2016 Water Quality Report
Aqua Virginia, Inc.
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2016 Water Quality Report

Este informe contiene información importante sobre la calidad de su agua de beber. Hable con alguien que lo entienda o llame al 877.WTR.AQUA.

This Water Quality Report identifies the source of your drinking water and the results of water quality monitoring conducted during 2016 (except where noted). If you have any questions about this report or your water quality, please contact us at 877.WTR.AQUA (877.987.2782) or visit our website at AquaAmerica.com.

SOURCES OF DRINKING WATER

The sources of drinking water (both tap water and bottle 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, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

CONTAMINANTS THAT MAY BE PRESENT IN SOURCE WATER INCLUDE:

Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
Inorganic contaminants, such as salts and metals which can be naturally- occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas productions, mining or farming.
Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
Radioactive contaminants, which can be naturally-occurring or result from oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (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 EPA's Safe Drinking Water Hotline (1.800.426.4791) or visiting www.epa.gov/safewater.

PROTECTING OUR CUSTOMERS

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 their drinking water from their health care providers. EPA/Center for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline (1.800.426.4791).

The EPA sets MCLs at very stringent levels. In developing the standard, the EPA assumes that the average adult drinks 2 liters of water each day throughout a 70-year life span. EPA generally sets MCLs at levels that will result in no adverse health effects for some contaminants or a one-in-ten thousand to one-in-a-million chance of having the described health effect for other contaminants.

DEFINITIONS - All definitions given are general and may not apply to a particular system

AL: Action Level– The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow.
MCL: Maximum Contaminant Level – 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.
MCLG: Maximum Contaminant Level Goal – The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
MRDL: Maximum Residual Disinfectant Level - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MRDLG: Maximum Residual Disinfectant Level Goal - 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.
NA: Not Applicable.
ND: Non-Detect – Not detected and indicates that the substance was not found by laboratory analysis.
NTU: Nephelometric Turbidity Unit – Measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
pCi/l: Picocuries per liter – A measure of the radioactivity in water.
ppb: Parts per billion or micrograms per liter – One part by weight of analyte to 1 billion parts by weight of the water sample.
ppm: Parts per million or milligrams per liter – One part by weight of analyte to 1 million parts by weight of the water sample.
TT: Treatment Technique – A required process intended to reduce the level of a contaminant in drinking water.
TTHMs: Total Trihalomethanes - TTHMs form when natural organic matter decomposes and combines chemically with the chlorine added for disinfection. Levels of TTHMs vary seasonally.
Variances and Exemptions: State or EPA permission not to meet a MCL or a treatment technique under certain conditions

CROZIER PUBLIC WATER SYSTEM
PWSID No. VA4075100

We are pleased to present our Drinking Water Quality Report. The data for this report was collected during 2016 (except where noted). The state allows us to monitor for some substances less than once per year because the concentrations of these substances do not change frequently. Some of our data, though representative, may be more than one year old. Although the water system samples your water for many substances, we are listing only those regulated substances that were detected in your water.

The Crozier Water System obtains its water supply from one well located near Route 6. The water for this system is treated with chlorine for disinfection and phosphate for corrosion control. Caustic soda is also added to raise the pH of the water.

The Virginia Department of Health conducted a source water assessment of the primary well serving the Crozier Water System during 2001. The well was determined have high susceptibility to contamination using criteria developed by the state in its EPA-approved Source Water Assessment Program. This does not mean that your drinking water is currently unsafe. Your current water quality is described in the rest of this report. The assessment report consists of maps showing the source water assessment area, an inventory of known land use activities of concern, and documentation of any known contamination within the last 5 years from the date of assessment. The report is available by contacting Aqua Virginia at 877.WTR.AQUA (877.987.2782).

For information regarding water saving techniques, please visit aquawatersmart.com and epa.gov/watersense.com.

Contaminant and Unit of Measurement	Date of Sample (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Radiological Contaminants – Results in pCi/L. The MCL for beta particles is 4 millirems per year (a measure of radiation absorbed by the body). EPA considers 50 pCi/L to be the level of concern for beta particles							
Combined Radium	04/13	N	0.68	NA	0	5	Erosion of natural deposits
Gross Alpha	04/13	N	2.6	NA	0	15	
Gross Beta	04/13	N	1.42	NA	0	50	Decay of natural and man-made deposits
Inorganic Contaminants							
Barium (ppm)	05/16	N	0.06	NA	2	2	Erosion of natural deposits
Nitrate (ppm)	02/16	N	2.2	NA	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Disinfection Byproducts							
Haloacetic Acids (ppb)	09/14	N	3	NA	NA	60	Byproduct of drinking water disinfection
Total Trihalo-methanes (ppb)	09/14	N	6	NA	NA	80	
Disinfectants					MRDLG	MRDL	
Chlorine (ppm)	2016	N	0.9	0.4 – 1.0	4	4	Water additive used to control microbes

Lead and Copper (Distribution samples)							
Contaminant and Unit of Measurement	Date of Sample (mo./yr.)	AL Violation Y/N	90th Percentile Result	# of sites exceeding the AL	Ideal Goal (MCLG)	AL (Action Level)	Likely Source of Contamination
Copper (ppm)	07-08/16	N	0.23	0	1.3	1.3	Corrosion of household plumbing
Lead (ppb)	07-08/16	N	2.9	0	0	15	

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. Aqua Virginia 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 cold water 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 or at http://www.epa.gov/safewater/lead.

There is no state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. The sodium level in your water was 19.3 ppm as tested in May 2016. People on a sodium-restricted diet should consult a physician about the level of sodium in water they drink.

Our water systems are designed and operated to deliver water to our customers' plumbing systems that complies with state and federal drinking water standards. This water is disinfected using chlorine, but it is not necessarily sterile. Customers' plumbing, including treatment devices, might remove, introduce or increase contaminants in tap water. All customers, and in particular operators of facilities like hotels and institutions serving susceptible populations (like hospitals and nursing homes), should properly operate and maintain the plumbing systems in these facilities. You can obtain additional information from the EPA's Safe Drinking Water Hotline at 800.426.4791