

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/departments/environmentalservices/uepd/wquality/environmentalservicesarlwq.aspx

Arlington County Department of Environmental Services
Water, Sewer and Streets Bureau
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Important Water Quality Information Enclosed



Department of Environmental Services

Water, Sewer and Streets Bureau

2010 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.

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.

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 2010 Annual Water Quality Report at www.arlingtonva.us/departments/environmentalservices/uepd/wquality/environmentalservicesarlwq.aspx Arlington County maintains water quality assurance through our regular water distribution and storage evaluations and routine water sampling analysis.

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 2010 from the Dalecarlia and McMillian treatment plants showed only trace amounts of perchlorate. The highest level detected was 3.7 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.

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 U.S. 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 15 to 30 seconds or until it becomes cold or reaches a steady temperature 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 at www.epa.gov/safewater/lead

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. The Potomac River source was monitored at Great Falls for *Cryptosporidium* during 2010 and there were no detects. 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* and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.



U.S. Environmental Protection Agency

NOTICE TO CUSTOMERS OF THE WILLSTON AREA WATER SYSTEM

In keeping with National Primary Drinking Water Regulations, we are informing you that the Washington Aqueduct which provides water to the Willston Area violated a portion of state regulations concerning frequency of monitoring drinking water. The Washington Aqueduct is required to regularly monitor our drinking water for specific contaminants on a regular basis. Results of this monitoring indicate whether or not your drinking water meets health standards. For 12 hours beginning October 20, 2010, the Washington Aqueduct did not monitor or test for turbidity for two of its 36 filters, and therefore cannot be sure of the quality of your drinking water during that time. Concurrent monitoring of all other processes and turbidity instruments showed no problems. Past records show the Washington Aqueduct has continually demonstrated compliance with the regulations regarding water treatment and quality.

There is nothing you need to do at this time.

The Washington Aqueduct has addressed this lapse in their monitoring protocol by retraining operators on proper monitoring procedures. The safety of Arlington County's Willston Area water system is paramount. We will continue to diligently manage this critical resource and report any alerts to citizens. For more information, contact the Water Control Center at 703-228-6555.

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 2010 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 which 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 2010 WATER QUALITY DATA¹

FINISHED WATER CHARACTERISTICS, SOURCE MONITORING

Substance	Date Tested	Unit	Goal (MCLG)	Maximum Allowed (MCL)	Detected Level	Range of Levels Detected	Source of Substance
Arsenic	2010	ppb	0	10	0.8	ND–0.8	Run off from orchards, glass and electronic produced waste ² .
Barium	2010	ppm	2	2	0.07	0.03–0.07	Runoff from herbicide used on row crops.
Beta/photon Emitters	2008	pCi/L	0	50 ³	4	ND–4	Discharge of drilling waste from metal refineries ² .
Cadmium	2010	ppb	5	5	0.2	ND–0.2	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints.
Chromium	2010	ppb	100	100	4.4	ND–4.4	Discharge from steel and pulp mills ² .
Combined Radium 226/228	2008	pCi/L	0	5	2	ND–2	Erosion of natural deposits or products.
Ethylene dibromide (EDB)	2010	ppt	0	50	10	ND–10	Discharge from petroleum refineries.
Fluoride	2010	ppm	4.0	4.0	1.2	0.5–1.2	Water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (as Nitrogen)	2010	ppm	10	10	3.1	0.06–3.1	Runoff from fertilizer use; leaching from septic tanks, sewage.
Nitrite (as Nitrogen)	2010	ppm	1	1	0.09	ND–0.09	Runoff from fertilizer use; leaching from septic tanks, sewage.
Selenium	2010	ppb	50	50	1.4	ND–1.4	Discharge from petroleum, mines and metal refineries.
Total Organic Carbon (TOC)	2010	ppm	n/a	TT	Running annual average removal ratio is required to be greater than 1.0. Removal ratio actually achieved ≥ 1.39.		Naturally present in the environment.
Turbidity ⁴	2010	NTU	n/a	TT	0.18 = highest single measurement. Lowest monthly percentage of samples meeting turbidity requirements = 100%.		Soil runoff.

FINISHED WATER CHARACTERISTICS, ARLINGTON COUNTY DISTRIBUTION SYSTEM MONITORING

Substance	Date Tested	Unit	Goal (MCLG)	Maximum Allowed (MCL)	Detected Level	Range of Levels Detected	Source of Substance
Copper ⁵	2010	ppm	1.3	AL – 1.3	0.046	0.010–0.06	Leaching from wood preservatives; corrosion of household plumbing. ²
Lead ⁶	2010	ppb	0	AL – 15	0.52	0.079–40	Runoff from fertilizer use; leaching from septic tanks; corrosion of household plumbing. ²
Total Coliform ⁷	2010	n/a	0	1	1	ND–1	Naturally occurring in the environment.
Chloramines ⁸	2010	ppm	(MRDLG) 4	(MRDL) 4	2.7	0.22–3.4	Water additive used to control microbes.
TTHM ⁸	2010	ppb	n/a	80	45	25–65	By-product of drinking water chlorination.
HAA5 ⁸	2010	ppb	n/a	60	33	23–45	By-product of drinking water chlorination.

¹ All test results are from 2010 unless otherwise noted.

² Erosion of natural deposits or products.

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

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. One hundred percent (100%) of the samples tested were below the Treatment Technique Level of 0.30 NTU.

⁵ The Detected Level represents the 90th percentile value. None of the 13 samples tested for copper exceeded the current Action Level of 1.3 ppm.

⁶ The Detected Level represents the 90th percentile value. One of the 13 samples (8% of the sample set) tested for lead exceeded the current Action Level of 15 ppb.

⁷ The Detected Level represents the highest monthly number of positive results.

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

⁹ Although sodium is not regulated by an MCL, the EPA's Fall 2009 Drinking Water Advisory Table identifies 20 mg/l as a health-based value for an individual on a 500 mg/day restricted sodium diet.

LEVELS OF COMPOUNDS IN WILLSTON DRINKING WATER

Average Hardness	8.4 grains/gal
Average pH	7.9
Average Chloramines Residual	2.7 ppm
Average Fluoride	1.0 ppm
Average Sodium ⁹	21 ppm
Average Nickel	2.3 ppb

The Willston Area Distribution System had 1 positive sample out of 27 samples collected for total coliform in the calendar year 2010. The Total Coliform positive test result was followed by repeat samples which detected no Total Coliforms. There were no detections of *E. coli* in any of the monthly samples during the calendar year 2010.