Unregulated Contaminants Monitoring (UCMR 4)

The Unregulated Contaminants Monitoring Rule (UCMR) was incorporated in the 1996 Safe Drinking Water Act amendments requiring EPA to issue a new list of no more than 30 unregulated contaminants to be monitored by Public Water Systems (PWSs), once every five years. UCMR monitors for contaminants not regulated by the National Primary Drinking Water Regulations. The data collected through UCMR are stored in the National Contaminant Occurrence Database (NCOD) to support analysis and review of contaminant occurrence and eventually help determine whether to regulate a contaminate in the interest of protecting public health. The fourth Unregulated Contaminant Monitoring Rule (UCMR 4) was published in the Federal Register on December 20, 2016. UCMR 4 requires monitoring for 30 chemical contaminants between 2018 and 2020 using analytical methods developed by EPA and consensus organizations. This monitoring provides a basis for future regulatory actions to protect public health. The table below reports the average and range of results of all UCMR 4 contaminants detected in the sampling performed in 2018.

Unregulated Contaminants Monitoring (UCMR 4)			
Metals	Units	Average	Range
manganese	ppb	0.85	0.80 - 0.92
Brominated Haloacetic Acid (HAA) Groups	Units	Average	Range
HAA5	ppb	35.4	9.8 - 59
HAA6Br	ppb	7.44	0.95 - 11
HAA9	ppb	42.6	11 - 67

For more information about this Water Quality Report, please contact our Water Control Center at 703-228-6555.

You may also consult the County's website at *www.arlingtonva.us* and the U.S. Environmental Protection Agency (EPA)'s website at *www.epa.gov/safewater*

Electronic copies of this report are available online at www.*arlingtonva.us/waterqualityreport*

ARLINGTON
VIRGINIA

Department of Environmental Services

Water, Sewer and Streets Bureau

2019 Annual Water Quality Report

WILLSTON REPORT

The Arlington County Water, Sewer and Streets Bureau is committed to providing residents with a reliable supply of high quality drinking water. We test County water using sophisticated equipment and advanced procedures and our water meets all state and federal standards for water quality. This annual "Consumer Confidence Report," required by the Safe Drinking Water Act (SDWA), tells you where your water comes from, what our tests show about it, and other things you should know about drinking water.

El informe contiene información importante sobre la calidad del agua en su comunidad. Tradúzca lo ó hable con alguien que lo entienda bien.

NOTICE ABOUT PERCHLORATE

Perchlorate is a naturally occurring as well as man-made compound. Its presence in drinking water is currently unregulated and utilities are not required to monitor for it. The Washington Aqueduct has been voluntarily monitoring for perchlorate since 2002. The EPA initially established a reference dose of 24.5 parts per billion (ppb) for perchlorate and beginning in 2009 has proposed an interim health advisory of 15 ppb. A reference dose is a scientific estimate of daily exposure level that is not expected to cause adverse health effects in humans. The reference dose concentration was used in EPA's efforts to address perchlorate in drinking water and to establish the interim health advisory.

The source and treated water samples collected in 2019 from the Dalecarlia and McMillian treatment plants found an average of 0.4 ppb. The highest level detected was 0.8 ppb. If you have special health concerns, you may want to get additional information from the EPA at http://water.epa.gov/drink/contaminants/unregulated/perchlorate.cfm or contact the EPA's Safe Drinking Water Hotline at 800-426-4791.

WHERE DOES OUR WATER COME FROM?

Arlington County purchases its water from the Washington Aqueduct Division of the Army Corps of Engineers. The Washington Aqueduct operates two water treatment plants in the District of Columbia. The plants treat water from a surface water source, the Potomac River. Arlington's water is treated at the Dalecarlia Treatment Plant located on MacArthur Boulevard in Northwest Washington. The Interstate Commission on the Potomac River Basin conducted a Source Water Assessment of the Potomac River watershed in April 2002. The assessment identified urban runoff, toxic spills, agriculture and inadequate wastewater treatment as potential contamination sources to the water supply. Contact the Interstate Commission on the Potomac River Basin at (301) 984-1908 for more information. For additional source water information, you may also read the Arlington Water System 2019 Annual Water Quality Report at https://arlingtonva.us/waterqualityreport.
Arlington County maintains water quality assurance through our regular water distribution and storage evaluations and routine water sampling analysis.

WHAT ELSE SHOULD I KNOW?

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

LEAD IN DRINKING WATER

The EPA finalized Lead and Copper Rule Short-Term Regulatory Revisions and Clarifications in October 2007, with one of its goals being to improve customer awareness. Hundreds of water samples have been taken throughout Arlington County to determine the lead concentration in our water. Historically these concentrations have been below the action level for lead. 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. Arlington County is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at www.epa.gov/safewater/lead.

Property Managers of Multiple Unit Dwellings:

Please share this information with all other people who drink this water, especially those who may not have received this Water Quality Report directly. You can do this by posting this notice in a public place or distributing copies by hand or mail. If additional copies are needed, contact our Water Control Center at 703-228-6555.

IMPORTANT HEALTH INFORMATION

Source water is tested for Cryptosporidium, a parasite that has caused outbreaks of intestinal disease in the U.S. and overseas. It is common in surface water, to kill, and even the best water system will contain some live parasites. The U.S. Environmental Protection Agency (EPA) is working to improve the control of microbial pathogens, namely the protozoan Cryptosporidium in drinking water. Cryptosporidium was monitored in the Potomac River source water on a monthly basis in 2019 and was detected in three samples collected at the Great Falls Intake in February, June, and December 2019 with concentrations ranging from 0.095 to 0.279 Oocysts/L. Giardia was also monitored in the source water monthly in 2019 and was detected in nine samples collected at the Great Falls Intake in January, February, April, May, July, August, September, November, and December 2019 with concentrations ranging from 0.093 to 0.744 Cysts/L. No precaution about County drinking water is currently necessary for the general public.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia, and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

U.S. Environmental Protection Agency

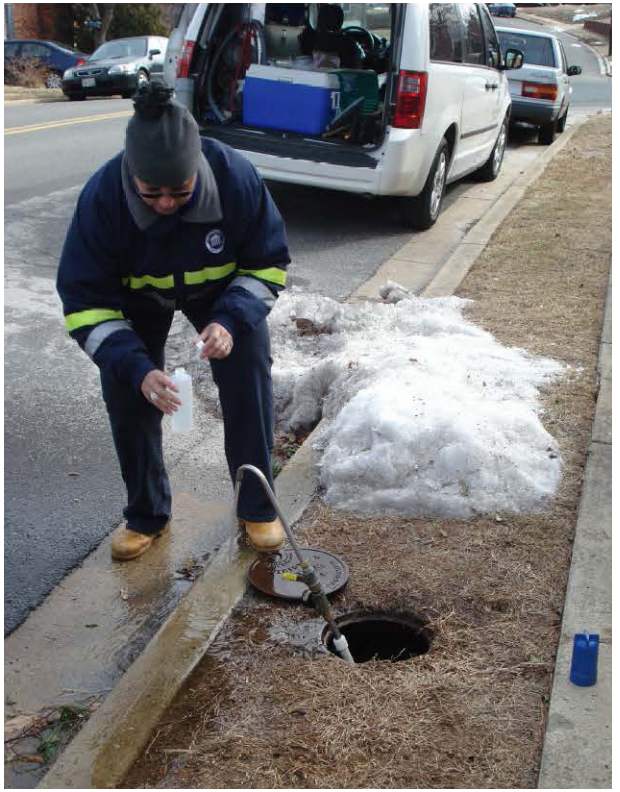
HOW TO READ THIS TABLE

It's easy! Our water is tested to assure that it is safe and healthy. The results of tests performed in 2019 or the most recent testing available are presented in the table. Footnotes below the chart are provided to explain important details.

The column marked **Goal** shows the Maximum Contaminant Level Goal or MCLG. This is 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.

The column marked **Maximum Allowed** is the Maximum Contaminant Level or MCL. This is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

The column marked **Detected Level** shows the results observed in our water during the most recent round of testing.



Source of Substance provides an explanation of the typical natural or man-made origins of the contaminant.

Action Level (AL) is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Treatment Technique (TT) is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Residual Disinfectant Level (MRDL) is the highest level of a residual disinfectant that is allowed in drinking water.

Maximum Residual Disinfectant Level Goal (MRDLG) is the level of a residual disinfectant below which there is no known or expected risk to health. MRDLGs allow for a margin of safety.

Non-detects (ND)—lab analysis indicates that the contaminant is not present.

Nephelometric Turbidity Unit (NTU)—nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Parts per million (ppm) or Milligrams per liter (mg/ℓ)—one part per million corresponds to one minute in two years, or a single penny in $10,000.

Parts per billion (ppb)—one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Parts per trillion (ppt)—one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in $10,000,000,000.

Picocuries per liter (pCi/ℓ)—picocuries per liter is a measure of the radioactivity in water.

SUMMARY OF 2019 WATER QUALITY DATA[1]

FINISHED WATER CHARACTERISTICS, SOURCE MONITORING						
Substance	**Unit**	**Goal (MCLG)**	**Maximum Allowed (MCL)**	**Detected Level**	**Range of Levels Detected**	**Source of Substance**
Arsenic[2]	ppb	0	10	0.3	ND-0.3	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Atrazine	ppb	3	3	0.08	ND - 0.08	Runoff from herbicide used on row crops
Barium[2]	ppm	2	2	0.05	0.03-0.05	Discharge of drilling waste; Discharge from metal refineries; Erosion of natural deposits
Beta/photon emitters[3]**	pCi/L	0	50*	3	ND-3	Decay of natural and man-made deposits oif certain minerals that are radioactive and may emit forms of radiation known as photons and beta radiation.
Combined Radium-226/228[3]	pCi/L	0	5	2	ND-2	Erosion of natural deposits
Fluoride[2]	ppm	4	4	0.8	0.6-0.8	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen)[2]	ppm	10	10	3	1-3	Runoff from fertilizer use; leaching from septic tanks, sewage; Erosion of natural deposits
Total Organic Carbon (TOC)	ppm	n/a	TT	Running annual average removal ratio is required to be equal to or greater than 1.00. Removal ratio actually achieved ≥ 1.23 based on running annual averages.		Naturally present in the environment
Turbidity[4]	NTU	n/a	TT	0.06 = highest single hourly measurement. Lowest monthly percentage of samples meeting turbidity requirements = 100%.		Soil runoff
Uranium[2]	ppb	0	30	0.2	ND-0.2	Erosion of natural deposits
FINISHED WATER CHARACTERISTICS, ARLINGTON COUNTY DISTRIBUTION SYSTEM MONITORING						
Copper[5]	ppm	1.3	AL-1.3	0.0406	0.0085 - 0.0765	Corrosion of household plumbing systems; Erosion of natural deposits
Lead[6]	ppb	0	AL-15	0.752	ND - 1.725	Corrosion of household plumbing systems; Erosion of natural deposits
Revised Total Coliform Rule[7]	n/a	0	< 5% of monthly samples contain coliform bacteria	ND	ND	Naturally present in the environment.
Chloramines[8]	ppm	(MRDLG) 4	(MRDL) 4	2.5	1.0 - 3.6	Water additive used to control microbes
TTHM[8]	ppb	n/a	80	46	15 - 69	By-product of drinking water chlorination
HAA5[8]	ppb	n/a	60	29	10 - 42	By-product of drinking water chlorination

1 All test results are from 2019 unless otherwise noted.

2 The levels shown for these parameters were derived from both SDWA compliance data and routine process control data. Therefore, they may be different from the compliance values shown in the monthly Washington Aqueduct Water Quality Report.

3 Triennial radionuclide monitoring was performed in 2017.

4 Turbidity is the measure of cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of the filtration process. The turbidity level of filtered water shall be less than or equal to 0.3 NTU in at least 95% of the measurements taken each month, and shall at no time exceed 1 NTU.

5 The Detected Level represents the 90th percentile value. None of the 16 samples tested for copper exceeded the current Action Level of 1.3 ppm. Testing for this parameter was conducted in 2019.

6 The Detected Level represents the 90th percentile value. None of the 16 samples tested for lead exceeded the current Action Level of 15 ppb. Testing for this parameter was conducted in 2019.

7 The Detected Level represents the highest monthly percentage of positive results taken between January 1, 2019 – December 31, 2019.

8 The Detected Level represents the highest running annual compliance average during the calendar year.

AVERAGE LEVELS OF COMPOUNDS IN WILLSTON DRINKING WATER			
Calcium	38 mg/L	Magnesium	7 mg/L
Chloramine Residual	2.5 ppm	Nickel	.25 ppb
Chloride	36 mg/L	pH	7.6
Flouride	0.7 ppm	Sodium***	22 ppm
Hardness	126 mg/L or 7 grains/gal	Sulfate	42 mg/L

Note: The Willston Zone had no detections for total coliform or E coli from 24 samples in calendar year 2019.

*The MCL for beta and photon emitters is 4 mrem/year and EPA considers 50 pCi/L to be the level of concern for beta/photon emitters. Because the beta particle results were below 50 pCi/L, no testing for individual beta particle constituents was required.

**The contribution to gross beta (pCi/L) from naturally occurring K-40 isotope is 0.82 times the potassium concentration (mg/L). The concentration of potassium monitored at the Dalecarlia and McMillan WTPs ranged from 2 - 4 mg/L at both WTPs when sampled at the same time as the beta/photon emitter samples. Therefore, all detects of gross beta in 2017 may be attributed to naturally occurring K-40.

***Although sodium is not regulated by an MCL, the EPA's Fall 2009 Drinking Water Advisory Table identified 20mg/L as a health-based value for a person on a 500 mg/day restricted sodium diet.