

CENTRAL SYSTEM

FOR THE  
YEAR ENDING 2015



# DRINKING WATER QUALITY

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ANNUAL REPORT

LOUDOUN  WATER

# 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 2015, 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 16, Table One shows the quality of the water as it flows within the Loudoun Water distribution system; and on page 17, Table Two shows the quality of the water as it leaves the two 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](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 Administrative Services Facility, 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.

**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.

**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.

**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.

## DEAR LOUDOUN WATER CUSTOMER:



Providing safe, clean and reliable drinking water is a priority for Loudoun Water. For this reason, I am pleased to share Loudoun Water's 2015 Drinking Water Quality Annual Report.

Loudoun Water continues to prepare for future growth in Loudoun County with the construction of our Potomac Water Supply Program. By 2040, Loudoun Water customers may require up to 90 million gallons of drinking water per day, which represents a 40 million gallon per day increase. While other areas of the country are faced with severe droughts and extensive infrastructure needs, Loudoun Water is able

to continue to plan for the future and work to protect our drinking water resources.

Education has become a priority for Loudoun Water and it starts with taking the time to understand where your drinking water comes from, the process it takes to treat it and the efforts needed to distribute it throughout our service area. I encourage you to take the time to review this report and the information provided and to discuss it as a family.

Sincerely,

A handwritten signature in black ink, appearing to read "Shaun V. Kelley".

Shaun V. Kelley  
Chairman, Loudoun Water Board of Directors

## DEAR LOUDOUN WATER CUSTOMER:



The quality of our drinking water must meet stringent state and federal standards developed by the EPA and administered by the Virginia Department of Health. I am pleased to share that Loudoun Water has consistently met or exceeded all federal and state drinking water quality standards.

You will see in this report the sources of your drinking water, how it is treated and the rigorous testing performed to ensure it is always clean, safe and healthy for you and your family. Every day, the staff at Loudoun Water work to provide healthy drinking water to over 228,000 people in

our service area.

Over the past year, drinking water quality has become a national issue. Access to clean, safe drinking water is often something that is taken for granted. That is why we encourage you to read through this report and review its' details. If you have any questions, comments or concerns about this report or your water quality, I encourage you to reach out to our customer relations team at 571-291-7880 or via email at [customerservice@loudounwater.org](mailto:customerservice@loudounwater.org).

Thank You,

A handwritten signature in black ink that reads "Dale C. Hammes".

Dale Hammes  
General Manager

## ABOUT LOUDOUN WATER

It is Loudoun Water's mission to sustainably manage water resources in advocacy of health, environment and quality of life. We pledge to bring our customers clean, healthy water that is safe to drink.

To do this, Loudoun Water maintains over 1,100 miles of water distribution pipelines, over 850 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 517 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 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 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 our wholesaler, Fairfax Water, and your drinking water from Goose Creek was fully treated by Loudoun Water.

## 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 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 is routinely performed. It is reported based on the presence or absence of total and Escherichia coli. Their presence indicates potential health risks for individuals exposed to this water. Loudoun Water tests for coliform bacteria at approximately 150 locations. Total coliform bacteria must not be present in more than five percent of monthly samples.
- Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAA5) analysis is a quarterly monitoring requirement. Both of these 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 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. In 2015, Loudoun Water tested for TTHMs and HAA5 at eight locations.
- Corrosion control parameters (orthophosphate and pH) are a semiannual monitoring requirement. By dosing the drinking water with a minimum of 0.50 ppm orthophosphate and maintaining a minimum pH of 6.5 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. 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.)

Loudoun Water has been testing for lead and copper in accordance with EPA's Lead and Copper Rule (LCR) since 1992. In 2014, the 90th percentile value for lead was non-detectable compared to the EPA action level of 15 ppb. The Virginia Department of Health requires Loudoun Water to monitor for lead and copper at 50 locations every three years, with the next monitoring event to occur in 2017.

In addition to this required monitoring, Loudoun Water has gone the extra step to make sure that any changes in the distribution system, due to upgrades in the newly acquired (2014) Goose Creek Water Treatment Facility, have not adversely affected the concentrations of lead and copper at our customer's homes receiving water from the facility. During 2014 and 2015 a special monitoring project verified that lead and copper levels were not affected.

## 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 of time.

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 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 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 at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead) or by calling the Safe Drinking Water Hotline at 800-426-4791. 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.

# INFORMATION ABOUT *CRYPTOSPORIDIUM* IN THE SOURCE WATERS

The following information reflects data gathered by Fairfax Water for the Potomac River, and Loudoun Water for Goose Creek Reservoir.

*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.



Fairfax Water is currently monitoring the Potomac River and Loudoun Water is currently monitoring Goose Creek Reservoir 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 began in April 2015 and involves the collection of one sample from water treatment plant sources each month for a period of two years. Monitoring for compliance with the LT2ESWTR Round 2 will continue through March 2017. In 2015 LT2ESWTR Round 2 monitoring neither Fairfax Water nor Loudoun Water detected *Cryptosporidium* at the Potomac River or Goose Creek Reservoir.

**The results for the source waters in 2015 are as follows:**

Source (Before Treatment)	Average Cryptosporidium Concentration (oocysts/Liter)
Potomac River Goose Creek Reservoir	0 0

## 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 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 growth of bacteria while water flows through the pipes to your home. Chlorine can be dangerous to human health at 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 so as 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 also uses ozone as another disinfectant. Ozone reduces the amount of chlorine needed to treat the water, offers additional barriers against water borne 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 for various component in the water supply to meet all regulatory requirements. The following tables list only those component 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.

## TURBIDITY

Turbidity is the clarity of the water. It is measured in Nephelometric Turbidity Units (NTU). Turbidity higher than 5 NTU is just 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) <sup>1</sup>	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	0.04	0.23	100%	TT	N/A	Soil Runoff	No
Loudoun Water – Goose Creek Water Treatment Facility	0.04	0.14	100%				No

Your water is tested for a large array of components at locations as it enters into the distribution system. You'll find this data on what was detected in Table Two and Table Three. Table Two depicts components that both Loudoun and Fairfax Water (Loudoun Water Supplier) are required to test for, where Table Three depicts components that are uniquely required for Fairfax Water's ozonation disinfection process.

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 on a regular basis. This data is found in Table One.

The tables on these pages show the results of monitoring for the period of January 1, 2015 to December 31, 2015, unless otherwise noted.

**Table One: Water Quality in the Distribution System**

Microbial Component	Highest Monthly % of Positive Samples	MCL (Max Allowed)	MCLG (Goal)	Typical Source	Violation
Total Coliform Bacteria	0%	Cannot exceed 5% of monthly samples	0	Naturally present in the environment	No
<i>Escherichia coli</i> (E. coli) bacteria	0%	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 System Running Annual Average	MRDL (Max Allowed, Compliance Based on System Running Annual Average)	MRDLG (Goal)	Typical Source	Violation
Total Chlorine (ppm)	2.97 RANGE (INDIVIDUAL TEST RESULTS) 0.4 – 4.4	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)	47. RANGE (INDIVIDUAL TEST RESULTS) 8.2 – 79.	80	N/A	Byproduct of drinking water disinfection	No
Haloacetic Acids (ppb)	Highest Quarterly Locational Running Annual Average 39. RANGE (INDIVIDUAL TEST RESULTS) 4.5 – 61.	60	N/A	Byproduct of drinking water disinfection	No

Metal Components <sup>1</sup>	90th Percentile Level	Action Level	Goal	Number Of Sites Above Action Level	Typical Source	Violation
Copper (ppm)	0.1	1.3	0	0	Corrosion of household plumbing; erosion of natural deposits	No
Lead (ppb)	ND	15	0	1	Corrosion of household plumbing; erosion of natural deposits	No

<sup>1</sup> Data collected in 2014 per regulatory requirements. Next collection scheduled for 2017.

**Table Two: Water Quality from Loudoun Water Supplier (Fairfax Water) and Loudoun Water**

<b>Components</b>	<b>Average Amount Detected Range</b>		<b>MCL (Max Allowed)</b>	<b>MCLG (Goal)</b>	<b>Typical Source</b>	<b>Violation</b>				
	Loudoun Water Goose Creek Water Treatment Facility	Fairfax Water Corbalis Water Treatment Facility								
Atrazine (ppb) <sup>1</sup>	0.18	ND	3	3	Runoff from herbicide used on row crops	No				
	RANGE									
	ND – 0.35									
Alpha Emitters (pCi/L) <sup>1</sup>	ND	2.02	15	0	Decay of natural and man-made deposits	No				
		RANGE								
		ND – 3.01								
Beta/photon emitters (pCi/L) <sup>1,2</sup>	ND	3.09	50	0	Decay of natural and man-made deposits	No				
		RANGE								
		ND – 5.99								
Radium 226/228 (pCi/L) <sup>1</sup>	ND	0.182	5	0	Erosion of natural deposits	No				
		RANGE								
		ND – 0.282								
Fluoride (ppm)	0.7	0.7	4	4	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories	No				
		RANGE								
		0.7 – 0.8								
Nitrate [as Nitrogen] (ppm)	Not applicable	.92	10	10	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits	No				
		RANGE								
		0.56 – 1.32								
Nitrite [as Nitrogen] (ppm)	Not applicable	ND	1	1	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits	No				
		RANGE								
		ND – 0.01								
Nitrite + Nitrite [as Nitrogen] (ppm)	0.098	Not applicable	10	10	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits	No				
Barium (ppm)	0.03	0.037	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	No				
		RANGE								
		0.028 – 0.043								
Total Organic Carbon <sup>3</sup> (ratio)	1.13	1.4	TT	N/A	Naturally present in the environment	No				
	RANGE									
	1.00 – 1.43	1.0 – 2.1								

<sup>1</sup> Data collected in 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> 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 value must be greater than or equal to 1 to be in compliance.

**Table Three: Water Quality from Loudoun Water Supplier (Fairfax Water) Specific to Ozonation Treatment**

Fairfax Water Corbalis Water Treatment Plant	MCL <sup>1</sup>	MCL	Highest Quarterly Running Annual Average <sup>2</sup>	Range of results for individual sites	Major Source in Drinking Water
Bromate (ppb)	10	0	0.4	ND – 5	By-product of drinking water disinfection

<sup>1</sup> The MCL is based on the result of the Highest Quarterly Running Annual Average of all monitored sites.

<sup>2</sup> This result is a mathematical average and is below the detection level for any individual sample result.

## UNREGULATED CONTAMINANT MONITORING

Loudoun Water is one of nearly 6,000 utilities across the country participating in the EPA's third round of the Unregulated Contaminant Monitoring Rule (UCMR3). We monitored unregulated contaminants to help EPA determine the occurrence of these contaminants in drinking water. EPA will use data from participating utilities to decide whether or not additional contaminants need to be regulated in drinking water for protection of public health.

Detected contaminants from the Loudoun Water monitoring of the UCMR3 monitoring are listed in the table below. Six (6) of the 28 contaminants have been detected in our water system. All detections were at low levels (parts per billion range). Hormones, perfluorinated compounds, synthetic organic compounds, and volatile organic compounds analyzed in the UCMR3 monitoring program were not detected in our treated drinking water. The EPA has not established maximum contaminant levels (MCL) for these unregulated contaminants, and the human health effects of these contaminants at the levels they were found is unclear. For more information about UCMR3 and the contaminants currently being sampled for, please visit <http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr3/>.

### UCMR3 DATA TABLE FOR LOUDOUN WATER 2013 - 2014

Component	System Average	Range (Individual Test Results)
Chromium-6 (ppb)	0.11	ND - 0.2
Chlorate (ppb)	111.	ND - 350
Chromium, total (ppb)	0.11	ND - 0.46
Molybdenum (ppb)	1.9	ND - 24
Strontium (ppb)	109.	29 - 180
Vanadium (ppb)	0.16	ND - 0.64

# CURRENT PROJECTS

Loudoun County is a dynamic and fast-growing county with a high demand for drinking water, wastewater treatment, and reclaimed water. Loudoun Water is always working to improve or expand our system to accommodate for future needs. At any given time, a number of capital improvement projects are ongoing throughout the Loudoun Water service area.

## **Several current projects include:**

### **Potomac Water Supply Program**

By 2040, Loudoun Water's customers may require up to 90 million gallons of drinking water every day. This represents a 40 million gallon per day increase from today's customer demand. To meet our customers' needs, we've developed the Potomac Water Supply Program to sustainably expand our water supply capacity and protect local quality of life for generations to come.

### **Broad Run Water Reclamation Facility Biosolids Project**

This project will expand the capacity of the solids treatment process at our Broad Run Facility in Ashburn through the use of two additional anaerobic digesters.

### **Beaverdam Reservoir Renovation**

Loudoun Water is beginning the renovation process to upgrade the site to meet the Virginia dam safety design and regulatory criteria as well as address safety and land use management issues. The assessment, inspection, planning, design, permitting, construction and acceptance activities are all associated with the renovation.

Projects are regularly posted and updated on our website at [www.loudounwater.org](http://www.loudounwater.org). Here you can find more information about what is happening in our community.

## 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. Loudoun Water customers receive their drinking water from the Potomac River and Goose Creek. 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?

#### 1. Public health protection

Reduced threats to public health due to acute or chronic illness from exposure to contaminated water.

#### 2. Economic benefits

Minimizes cost for water treatment, emergency replacement water and finding new supplies.

#### 3. Environmental stewardship

Protection of rural lands, wildlife habitats, recreational areas and water quality of streams and wetlands.

### How you can help protect source water:

- 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.



## POOLS AND IRRIGATION

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 drop in pressure 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](http://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.**

## LOUDOUN WATER TALKS, TOURS AND EXHIBITS

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 Administrative Services Facility in Ashburn is an interactive educational center with over 3,500 square feet of indoor exhibits and nearly one mile of outdoor trails. Come explore "The Aquiary" on your own or let Loudoun Water guide you. School groups, community organizations and HOAs are all welcome to schedule a tour. Call us at 571-291-7880 for more information or visit our website at [www.loudounwater.org](http://www.loudounwater.org).

## TAP WATER FOR 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 the 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.

## Keep In Touch

Join over 13,000 people who receive our bi-monthly newsletter, On Tap! Each issue includes service updates, seasonal tips and other Loudoun Water highlights. To sign up, visit [www.loudounwater.org](http://www.loudounwater.org).



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