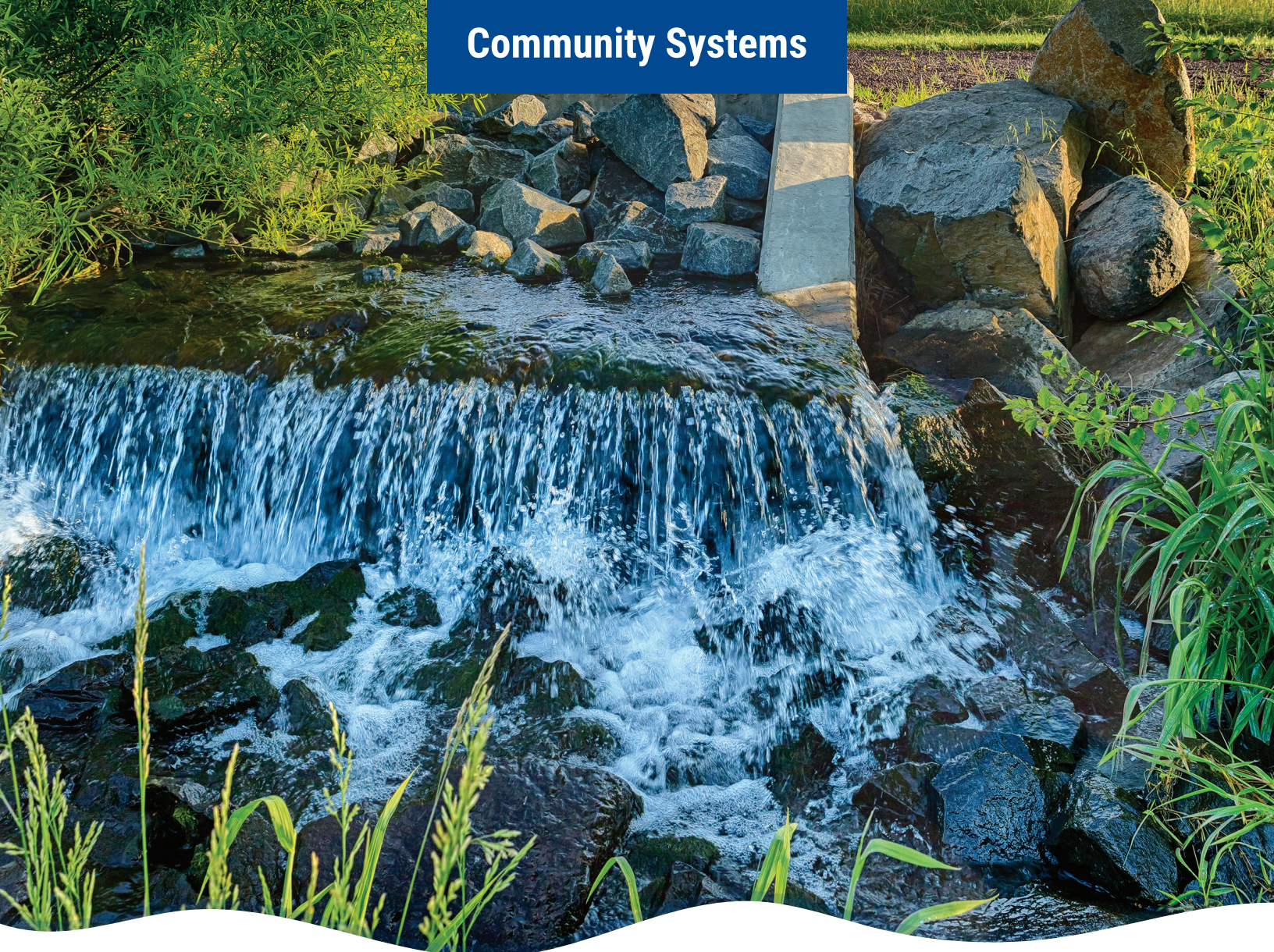


Community Systems



LOUDOUN  WATER

# DRINKING WATER QUALITY

2024 ANNUAL REPORT





## 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 2024, 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.

The tables you see in this report provide the actual data collected on your water throughout the year. Data tables on pages 9 through 13 show the quality of the water for customers in each community system.

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](http://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](http://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

It is with great pleasure that I present the 2024 Annual Drinking Water Quality Report. This document serves as a comprehensive overview of Loudoun Water's commitment to providing safe and reliable drinking water to our community. We know that reliable access to clean water is fundamental to public health and well-being.

The 2024 report details the rigorous testing and monitoring procedures conducted throughout the year. We examine microbiological contaminants, chemical pollutants and essential physical characteristics like turbidity and pH levels. This comprehensive analysis allows us to maintain a thorough understanding of our water supply and address any potential concerns proactively.

We are pleased to confirm that the results of these extensive tests demonstrate that our water meets or exceeds all regulatory requirements established by the Environmental Protection Agency and the Virginia Department of Health.

This report not only outlines the positive results of our testing but also provides information about our water sources and our ongoing initiatives to safeguard our water supply. I encourage you to review the detailed report to gain a complete understanding of our water quality management practices and our unwavering commitment to your health and safety. We are confident that this report will reinforce your trust in your drinking water and our dedication to serving our community.

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](mailto:customerservice@loudounwater.org). Our staff at Loudoun Water is always here for you and we are happy to help.

Sincerely,

**Brian Carnes**

**General Manager, Loudoun Water**

## Letter from the Chairman

On behalf of the Loudoun Water Board of Directors, I'm pleased to present the 2024 Annual Drinking Water Quality Report. This report explains what's in your water, how it's treated, and how it meets EPA and Virginia Department of Health standards. Loudoun Water is dedicated to meeting or exceeding regulations and serving our growing community.

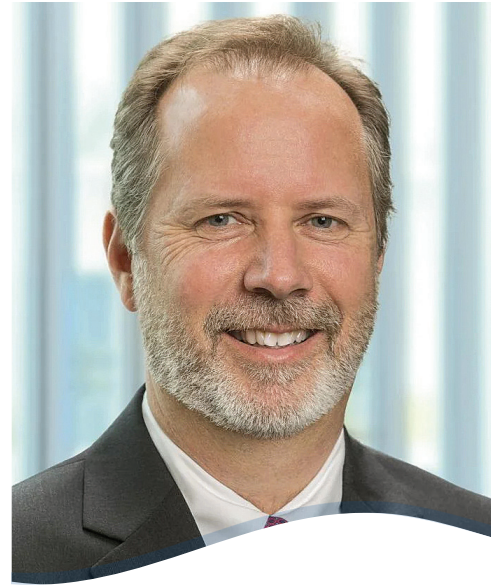
In our ongoing commitment to continuous improvement, we have invested significantly in infrastructure upgrades and the implementation of advanced treatment technologies. These investments are crucial for ensuring the long-term safety and reliability of our drinking water, particularly in the face of evolving environmental challenges.

I encourage you to review this report and reach out to Loudoun Water with any questions you may have about your drinking water or utility operations. 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](http://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

A Virginia Department of Health source water assessment for all groundwater systems served by Loudoun Water determined them to be highly susceptible to contamination using the state source water assessment program criteria. This assessment report consists of maps showing the source water area, an inventory of known land-use activities of concern and documentation of any known contaminants. Additional information about these reports can be obtained by contacting us at 571-291-7880.



## 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 of the treated water** is a monitoring requirement. The analysis is reported based on the presence or absence of total coliform and *Escherichia coliform* (*E. coli*).
- ◆ **Bacteriological analysis of the untreated water** (raw water) varies from a monthly to yearly monitoring requirement. This analysis is an important indicator of raw water quality and can trigger additional treatment requirements.
- ◆ **Volatile Organic Compounds** is a test for 56 different chemicals such as fuel derivatives and solvents. The analysis is initially performed quarterly and is reduced to annually and eventually every three years as repeated results show no detections of the chemicals.
- ◆ **Radiological analyses** are performed for alpha and beta emitters, as well as for radium 226 and 228. Samples are initially conducted quarterly and may eventually be reduced to once every six years after sufficient data shows low levels of results.
- ◆ **Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAA5)** are disinfection byproducts that can 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 an annual average of 80 parts per billion (ppb). For HAA5 the limit is an annual average of 60 ppb. They are initially measured annually in small groundwater systems and eventually reduced to every three years.
- ◆ **Lead and copper** are measured at the point of use (generally a homeowner's kitchen sink). In small community water systems, five to 20 homes are sampled initially every six months. The frequency of sample collection is reduced to annually and subsequently to three years based upon consistently meeting the action limit.
- ◆ **Nitrite and nitrate analyses** are performed annually. The combined concentration of nitrate and nitrite may not exceed 10 ppm.
- ◆ **Inorganics and metals** are analyzed every three years in groundwater systems to assure that none of the parameters exceed the respective MCLs.

## 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. Currently, the Virginia Department of Health requires Loudoun Water to monitor lead and copper every three years. Please refer to the respective community pages for the 90th percentile value.

### 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](http://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](http://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.

# 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.



## Water Quality Analysis and Results

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

## How is Your Water Treated?

Your water is treated with chlorine for disinfection. Iron and manganese treatment occurs at Beacon Hill and Selma Estates due to the natural presence of iron and manganese in these ground water supplies. At Selma Estates, corrosion control in the water system is provided by adding phosphoric acid. Fluoride is added to the Selma Estates and Village Green at Elysian Heights water systems. In 2014, a membrane filtration system was added to Selma Estates to improve water supply capacity.

## Where Does Your Water Come From?

Groundwater is supplied by wells located within the development:

- ◆ **Beacon Hill**—Three wells  
*(one of which is an emergency well if needed)*
- ◆ **Creighton Farms**—Two wells
- ◆ **Selma Estates**—Seven wells
- ◆ **The Reserve at Rokeby**—Four wells
- ◆ **Village Green at Elysian Heights**—Five wells  
*(one of which is an emergency well if needed)*

Water Quality in Beacon Hill

Data collected in 2024 unless otherwise noted

Microbials	Highest Monthly Result		MCL		MCLG	Typical Source	Violation
Total Coliform Bacteria	0		TT		N/A	Naturally present in environment	No
<i>E. coli</i> Bacteria	0		Repeat sample is <i>E. coli</i> positive OR Routine sample is <i>E. coli</i> positive followed by Repeat sample that is Total Coliform positive OR System fails to take all required repeat samples following <i>E. coli</i> positive routine sample OR System fails to analyze for <i>E. coli</i> when any repeat sample tested positive for Total Coliform		0	Human and animal fecal waste	No
Disinfectant Byproducts	Highest Level Detected		MCL	MCLG	Typical Source		Violation
Total Trihalomethanes (ppb) <sup>1</sup>	40.0		80	N/A	Byproduct of drinking water disinfection		No
Haloacetic Acids (ppb) <sup>1</sup>	12.0		60	N/A	Byproduct of drinking water disinfection		No
Disinfectant	Highest Quarterly Running Annual Average		MRDL	MRDLG	Typical Source		Violation
	RANGE						
Chlorine (ppm)	1.28		4	4	Water additive used to control microbes	No	
	0.83–1.85						
Inorganics and Metals	Highest Level Detected		MCL	MCLG	Typical Source		Violation
Nitrate-Nitrite [as Nitrogen] (ppm)	0.048		10	0	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits		No
Barium (ppm) <sup>1</sup>	0.353		2	0	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits		No
Radiologicals	Highest Level Detected		MCL	MCLG	Typical Source		Violation
Combined Radium 226 and 228 (pCi/L) <sup>1</sup>	2.11		5	0	Erosion of natural deposits		No
Gross Beta/photon emitters (pCi/L) <sup>1,2</sup>	5.65		50	0	Decay of natural and manmade deposits		No
Unregulated Parameters	Highest Level Detected		MCL	MCLG	Typical Source		Violation
Sodium (ppm) <sup>1,3</sup>	12.4		N/A <sup>3</sup>	N/A <sup>3</sup>	Erosion of natural deposits; runoff from road deicing chemicals; discharge from industrial sources; wastewater treatment effluent		N/A
Metals Parameters	90th Percentile Level	Action Level	MCLG	Number of Sites Above Action Level		Typical Source	Violation
Copper (ppm) <sup>1</sup>	0.104	1.3	1.3	0		Corrosion of household plumbing	No
Lead (ppb) <sup>1</sup>	1	15	0	0		Corrosion of household plumbing	No

<sup>1</sup> Samples collected in 2023.

<sup>2</sup> The MCL for Beta particles is 4mrem/year. EPA considers 50 pCi/L to be the level of concern for Beta particles.

<sup>3</sup> There are no State or Federal limits established for this parameter.

Water Quality in Creighton Farms

Data collected in 2024 unless otherwise noted

Inorganics and Metals		Highest Level Detected	MCL	MCLG	Typical Source	Violation
Nitrate-Nitrite [as Nitrogen] (ppm)		1.041	10	10	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits	No
Arsenic (ppb)		4.0	10	0	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes	No
Barium (ppm)		0.254	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	No
Microbials	Highest Monthly Result	MCL		MCLG	Typical Source	Violation
Total Coliform Bacteria	0	TT		N/A	Naturally present in environment	No
<i>E. coli</i> Bacteria	0	Repeat sample is <i>E. coli</i> positive <b>OR</b> Routine sample is <i>E. coli</i> positive followed by Repeat sample that is Total Coliform positive <b>OR</b> System fails to take all required repeat samples following <i>E. coli</i> positive routine sample <b>OR</b> System fails to analyze for <i>E. coli</i> when any repeat sample tested positive for Total Coliform		0	Human and animal fecal waste	No
Disinfectant Byproducts		Highest Level Detected	MCL	MCLG	Typical Source	Violation
Total Trihalomethanes (ppb) <sup>1</sup>		28	80	N/A	Byproduct of drinking water disinfection	No
Haloacetic Acids (ppb) <sup>1</sup>		13	60	N/A	Byproduct of drinking water disinfection	No
Disinfectant	Highest Quarterly Running Annual Average		MRDL	MRDLG	Typical Source	Violation
	RANGE					
Chlorine (ppm)	1.17		4	4	Water additive used to control microbes	No
	0.58–1.57					
Unregulated Parameters		Highest Level Detected	MCL	MCLG	Typical Source	Violation
Sodium (ppm) <sup>2</sup>		13.7	N/A <sup>2</sup>	N/A <sup>2</sup>	Erosion of natural deposits; runoff from road deicing chemicals; discharge from industrial sources; wastewater treatment effluent	N/A
Metal Components	90th Percentile Level	Action Level	MCLG	Number of Sites Above Action Level	Typical Source	Violation
Copper (ppm) <sup>1</sup>	0.08	1.3	1.3	0	Corrosion of household plumbing	No
Lead (ppb) <sup>1</sup>	<2	15	0	0	Corrosion of household plumbing	No
Radiologicals		Highest Level Detected	MCL	MCLG	Typical Source	Violation
Combined Radium 226 and 228 (pCi/L)		0.964	5	0	Erosion of natural deposits	No
Gross Beta/photon emitters (pCi/L) <sup>3</sup>		1.59	50	0	Decay of natural and manmade deposits	No
Uranium (ppb)		1.08	30	0	Erosion of natural deposits	No

<sup>1</sup> Samples collected in 2023.

<sup>2</sup> There are no State or Federal limits established for this parameter.

<sup>3</sup> The MCL for Beta particles is 4mrem/year. EPA considers 50 pCi/L to be the level of concern for Beta particles.

Water Quality in Selma Estates

Data collected in 2024 unless otherwise noted

Inorganics and Metals		Highest Level Detected	MCL	MCLG	Typical Source	Violation
Nitrate-Nitrite [as Nitrogen] (ppm)		2.348	10	10	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits	No
Barium (ppm)		0.046	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	No
Fluoride (ppm)		0.92	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	No
Microbials	Highest Monthly Result	MCL		MCLG	Typical Source	Violation
Total Coliform Bacteria	0	TT		N/A	Naturally present in environment	No
<i>E. coli</i> Bacteria	0	Repeat sample is <i>E. coli</i> positive OR Routine sample is <i>E. coli</i> positive followed by Repeat sample that is Total Coliform positive OR System fails to take all required repeat samples following <i>E. coli</i> positive routine sample OR System fails to analyze for <i>E. coli</i> when any repeat sample tested positive for Total Coliform		0	Human and animal fecal waste	No
Disinfectant Byproducts		Highest Level Detected	MCL	MCLG	Typical Source	Violation
Total Trihalomethanes (ppb)		32	80	N/A	Byproduct of drinking water disinfection	No
Haloacetic Acids (ppb)		9	60	N/A	Byproduct of drinking water disinfection	No
Disinfectant	Highest Quarterly Running Annual Average		MRDL	MRDLG	Typical Source	Violation
	RANGE					
Chlorine (ppm)	2.19		4	4	Water additive used to control microbes	No
	1.79–2.81					
Unregulated Parameters		Highest Level Detected	MCL	MCLG	Typical Source	Violation
Sodium (ppm) <sup>1</sup>		6.6	N/A <sup>1</sup>	N/A <sup>1</sup>	Erosion of natural deposits; runoff from road deicing chemicals; discharge from industrial sources; wastewater treatment effluent	N/A
Metals Parameters	90th Percentile Level	Action Level	MCLG	Number of Sites Above Action Level	Typical Source	Violation
Copper (ppm) <sup>2</sup>	0.1	1.3	1.3	0	Corrosion of household plumbing	No
Lead (ppb) <sup>2</sup>	ND	15	0	0	Corrosion of household plumbing	No

<sup>1</sup> There are no State or Federal limits established for this parameter.

<sup>2</sup> Samples collected in 2022.

Water Quality in The Reserve at Rokeyby

Data collected in 2024 unless otherwise noted

Inorganics and Metals		Highest Level Detected	MCL	MCLG	Typical Source	Violation
Nitrate-Nitrite [as Nitrogen] (ppm)		4.044	10	10	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits	No
Barium (ppm) <sup>1</sup>		0.119	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	No
Microbials	Highest Monthly Result	MCL		MCLG	Typical Source	Violation
Total Coliform Bacteria	0	TT		N/A	Naturally present in environment	No
<i>E. coli</i> Bacteria	0	Repeat sample is <i>E. coli</i> positive OR Routine sample is <i>E. coli</i> positive followed by Repeat sample that is Total Coliform positive OR System fails to take all required repeat samples following <i>E. coli</i> positive routine sample OR System fails to analyze for <i>E. coli</i> when any repeat sample tested positive for Total Coliform		0	Human and animal fecal waste	No
Disinfectant	Highest Quarterly Running Annual Average		MRDL	MRDLG	Typical Source	Violation
	RANGE					
Chlorine (ppm)	1.51		4	4	Water additive used to control microbes	No
	1.09–1.67					
Unregulated Parameters	Highest Level Detected	MCL	MCLG	Typical Source	Violation	
Sodium (ppm) <sup>1,2</sup>	9.96	N/A <sup>2</sup>	N/A <sup>2</sup>	Erosion of natural deposits; runoff from road deicing chemicals; discharge from industrial sources; wastewater treatment effluent	N/A	
Metal Components	90th Percentile Level	Action Level	MCLG	Number of Sites Above Action Level	Typical Source	Violation
Copper (ppm) <sup>1</sup>	0.0434	1.3	1.3	0	Corrosion of household plumbing	No
Lead (ppb) <sup>1</sup>	<2	15	0	0	Corrosion of household plumbing	No
Radiologicals		Highest Level Detected	MCL	MCLG	Typical Source	Violation
Combined Radium 226 and 228 (pCi/L)		0.953	5	0	Erosion of natural deposits	No
Uranium (ppb)		1.43	30	0	Erosion of natural deposits	No

<sup>1</sup> Samples collected in 2023.

<sup>2</sup> There are no State or Federal limits established for this parameter.

Water Quality in Village Green at Elysian Heights

Data collected in 2024 unless otherwise noted

Inorganics and Metals		Highest Level Detected	MCL	MCLG	Typical Source	Violation
Nitrate-Nitrite [as Nitrogen] (ppm)		4.406	10	10	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits	No
Barium (ppm) <sup>1</sup>		0.158	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	No
Arsenic (ppb) <sup>1</sup>		0.7	10	0	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes	No
Fluoride (ppm)		0.74	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	No
Microbials	Highest Monthly Result	MCL		MCLG	Typical Source	Violation
Total Coliform Bacteria	0	TT		N/A	Naturally present in environment	No
<i>E. coli</i> Bacteria	0	Repeat sample is <i>E. coli</i> positive OR Routine sample is <i>E. coli</i> positive followed by Repeat sample that is Total Coliform positive OR System fails to take all required repeat samples following <i>E. coli</i> positive routine sample OR System fails to analyze for <i>E. coli</i> when any repeat sample tested positive for Total Coliform		0	Human and animal fecal waste	No
Disinfectant Byproducts		Highest Level Detected	MCL	MCLG	Typical Source	Violation
Total Trihalomethanes (ppb)		28	80	N/A	Byproduct of drinking water disinfection	No
Haloacetic Acids (ppb)		8	60	N/A	Byproduct of drinking water disinfection	No
Disinfectant	Highest Quarterly Running Annual Average		MRDL	MRDLG	Typical Source	Violation
	RANGE					
Chlorine (ppm)	1.50		4	4	Water additive used to control microbes	No
	0.7-2.17					
Unregulated Parameters		Highest Level Detected	MCL	MCLG	Typical Source	Violation
Sodium (ppm) <sup>1,2</sup>		23.6	N/A <sup>2</sup>	N/A <sup>2</sup>	Erosion of natural deposits; runoff from road deicing chemicals; discharge from industrial sources; wastewater treatment effluent	N/A
Metals Parameters	90th Percentile Level	Action Level	MCLG	Number of Sites Above Action Level	Typical Source	Violation
Copper (ppm) <sup>3</sup>	0.32	1.3	1.3	0	Corrosion of household plumbing	No
Lead (ppb) <sup>3</sup>	ND	15	0.0	0	Corrosion of household plumbing	No
Radiologicals		Highest Level Detected	MCL	MCLG	Typical Source	Violation
Combined Radium 226 and 228 (pCi/L) <sup>4</sup>		0.926	5	0	Erosion of natural deposits	No
Gross Alpha emitters (pCi/L) <sup>4</sup>		4.26	15	0	Erosion of natural deposits	No
Gross Beta/photon emitters (pCi/L) <sup>4,5</sup>		1.55	50	0	Decay of natural and manmade deposits	No
Uranium (ppb) <sup>4</sup>		2.72	30	0	Erosion of natural deposits	No

<sup>1</sup> Samples collected in 2022.

<sup>2</sup> There are no State or Federal limits established for this parameter.

<sup>3</sup> Samples collected in 2023.

<sup>4</sup> Samples collected in 2020.

<sup>5</sup> The MCL for Beta particles is 4mrem/year. EPA considers 50 pCi/L to be the level of concern for Beta particles.

# 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 has closely followed the US EPA's drinking water regulatory process. On April 10, 2024, the EPA announced the final national primary drinking water regulation for six PFAS including proposed Maximum Contaminant Levels (MCLs) for perfluorononanoic acid (PFNA), perfluorohexanesulfonic acid (PFHxS), hexafluoropropylene oxide dimer acid (HFPO-DA or GenX chemicals), perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). The standard also establishes a hazard index (HI) for a mixture of two or more of the following: PFNA, PFHxS, HFPO-DA, and perfluorobutane sulfonic acid (PFBS). The EPA mandates that monitoring efforts begin by 2027. Loudoun Water has begun developing our monitoring program in accordance with the regulatory requirements, and will share those results in future Water Quality Reports. According to the EPA, public water systems have five years (by 2029) to implement solutions that reduce these PFAS if monitoring shows that drinking water levels exceed these MCLs. Loudoun Water will ensure that our water meets these standards.

## 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.

# WHAT ARE COMMUNITY SYSTEMS?

Community Water and Wastewater Systems are free-standing water and wastewater systems whereby water may be supplied to a rural village or hamlet by its own community well and wastewater may be treated in the village/hamlets by the village's own packaged treatment facility. Highly treated wastewater (effluent) is discharged in most cases on site or, in a few cases, to local streams/ivers.

## Current Community Water Systems Managed by Loudoun Water Include:

- ◆ **Beacon Hill**
- ◆ **Creighton Farms**
- ◆ **Selma Estates**
- ◆ **The Reserve at Rokeby**
- ◆ **Village Green at Elysian Heights**

Information regarding each community system can be found on the Loudoun Water website at [www.loudounwater.org](http://www.loudounwater.org).

## Importance of Conservation for Community System Users

While conservation is important for all customers, it is imperative that Community System users are responsible and good stewards of water resources. In the Central System, the focus of conservation

efforts is on a reduction of peaks and max days and minimizing water waste. In the Community Systems, the focus is on overall daily demand reductions due to the more limited nature of the groundwater supply. These water systems must be managed prudently due to permitted capacity in each community.

## Landscaping Without Irrigation for Community System Users

While Community System capacities are limited in nature for excessive watering, it is still possible to have an eye-catching garden. The practice of water-smart landscaping allows homeowners to plan and maintain landscapes in an attractive way that requires less maintenance and less water. Key tips to remember when it comes to water-smart landscaping are:

- ◆ **Choose plants that require less water:** Check with your local nursery to see which plants they recommend based on watering requirements.
- ◆ **Group plants according to their watering needs:** Grouping plants in "hydrozones," helps to reduce water usage as well as allows you to water each zone's specific needs.
- ◆ **Maintain healthy soils:** This helps to effectively cycle nutrients, minimize runoff, retain water, and absorb excess nutrients, sediments and pollutants.

- ◆ **Be very selective when adding turf areas:**

To improve the aesthetic of your landscape and better manage outdoor water use, plant turf only where there is a practical function.

- ◆ **Water wisely:** Understand your plant's water needs and always avoid watering during the heat of the day.
- ◆ **Use mulch:** Mulch helps to reduce evaporation, inhibit weed growth, moderate soil temperature, and help to prevent erosion.
- ◆ **Provide regular maintenance:** Replace mulch around shrubs and garden plants at least once per year, and remove weeds and thatch as necessary.

## 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.

## 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.

## Making Every Drop Count

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](http://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](http://www.loudounwater.org) for some creative ways to optimize your water use in the bathroom, kitchen, laundry room and more!

## 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](http://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 Aquary," 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](http://www.loudounwater.org/community).



[www.loudounwater.org](http://www.loudounwater.org)  
44865 Loudoun Water Way  
PO Box 4000  
Ashburn, VA 20146

**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](http://www.loudounwater.org/contactus)

**Miss Utility / VA 811**  
[www.va811.com](http://www.va811.com)

Dial 811 in Virginia or 1-800-552-7001

### 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

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

이 보고서는 귀하의 거주하는 지역의 수질에 관한 중요한 정보가 들어 있습니다. 이것을 번역하거나 충분히 이해하시는 친구와 상의하십시오.

Korean

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

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

Italian

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

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

French

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

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