

Annual Drinking Water  
**Quality Report**

For the Year Ending 2013

LOUDOUN  WATER



## Introduction

Loudoun Water is pleased to present your annual drinking water quality report. The information contained in this report is based on data collected and reported to Virginia Department of Health in 2013, 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 11 through 16 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 at 3:00 p.m. in the Boardroom of our Administrative Services Facility, located at 44865 Loudoun Water Way, Ashburn, VA 20146. To learn more about Loudoun Water's Board of Directors, please visit [www.boarddocs.com/va/lwva/Board.nsf/Public](http://www.boarddocs.com/va/lwva/Board.nsf/Public).



## Helpful Definitions

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

**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 risk to health. 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 risk to health. 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.

**ND:** Non-detect. Levels were 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.

**NRL:** No regulatory limit.

**NTU:** Nephelometric Turbidity Unit.

**PCi/L:** Picocuries per liter.

**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.

## Using Tap Water for Fish Tanks

You 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 kill fish. Check with a pet store to learn what types of chemicals you need to add to the tank to neutralize the effects of the disinfectants.



## Dear Loudoun Water Customer:



As Chairman of the Loudoun Water Board of Directors, I'm pleased to announce that once again the drinking water that we deliver to our customers attains or surpasses all regulatory standards for quality and safety. This report demonstrates our commitment to providing exceptional water quality and ensuring your peace of mind every time you open a faucet.

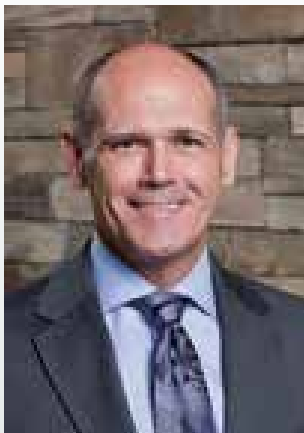
Every day, your Loudoun Water Board and staff are working to set the standard for what a water authority must be: progressive, diligent, environmentally-focused, and responsive to the needs and concerns of every residential and commercial customer we so proudly serve. In that light, we see so much more than lab results in this report. We see a child playing in a sprinkler. We see athletes drinking water at halftime. We see families preparing meals, and a couple enjoying a morning cup of coffee on the porch. We see the myriad ways in which the water we provide is used to sustain a healthy and enjoyable life. These are the visions that motivate us each and every day.

Thank you for taking time to read this report. We are proud of the results. We hope you are, too!

Sincerely,

Johnny Rocca  
Chairman  
Loudoun Water Board of Directors

## Dear Loudoun Water Customer:



I am pleased to present the Community Systems Annual Drinking Water Quality Report.

This annual report is important for you and all Loudoun County residents and business owners for two key reasons. First and foremost, it presents detailed information about the sources of your drinking water, how it is treated, and the rigorous testing performed to ensure that your drinking water is always clean, safe, and healthy. Second, it demonstrates our success in providing steady, dependable, and sustainable water supply to meet the ever-growing needs of our burgeoning community.

All of us here at Loudoun Water are driven to make Loudoun Water the premier water authority in the nation. Essential projects such as our Potomac Water Supply Program and recent acquisition of Beaverdam and Goose Creek Reservoirs are critical to maintaining Loudoun County as one of the country's most desired places to live and grow. And we intend to continue this distinction through our steady focus on cooperative resource management, customer-centric initiatives, and proactive, environmentally sustainable planning.

Just as clean, fresh water is essential to the life and health of our community, we consider our transparent, innovative approach to water management essential to our stewardship of this precious natural resource. As you read through this report, I hope you will agree Loudoun Water is committed to providing superior quality water that supports healthy families, strong businesses, and a vibrant region.

Thank you for taking time to read this report. Our staff is available to answer any questions that you may have; and we are also available to speak to your community about water quality, conservation, and our capital programs. On behalf of the staff at Loudoun Water, it's our pleasure to serve you!

Sincerely,

Fred E. Jennings  
General Manager

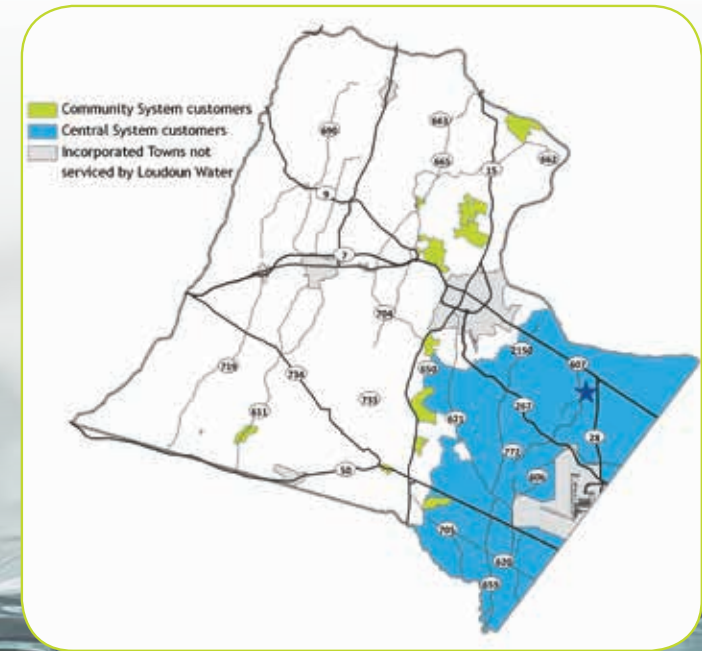
## A Brief History of Loudoun Water

In May of 1959, the Loudoun County Board of Supervisors created Loudoun County Sanitation Authority, doing business as Loudoun Water, by a resolution through the Virginia Water and Waste Authorities Act.

Headquartered in Ashburn, Virginia, Loudoun Water provides water and wastewater service to more than 200,000 people in its Central Service Area, which includes nearly all residents and businesses east of Route 15. As an authority, Loudoun Water makes no profit and receives no tax money; instead, Loudoun Water operates on user fees from customers and pays for all new water and wastewater infrastructure for new developments from fees paid directly by developers.

Having received its water through a wholesale agreement with the City of Fairfax since 1959, Loudoun Water executed a \$30 million historic purchase agreement in early 2014 to acquire all drinking water assets in Loudoun County controlled by the City of Fairfax.

## Loudoun Water Service Area



## 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.

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 storm water 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, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water 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 monthly monitoring requirement. The analysis is reported based on the presence or absence of total and Escherichia coliform. Total coliform bacteria may not be present in more than one monthly sample and E.coli may not be present in any sample.
- ▶ 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 (TTHM) 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 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 10 homes are sampled initially every six months. This is then reduced first to annually and then three years based upon consistently meeting the action limit.
- ▶ Nitrite and nitrate analysis is 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. 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 service-line replacement where such lines exist. (Loudoun Water does not have any lead service lines in its system.)

### Where does lead in drinking water come from?

Loudoun Water's raw water 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 of time.

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 15 to 30 seconds, or until it becomes cold or reaches a steady temperature before using the water for drinking or cooking. Use only cold water for 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 at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead) or (800) 426-47911.

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 Service 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 health care providers. EPA/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 contaminants in the water supply to meet all regulatory requirements. The following tables list only those contaminants 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 Raspberry Falls, corrosion control in the water system is provided by adding phosphoric acid. At Selma Estates, zinc phosphate is added for corrosion control. Fluoride is added to the Selma Estates and Village Green at Elysian Heights water systems.

## Where Does Your Water Come From?

Groundwater is supplied by wells located in the development:

- ▶ **Beacon Hill** – Two wells
- ▶ **Raspberry Falls** – Two wells
- ▶ **Lenah Run** – Three wells
- ▶ **Rokeby** – Four wells
- ▶ **Village Green** – Five wells (one of which is an emergency well if needed)
- ▶ **Selma** – Three wells



## Water Quality in Beacon Hill

Microbials	Highest Result	MCL	MCLG	Typical Source	Violation
Total Coliform Bacteria	All Absent	Cannot be detected in more than one monthly sample	0	Naturally present in environment	No
E. Coli Bacteria	All Absent	A routine sample and repeat sample are Total Coliform positive, and E. Coli positive	0	Human and animal fecal waste	No
Organics	Highest Quarterly Running Annual Average	MCL	MCLG	Typical Source	Violation
Total Trihalomethanes <sup>1</sup> (ppb)	7.6	80	N/A	By-product of drinking water disinfection	No
Haloacetic Acids <sup>1</sup> (ppb)	1.4	60	N/A	By-product of drinking water disinfection	No
Component	Highest Quarterly Running Annual Average	MRDL	MRDLG	Typical Source	Violation
	Range				
Chlorine (ppm)	1.64	4	4	Water additive used to control microbes	No
	1.1-2.16				
Inorganics and Metals	Highest Result	MCL	MCLG	Typical Source	Violation
Barium <sup>1</sup> (ppm)	0.28	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	No
Fluoride <sup>1</sup> (ppm)	0.17	4.0	4.0	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories	No
Nitrate/Nitrite [as Nitrogen] (ppm)	0.04	10	10	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits	No

Radiologicals	Highest Result	MCL	MCLG	Typical Source	Violation
Combined Radium 226 and 228 <sup>2</sup> (pCi/L)	1.5	5	0	Erosion of natural deposits	No
Alpha emitters <sup>2</sup> (pCi/L)	3.2	15	0	Erosion of natural deposits	No
Beta/photon emitters (pCi/L) <sup>2,3</sup>	4.7	4	0	Decay of natural and man-made deposits	No

Metal Components	90th Percentile Level	Action Level	MCLG	Number Of Sites Above Action Level	Typical Source	Violation
Copper <sup>4</sup> (ppm)	0.44	1.3	0	0	Corrosion of household plumbing	No
Lead <sup>4</sup> (ppb)	ND	15	0	0	Corrosion of household plumbing	No

<sup>1</sup> Samples taken in 2013. Next required testing is 2016.<sup>3</sup> The MCL for Beta particles is 4 mrem/year. EPA considers 50 pCi/L to be a level of concern.<sup>2</sup> Samples taken in 2010. Next required testing is 2016.<sup>4</sup> Samples taken in 2011. Next required testing is 2014.

**Water Quality in Village Green at Elysian Heights**

Inorganics and Metals	Highest Result	MCL	MCLG	Typical Source	Violation
Nitrate/Nitrite [as Nitrogen] (ppm)	4	10	10	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits	No
Barium <sup>1</sup> (ppm)	0.14	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	No
Fluoride (ppm)	0.63	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	No
Microbials	Highest Result	MCL	MCLG	Typical Source	Violation
Total Coliform Bacteria	All absent	Cannot be detected in more than one monthly sample	0	Naturally present in environment	No
E. Coli Bacteria	All absent	A routine sample and repeat sample are Total Coliform positive, and one is also E. Coli positive	0	Human and animal fecal waste	No
Organics	Highest Quarterly Running Annual Average	MCL	MCLG	Typical Source	Violation
Total Trihalomethanes <sup>1</sup> (ppb)	10.6	80	N/A	By-product of drinking water disinfection	No
Haloacetic Acids <sup>1</sup> (ppb)	2.1	60	N/A	By-product of drinking water disinfection	No
Component	Highest Quarterly Running Annual Average	MRDL	MRDLG	Typical Source	Violation
	Range				
Chlorine (ppm)	1.33 0.8 – 1.60	4	4	Water additive used to control microbes	No
Radiologicals	Highest Result	MCL	MCLG	Typical Source	Violation
Alpha emitters <sup>2</sup> (pCi/L)	7.4	15	0	Erosion of natural deposits	No
Beta/photon emitters <sup>2,3</sup> (pCi/L)	4.4	4	0	Decay of natural and man-made deposits	No

Metal Components	90th Percentile Level	Action Level	MCLG	Number Of Sites Above Action Level	Typical Source	Violation
Copper <sup>4</sup> (ppm)	0.2	1.3	0	0	Corrosion of household plumbing	No
Lead <sup>4</sup> (ppb)	ND	15	0	0	Corrosion of household plumbing	No

<sup>1</sup> Samples taken in 2013. Next required testing is 2016.

<sup>2</sup> Samples taken in 2010. Next required testing is 2016.

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

<sup>4</sup> Samples taken in 2011. Next required testing is 2014.

## Water Quality in Lenah Run

Inorganics and Metals	Highest Result	MCL	MCLG	Typical Source	Violation	
	Range					
Nitrate/Nitrite [as Nitrogen] (ppm)	2.5 1.8 – 2.5	10	10	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits	No	
Arsenic <sup>1</sup> (ppb)	5.3 3.6 – 5.3	10	0	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes	No	
Chromium (ppb)	2.4 ND – 2.4	1000	100		No	
Barium (ppm)	0.3 0.14 – 0.3	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	No	
Microbials	Highest Result	MCL	MCLG	Typical Source	Violation	
Total Coliform Bacteria	All absent	Cannot be detected	0	Naturally present in environment	No	
E. Coli Bacteria	All Absent	A routine sample and repeat sample are Total Coliform positive, and one is also E. Coli positive	0	Human and animal fecal waste	No	
Organics	Highest Quarterly Running Annual Result	MCL	MCLG	Typical Source	Violation	
Total Trihalomethanes <sup>2</sup> (ppb)	10.8	80	N/A	By-product of drinking water disinfection	No	
Haloacetic Acids <sup>2</sup> (ppb)	1.4	60	N/A	By-product of drinking water disinfection	No	
Component	Highest Quarterly Running Annual Average	MRDL	MRDLG	Typical Source	Violation	
Chlorine (ppm)	1.32 0.70 – 2.6	4	4	Water additive used to control microbes	No	
Radiologicals	Highest Result	MCL	MCLG	Typical Source	Violation	
Combined Radium 226 / 228 (pCi/L)	2.6	5	0	Erosion of natural deposits	No	
	0.3 – 2.6					
Alpha emitters (pCi/L)	5.3	15	0	Erosion of natural deposits	No	
	ND – 5.3					
Metal Components	90th Percentile Level	Action Level	MCLG	Number Of Sites Above Action Level	Typical Source	Violation
Copper <sup>3</sup> (ppm)	0.6	1.3	0	0	Corrosion of household plumbing	No
Lead <sup>3</sup> (ppb)	ND	15	0	0	Corrosion of household plumbing	No

<sup>1</sup>Sample taken in 2010 was 6.1 ppb. Sample taken in 2011 was 5.3 ppb. While your drinking water meets EPA standards for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

<sup>2</sup>Samples taken in 2010. Next sampling in 2013.

<sup>3</sup>Samples taken in 2011. Next required testing is 2014.

### Water Quality in Raspberry Falls

Inorganics and Metals	Highest Result	MCL	MCLG	Typical Source	Violation
Nitrate/nitrite [as nitrogen] (ppm)	3.2	10	10	Runoff from fertilizer; leaching from septic tanks, erosion of natural deposits	No
Barium <sup>2</sup> (ppm)	0.043	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	No
Microbials	Highest Result	MCL	MCLG	Typical Source	Violation
Total Coliform Bacteria	All absent	Cannot be detected in more than one monthly sample	0	Naturally present in environment	No
E. Coli Bacteria	All Absent	A routine sample and repeat sample are Total Coliform positive, and one is also E. Coli positive	0	Human and animal fecal waste	No
Component	Highest Quarterly Running Annual Average	MRDL	MRDLG	Typical Source	Violation
	Range				
Chlorine (ppm)	1.52	4	4	Water additive used to control microbes	No
	0.80 – 1.9				
Organics	Highest Quarterly Running Annual Average	MCL	MCLG	Typical Source	Violation
Total Trihalomethanes <sup>2</sup> (ppb)	0.53	80	N/A	By-product of drinking water disinfection	No
Haloacetic Acids <sup>2</sup> (ppb)	ND	60	N/A	By-product of drinking water disinfection	No
Radiologicals	Highest Result	MCL	MCLG	Typical Source	Violation
Combined Radium 226 / 228 (pCi/L)	0.546	5	0	Erosion of natural deposits	No
Beta/photon emitters <sup>1</sup> (pCi/L)	ND	4	0	Decay of natural and man-made deposits	No

Metal Components	90th Percentile Level	Action Level	MCLG	Number Of Sites Above Action Level	Typical Source	Violation
Copper (ppm)	0.2	1.3	0	0	Corrosion of household plumbing	No
Lead (ppb)	2	15	0	0	Corrosion of household plumbing	No

<sup>1</sup> The MCL for Beta particles is 4 mrem/year. EPA considers 50 pCi/L to be the level of concern for Beta particles

<sup>2</sup> Sample taken in 2012. Next Sampling in 2015.

### Water Quality in The Reserve at Rokeby

Inorganics and Metals	Level Detected	MCL	MCLG	Typical Source	Violation
Nitrate/nitrite [as nitrogen] (ppm)	3.4	10	10	Runoff from fertilizer; leaching from septic tanks, erosion of natural deposits	No
Barium <sup>1</sup> (ppm)	0.11	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	No
Fluoride <sup>1</sup>	0.11	4.0	4.0	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories	No
Microbials	Highest Result	MCL	MCLG	Typical Source	Violation
Total Coliform Bacteria	All absent	Cannot be detected in more than one monthly sample	0	Naturally present in environment	No
E. Coli Bacteria	All Absent	A routine sample and repeat sample are Total Coliform positive, one is also E. Coli positive	0	Human and animal fecal waste	No
Organics	Highest Quarterly Running Annual Average	Action Level	MCLG	Typical Source	Violation
Total Trihalomethanes <sup>3</sup> (ppb)	0.51	80	N/A	By-product of drinking water disinfection	No
Haloacetic Acids <sup>3</sup> (ppb)	ND	60	N/A	By-product of drinking water disinfection	No
Component	Highest Quarterly Running Annual Average	MRDL	MRDLG	Typical Source	Violation
	Range				
Chlorine (ppm)	1.51	4	4	Water additive used to control microbes	No
	1.21 – 1.90				
Radiologicals	Highest Result	MCL	MCLG	Typical Source	Violation
Radium 226 and 228 (pCi/L)	0.2	5	0	Erosion of natural deposits	No
Beta/photon emitters <sup>3</sup> (pCi/L)	2.5	4	0	Decay of natural and man-made deposits	No

Metal Components	90th Percentile Level	Action Level	MCLG	Number Of Sites Above Action Level	Typical Source	Violation
Copper <sup>4</sup> (ppm)	0.08	1.3	0	0	Corrosion of household plumbing	No
Lead <sup>4</sup> (ppb)	3	15	0	0	Corrosion of household plumbing	No

<sup>1</sup> Samples taken in 2011. Next required testing is 2014

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

<sup>3</sup> Sample last taken 2012. Next sampling 2015

<sup>4</sup> Samples taken in 2011. Next required testing is 2014.

**Water Quality in Selma**

Inorganics and Metals	Highest Result	MCL	MCLG	Typical Source	Violation
	Range				
Nitrate/nitrite [as nitrogen] (ppm)	1.8	10	10	Runoff from fertilizer; leaching from septic tanks, erosion	No
	1.6 – 1.8				
Barium (ppm)	0.078	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	No
Fluoride (ppm)	1.0	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	No
	0.76 – 1.0				
Microbials	Highest Result	MCL	MCLG	Typical Source	Violation
Total Coliform Bacteria	All absent	Cannot be detected in more than one monthly sample	0	Naturally present in environment	No
E. Coli Bacteria	All Absent	A routine sample and repeat sample are Total Coliform positive, and one is also E. Coli bacteria positive	0	Human and animal fecal waste	No
Organics	Highest Quarterly Running Annual Average	Action Level	MCLG	Typical Source	Violation
Total Trihalomethanes (ppb)	9.6	80	N/A	By-product of drinking water disinfection	No
Haloacetic Acids (ppb)	2.2	60	N/A	By-product of drinking water disinfection	No
Component	Highest Quarterly Running Annual Average	MRDL	MRDLG	Typical Source	Violation
	Range				
Chlorine (ppm)	1.52	4	4	Water additive used to control microbes	No
	0.80 – 2.2				

Metal Components	90th Percentile Level	Action Level	MCLG	Number Of Sites Above Action Level	Typical Source	Violation
Copper (ppm)	0.047	1.3	0	0	Corrosion of household plumbing	No
Lead (ppb)	2	15	0	0	Corrosion of household plumbing	No



## Have You Visited the Aquiry® Yet?

### Grab the kids and learn about water.

The Loudoun Water Aquiry is an interactive indoor educational center and outdoor interpretive trail. Walk through 3,500 sq. feet of exhibits as you learn the story of drinking water treatment and delivery; source water protection; water conservation and water reclamation. Then enjoy the outdoor trails as you walk along a wetland area and learn more about its features.

The Aquiry is a unique destination in Loudoun. We hope to see you soon. Normal Aquiry hours: Self-guided tours: M–F, 8:00am–5:00pm; trails are open anytime.

Schools and groups can schedule a tour online at [www.loudounwater.org](http://www.loudounwater.org), click on Talks and Tours.

Visit [www.loudounwater.org](http://www.loudounwater.org)  
for directions.  
44865 Loudoun Water Way  
Ashburn, Virginia



## Every Drop Counts!

Did you know that you can reduce your water use by installing more water-efficient fixtures and landscape irrigation controls? Through the U.S. Environmental Protection Agency's WaterSense® program, you can identify a range of certified products to help you use water more wisely and save money on your water 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. To calculate your water use, estimate your water bill, and to learn about more ways to save water please visit [www.loudounwater.org/Residential-Customers/Conservation/](http://www.loudounwater.org/Residential-Customers/Conservation/).

