addresses: Thurs & Sun
Odd Number Home Addresses: Wed & Sat

For Customers with Pools or Irrigation Systems

The Loudoun Water Cross-Connection Backflow Program is responsible for protecting the water distribution system from potential hazards caused by cross-connections of non-potable water systems.

Backflow prevention protects both the customer's drinking water pipes in their home as well as the water mains in the streets. Otherwise, if a pressure drop occurs, any connection to a non-potable source could be siphoned back into the customer's home or Loudoun Water's service line, which is dangerous. The only way to prevent such incidents from occurring and to maintain safe drinking water is to use a backflow prevention device that is correctly installed and maintained properly.

For more information, please contact our Customer Relations department at 571-291-7880 or visit our website at **www.loudounwater.org**.

Loudoun Water is committed to ensuring tap water is safe to drink, which according to Federal and State regulations, requires backflow preventers be tested annually by a certified tester to make sure it is adequately working.

Tap Water for Your Fish Tanks

Customers will need to treat tap water before using it in a fish aquarium because drinking water contains free chlorine and chloramines to inhibit bacterial growth. These disinfectants can harm fish. Check with a local pet store to learn what types of chemicals you need to add to the tank to neutralize the effects of these disinfectants.

Optimize Your Water Use

The U.S. Environmental Protection Agency's WaterSense® program helps identify a range of certified products that help you use water more wisely as well as save money on your bill. Visit the WaterSense website at **www.epa.gov/watersense** to learn more about what you can do to make every drop count. Looking for other ways to save? Visit our website at **www.loudounwater.org** for some creative ways to optimize your water use in the bathroom, kitchen, laundry room and more!

GET INVOLVED WITH SOURCE WATER PROTECTION

Source water is untreated water from lakes, rivers, streams, ponds, reservoirs, aquifers, and springs that serve as a community's water source. Protecting these water sources is an easy way to prevent drinking water from becoming polluted by managing possible sources of contamination.

How Does Source Water Protection Benefit Me?

- **Public health protection:** Reduces threats to public health due to acute or chronic illness from exposure to contaminated water.
- **Economic benefits:** Minimizes cost for water treatment, emergency replacement water and finding new supplies.
- **Environmental stewardship:** Protects rural lands, wildlife habitats, recreational areas and water quality of streams and wetlands.

How You Can Help Protect Source Water:

- Always pick up after your pet.
- Refrain from swimming in known drinking water sources.
- Never dump anything in creeks or lakes.
- If you like boating, only participate in passive boating such as rowing, canoeing or kayaking instead of motorized boating.
- Compost yard waste and use natural fertilizers.
- Plant trees along creeks.
- Check and repair vehicle fluid levels.
- Properly dispose of household cleaning products, paint, fertilizers, pesticides and expired/unused medications.

LOUDOUN WATER ANNUAL REPORT

Customer Relations
571-291-7880

Administration
571-291-7700

After-Hours Emergencies
571-291-7878

Have a question about this report?
www.loudounwater.org/contactus

Miss Utility / VA 811
www.va811.com
Dial 811 in Virginia or 1-800-552-7001

www.loudounwater.org
44865 Loudoun Water Way
PO Box 4000
Ashburn, VA 20146

@ loudounwater

This report contains important information about your drinking water. Translate it, or speak with someone who understands it.

If you are a landlord, please share a copy of this report with your tenants.

يحتوي هذا التقرير على معلومات هامة عن نوعية ماء الشرب في منطقتك. يرجى ترجمته، أو ابحث التقرير مع صديق لك يفهم هذه المعلومات جيداً

Arabic

这份报告中有些重要的信息，讲到关于您所在社区的水的品质。请您找人翻译一下，或者请能看得懂这份报告的朋友给您解释一下。

Chinese

Ce rapport contient des informations importantes sur votre eau potable. Traduisez-le ou parlez en avec quelqu'un qui le comprend bien.

French

Der Bericht enthält wichtige Informationen über die Wasserqualität in Ihrer Umgebung. Der Bericht sollte entweder offiziell uebersetzt werden, oder sprechen Sie mit Freunden oder Bekannten, die gute Englischkenntnisse besitzen.

German

Questo rapporto contiene informazioni inportanti che riguardano la vostra aqua potabile. Traducetelo, o parlate con una persona qualificata in grado di spiegarvelo.

Italian

この資料には、あなたの飲料水についての大切な情報が書かれています。内容をよく理解するために、日本語に翻訳して読むか説明を受けてください。

Japanese

이 보고서에는 귀하가 거주하는 지역의 수질에 관한 중요한 정보가 들어 있습니다. 이것을 본역하거나 충분히 이해하시는 친구와 상의하십시오.

Korean

Este informe contiene información muy importante sobre su agua potable. Para mas información ó traducción, favor de contactar a Customer Service.
Telefono: 571-291-7880.

Spanish

Bản báo cáo có ghi những chi tiết quan trọng về phẩm chất nước trong cộng đồng quý vị. Hãy nhờ người thông dịch, hoặc hỏi một người bạn biết rõ về vấn đề này.

Vietnamese