# **2019 WATER QUALITY REPORT**

# Fort Lee District PWSID: VA3149247



# A Message from the Virginia American Water President



To Our Valued Customers:

Virginia American Water is proud to be your local water service provider, and I am pleased to share with you good news about the quality of your drinking water. Each year, we provide you with our Annual Water Quality Report, and Virginia American Water continues to supply drinking water that meets or surpasses all state and federal water quality regulations.

Virginia American Water delivers high quality water to your homes and businesses by maintaining and improving the miles of pipeline hidden below the ground, the

facilities that draw water from the source and the plants where the water is treated and tested.

Our plant operators, water quality experts, engineers and maintenance crews work diligently to protect our water supplies and provide our communities with safe, clean tap water. Delivering reliable water service to your tap also requires significant investment to upgrade the aging water infrastructure. In 2019 alone, we invested more than \$35 million in water system improvements statewide.

We do this because Virginia American Water delivers more than just water service. We distribute a key resource for public health, fire protection, the economy and overall quality of life. Our job is to provide quality water not only today, but well into the future. It's part of our commitment to you and the communities we serve. We hope you agree that your water quality is worth every penny, and worth learning more about.

Please spend time reviewing this report. You'll learn details about the source and quality of your drinking water using data from water quality testing conducted for your local water system from January through December 2019.

Thanks for allowing us to serve you.

Sincerely,

Barry Suits, P.E.



# Information on the Internet

Virginia American Water, a subsidiary of American Water Works Company, Inc. (NYSE: AWK), is the largest investor-owned water utility in the state, providing high quality and reliable water services to approximately 320,000 people.

With a history dating back to 1886, American Water is the largest and most geographically diverse U.S. publicly traded water and wastewater utility company. The company employs more than 6,800 dedicated professionals who provide regulated and market-based drinking water, wastewater and other related services to an estimated 15 million people in 46 states. American Water provides safe, clean, affordable and reliable water services to our customers to help keep their lives flowing. For more information, visit <u>www.amwater.com</u> and follow American Water on <u>Twitter</u>, <u>Facebook</u>, and <u>LinkedIn</u>.

The U.S. Environmental Protection Agency (EPA) Office of Water (<u>www.epa.gov/safewater</u>) and the Centers for Disease Control and Prevention (CDC) (<u>www.cdc.gov</u>) websites provide a substantial amount of information on many issues relating to water resources, water conservation and public health. Also, the Virginia Department of Health (VDH) and the Virginia Department of Environmental Quality (DEQ) have websites that provide complete and current information on water issues in Virginia. These websites are located at (<u>www.vdh.virginia.gov</u>) and (<u>www.deq.state.va.us</u>). All these websites have numerous links that will direct you to other professional organizations, public education and public health topics related to water.

### What is a Source Water Assessment?

The Source Water Assessment Program (SWAP) is a result of the 1996 amendments to the Federal Safe Drinking Water Act (SDWA). Those amendments require all states to establish a program to assess the vulnerability of public water systems to potential contamination. While Fort Lee is classified as a consecutive water system, the Virginia Department of Health (VDH), Office of Water Programs, performed a source water assessment of the Appomattox and James Rivers in 2001 for the Hopewell District. This assessment consisted of defining the drainage-watershed area, provided an inventory of known land use activity, and identified any known contamination that occurred within the last five years within a five mile radius of our water intakes. The report became available in the year 2002, and is the first step in the preparation of a Source Water Protection Program (SWPP). The following paragraphs which have been prepared by VDH are required to be included in the CCR.

"The Virginia Department of Health conducted a Source Water Assessment of the Appomattox and James Rivers in 2001. The rivers were determined to be of high susceptibility to contamination using the criteria developed by the state in its approved SWAP. The assessment report consists of maps showing the Source Water Assessment area, an inventory of known land use activities and potential sources of contamination of concern, best management practices utilized at land use activity sites in zone 1, documentation of any known contamination within the last five years, susceptibility explanation chart, and definitions of key terms. The report is available by contacting your waterworks system owner at (804) 446-9822."

"The Virginia Department of Health conducted a Source Water Assessment of the ARWA source water during 2002. Lake Chesdin (Appomattox River) was determined to be of high susceptibility to contamination, using criteria developed by the State in its EPA-approved Source Water Assessment Program. The assessment report consists of maps showing the source water assessment area, and inventory of known land use activities of concern and documentation of any known contamination within the last five years from the date of the assessment. The report is available by contacting Robert Wilson at (804) 590-1145."

# What Is a Water Quality Report?

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

To comply with VDH and EPA regulations, Virginia American Water issues a report annually describing the quality of your drinking water. The purpose of this report is to provide you an overview of last year's (2019) drinking water quality. It includes details about where your water comes from and the results of our testing. We hope the report will raise your understanding of drinking water issues and awareness of the need to protect your drinking water sources.

### **Share This Report**

Landlords, businesses, schools, hospitals and other groups are encouraged to share this important water quality information with water users at their location who are not billed customers of Virginia American Water and therefore do not receive this report directly.



# Where Does My Water Come From?

In April 2001, the Virginia American Water Company acquired ownership and is the current operator of the water system at the U.S. Army Garrison at Fort Lee, Virginia. Virginia American Water customers at Fort Lee enjoy an abundant water supply from two major surface water treatment plants. Fort Lee is a consecutive water system. That is, the drinking water that enters the base is supplied from other treatment facilities outside the installation. Currently, water is supplied from both the Appomattox River Water Authority (ARWA) in Petersburg, and Virginia American Water (VAWC) in Hopewell. For the Hopewell District, the water is withdrawn from the Appomattox River, at the confluence with the James River. The combined drainage area of these two watersheds is approximately 9,000 squares miles. Lake Chesdin, which is supplied by the Appomattox River, is the water source for the Appomattox River Authority. To learn more about our watershed on the Internet, go to U.S. EPA's Search Your Watershed at <a href="https://watersgeo.epa.gov/mywaterway">https://watersgeo.epa.gov/mywaterway</a>

# **Protecting your Drinking Water Supply**

Protecting drinking water at its source is an important part of the process to treat and deliver high quality water. It takes a community effort to protect our shared water resources. This includes utilities, businesses, residents, government agencies and organizations. Everyone who lives, works, and plays in the area has a role and stake in clean water supplies.

What Can you do? Quality drinking water starts upstream. Everyone can help maintain and improve drinking water supplies through the following actions:

- Dispose of pharmaceuticals, household chemicals, oils and paints at proper waste collections sites. Materials can impact water ways if poured down the drain, flushed down the toilet, or dumped on the ground. Contact your county waste authority to find out how to dispose of these materials properly
- Check for leaks from automobiles and heating fuel tanks. Clean up any spills using an absorbent material like cat litter. Sweep up the material and put it in a sealed bag in the trash.
- Clean up after your pets and limit the use of fertilizers and pesticides.
- Look for local opportunities to take part in watershed activities.
- Report any spills, illegal dumping or suspicious activity to VDEQ Pollution Response Program (PREP) (804) 527-5020.

What Are We Doing? Our vision is Clean Water for Life. Our priority is to provide reliable, quality drinking water for our customers. The source of supply is an important part of that mission. We work to understand and reduce potential risks to your drinking water supply.

Here are a few of the efforts underway to protect our shared water resources:

- Community Involvement: We have a proactive public outreach program to help spread the word and get people involved. This includes school education, and other community activities. For more information, visit: <u>https://amwater.com/vaaw/news-community/community-involvement</u>.
- Environmental Grant Program: Each year, we fund projects that improve water resources in our local communities. For more information on the program, visit : <u>https://amwater.com/vaaw/about-us/environmental-grant-program</u>.

To learn more about your water supply and local activities, please contact Kelly Ryan at (804) 446-9822.

# **Lead Education Statement**

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. Virginia American Water 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 two minutes before using the 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 (800) 426-4791 or at <a href="http://www.epa.gov/safewater/lead">http://www.epa.gov/safewater/lead</a>.

We take steps to reduce the potential for lead to leach from your pipes into the water. This is accomplished by adding a corrosion inhibitor to the water leaving our treatment facilities. There are steps that you can take to reduce your household's exposure to lead in drinking water. For more information, please review our Lead and Drinking Water Fact Sheet at <a href="https://amwater.com/vaaw/water-quality/lead-and-drinking-water">https://amwater.com/vaaw/water-quality/lead-and-drinking-water</a>

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# **Special Health Information**

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 may 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 EPA's Safe Drinking Water Hotline (800) 426-4791.

# **Other Drinking Water Constituents You May Be Interested In Are As Follows:**

The average sodium concentration in the sample collected from the Virginia American Water plant effluent was 19 ppm. This concentration exceeds the recommended maximum contaminant level guidance of 20ppm for persons on a "strict" sodium intake diet.

# Cryptosporidium

*Cryptosporidium* is a microbial pathogen found in surface water throughout the U.S. Although filtration removes *Cryptosporidium*, the most commonly used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water. Current test methods do not allow us to determine if 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 to cause disease, and it may be spread through means other than drinking water

# **Opportunities for Public Participation**

Virginia American Water does not schedule regular meetings for public participation in decisions that affect drinking water quality. However, when public participation is required, meetings would be announced in the local newspaper and information would be posted on our website (<u>www.amwater.com/vaaw</u>).

# Water Information Sources

Virginia American Water: www.amwater.com/vaaw Virginia Department of Health: www.vdh.virginia.gov United States Environmental Protection Agency: www.epa.gov/safewater Safe Drinking Water Hotline: (800) 426-4791 Centers for Disease Control and Prevention: www.cdc.gov American Water Works Association: www.awwa.org National Library of Medicine/National Institute of Health: www.nlm.nih.gov/medlineplus



# Substances Expected to be in Drinking 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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. Environmental Protection Agency's Safe Drinking Water Hotline (800) 426-4791.

The sources of drinking water (both tap water and bottled water) includes 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, or wildlife.

**Inorganic Contaminants,** such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, 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 may also come from gas stations, urban stormwater runoff, and septic systems.

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities

### Why does my water sometimes have a chlorine taste and odor?

Periodically, you may notice the taste and odor of chlorine in your water. Virginia American Water uses free chlorine instead of the less noticeable combined chlorine (chloramines) as a disinfectant during distribution system flushing. Free chlorine is used during the water main flushing program done each year to maintain a high level of water quality.

## How to Read the Data Tables

Virginia American Water conducts extensive monitoring. The results of our monitoring are reported in the accompanying tables. While most monitoring was conducted in 2019, certain substances are only monitored once every three to nine years because the levels do not change frequently. For help with interpreting this table, see the "Table Definitions" section.

Starting with a **Substance**, read across. **Year Sampled** is usually in 2019 but may be a prior year. **MCL** shows the highest level of substance (contaminant) allowed. **MCLG** is the goal level for that substance (this may be lower than what is allowed). **Average Amount Detected** represents the measured amount (less is better). **Range** tells the highest and lowest amounts measured. A **Yes** under **Compliance Achieved** means the amount of the substance met government requirements. **Typical Source** tells where the substance usually originates.



# **Table Definitions and Abbreviations**

- Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which 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 a 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 disinfectant routinely 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 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 contamination.
- NA: Not applicable
- ND: Not detected
- NTU Nephelometric Turbidity Units: Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- pCi/L (picocuries per liter): Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles).
- ppm (parts per million): One part substance per million parts water, or milligrams per liter. 1 ppm = 1 minute in 2 years or 1 penny in \$10,000.
- ppb (parts per billion): One part substance per billion parts water, or micrograms per liter. 1 ppb = 1 minute in 2,000 years or 1 penny in \$10,000,000.
- TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.

# **Unregulated Contaminant Monitoring**

**Definition**: Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether regulation is warranted.

The list of unregulated contaminants applicable for monitoring during 2013-2016 under the unregulated contaminants monitoring rule 3 is located on EPA's website at: <u>https://www.epa.gov/dwucmr/third-unregulated-contaminant-monitoring-rule</u>.

The list of unregulated contaminants applicable for monitoring during 2017-2021 under the unregulated contaminants monitoring rule 4 is located on EPA's website at: <u>https://www.epa.gov/dwucmr/fourth-unregulated-contaminant-monitoring-rule</u>.

# **Water Quality Statement**

For your information, we have compiled a list in the table below showing the results of our testing of your drinking water during 2019. For information concerning our results, please contact Water Quality Supervisor, Kelly Ryan, at (804) 446-9822.



# Fort Lee Water Quality 2019

# **Regulated Substances (from the treatment facilities)**

	Maria			AF	RWA	V	AWC	Compliance Achieved	Typical Source
Substance (units)	Year Sampled	MCL	MCLG	Amount Detected	Range of Detected Levels	Amount Detected	Range of Detected Levels		
Barium (ppm)	2019	2	2	0.019	NA	NA	NA	Yes	Erosion of natural deposits, Discharge of drilling waste and, metal refineries
Beta emitters (pCi/L) <sup>2</sup>	2014 ARWA 2018 VAWC	50	0	4.9	NA	1.9	NA	Yes	Decay of natural and man-made deposits
Fluoride (ppm)	2019	4	4	0.68	<0.1 - 0.87	0.59	NA	Yes	Added to water to promote healthy teeth
Nitrate (ppm)	2019	10	10	0.14	NA	0.07	NA	Yes	Erosion of natural deposits; Runoff from fertilizer use
Combined Radium (pCi/L)	2014 ARWA 2018 VAWC	5	0	<0.6	NA	0.2	NA	Yes	Erosion of natural deposits
TOC <sup>3</sup>	2098	TT	NA	1.44	1.27 - 1.64	1.50	1.24 - 1.71	Yes	Naturally present in the environment
		TT = 1 NTU	NA	0.116	NA	0.293	NA		
Turbidity (NTU) 2019	2019	2019 Percent of readings ≤0.3 NTU on NA a monthly basis	NA	100% of readings ≦ 0.3 NTU	NA	100% of readings ≦0.3 NTU	NA	Yes	Soil erosion and runoff
Chlorine Dioxide (ppm)	2019	MRDL =0.8	MRDLG =0.8	<0.1	<0.10 - 0.14	NA	NA	Yes	Additive used to control microbes; Used during pre- treatment only

# **Disinfection By-Products (from the distribution system)**

Substance (units)	Year Sampled	MCL	MCLG	Amount Detected <sup>6</sup>	Range of Detected Levels <sup>7</sup>	Compliance Achieved	Typical Source
Haloacetic acids (HAAs)	2019	60	NA	21.45	6.8 - 31.2	Yes	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) <sup>5</sup>	2019	80	NA	54.38	25.6 - 57.7	Yes	By-product of drinking water disinfection
Chlorite (ppm)	2019	1.0	0.8	0.16	ND - 0.27	Yes	By-product of drinking water disinfection

# **Regulated Lead and Copper (Tap water samples were collected from 30 homes on Base)**

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Substance (units)	Year Sampled	MCL	MCLG	Amount Detected (90th Percentile)	Number of Samples Over Action Level	Compliance Achieved	Typical Source
Copper (ppm)	2017	AL = 1.3	1.3	0.120	0	Yes	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2017	AL = 15	0	<1	0	Yes	Corrosion of household plumbing systems; Erosion of natural deposits

# **Bacteriological Results (from the distribution system)**

Substance (units)	Year Sampled	MCL	MCLG	Highest Level Detected	Compliance Achieved	Typical Source
Chlorine/Chloramine Residual	2019	MRDL = 4	MRDLG = 4	Range: 0.4 – 3.0 Average: 1.71	Yes	Additive used to control microbes

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# Unregulated Substances (from the distribution system)<sup>8</sup>

	Year		ARWA		VAWC	
Substance (units)	Sampled	Amount Detected	Range of Detected Levels	Amount Detected	Range of Detected Levels	Typical Source
Bromochloroacetic Acid (ppb)	2019	NA	NA	3.1	ND - 3.1	By-product of drinking water disinfection
Bromodichloromethane (ppb)	2019	NA	NA	21	4.6 - 21	By-product of drinking water disinfection
Chlorate (ppm)	2019	NA	NA	0.55	ND - 0.55	By-product of drinking water disinfection
Chloroform (ppb)	2019	NA	NA	51.3	20.2 - 51.3	By-product of drinking water disinfection
Chlorodibromomethane (ppb)	2019	NA	NA	11.1	ND - 11.1	By-product of drinking water disinfection
Dichloroacetic Acid (ppb)	2019	NA	NA	14	2.9 - 14	By-product of drinking water disinfection
Bromide (ppm)	2019	NA	NA	0.07	ND - 0.07	By-product of drinking water disinfection
Trichloroacetic Acid (ppb)	2019	NA	NA	17.9	1.8 - 17.9	By-product of drinking water disinfection

# **Other Unregulated Substances (from the treatment facilities)**

	Year		ARWA		VAWC	
Substance (units)	Sampled	Amount Detected	Range of Detected Levels	Amount Detected	Range of Detected Levels	Typical Source
Calcium (ppm)	2019	NA	NA	10	NA	Naturally occurring
Magnesium (ppm)	2019	NA	NA	3	NA	Naturally occurring
Sodium (ppm)	2019	19	NA	51	16.2 - 51	Sodium occurs naturally in ground water. However, sources such as road salt, water softeners, natural underground salt deposits, pollution from septic systems as well as saltwater intrusion due to proximity to the ocean, are often causes of elevated levels in drinking water supplies.
Giardia (cysts/L) <sup>9</sup>	2017	NA	NA	0.545	ND - 0.545	Organism naturally present in the environment
Cryptosporidium (oocyst/L) 9	2017	0.039	NA	0.091	ND - 0.091	Organism naturally present in the environment
Bromodichloromethane (ppb)	2019	5	NA	NA	NA	By-product of drinking water disinfection
Dibromochloromethane (ppb)	2019	1.1	NA	NA	NA	By-product of drinking water disinfection
Chloroform (ppb)	2019	11	NA	NA	NA	By-product of drinking water disinfection
MTBE (ppb)	2019	<5.0	NA	NA	NA	Leaking underground gasoline storage tanks
Zinc (ppm)	2019	NA	NA	0.150	NA	Water treatment additive
Sulfate (ppm)	2019	21.2	NA	26.7	NA	Erosion of natural deposits and water treatment additive
Chloride (ppm)	2019	NA	NA	12.2	NA	Naturally occurring
Chlorite (ppm)	2019	0.17	0.02 - 0.45	NA	NA	By-product of drinking water disinfection
Total Chlorine (ppm)	2019	3.0	0.2 - 4.10	3.94	1.6 - 3.94	Additive used to control microbes; Values reported for ARWA are from distribution system prior to Ft Lee entry point

Sodium was detected in your water sample. There is presently no established standard for sodium in drinking water. Drinking water does not play a significant role in sodium exposure for most individuals. Those that are under treatment for sodium-sensitive hypertension should consult with their health care provider regarding sodium levels in their drinking water supply and the advisability of using an alternative water source or point of use treatment to reduce the sodium. For individuals on a very low sodium diet (500mg/day), the EPA recommends that drinking water sodium not exceed 20 mg/L. The World Health Organization has established a drinking water guideline of 200 mg/L of sodium on the basis of esthetic considerations (i.e. taste).

# **Unregulated Substances (From the Distribution System and Treatment facility) UCMR 4**

Substance (units)	Year Sampled	Results	Range Low-High	Typical Source
Bromochloroacetic acid (ppb)	2019	3.1	1.0 - 3.1	By-product of drinking water disinfection
Dichloroacetic acid (ppb)	2019	14	2.9 - 14	By-product of drinking water disinfection
Trichloroacetic acid (ppb)	2019	17.9	1.8 - 17.9	By-product of drinking water disinfection
Dibromoacetic acid (ppb)	2019	2.3	ND – 2.3	By-product of drinking water disinfection
Bromodichloroacetic acid (ppb)	2019	1.8	0.54 - 1.8	By-product of drinking water disinfection
Chlorodibromoacetic acid (ppb)	2019	1.6	0.3 - 1.6	By-product of drinking water disinfection
Manganese (ppb)	2019	8.7	1.8 - 8.7	Erosion of naturally occurring deposits
Bromoform (ppb)	2019	2.1	ND - 2.1	By product of drinking water disinfection

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# Unregulated Substances (from the distribution system and treatment facility) UCMR3

Substance (units)	Year Sampled	Amount Detected	Range of Detected Levels	Typical Source
Strontium (ug/L)	2014	43.2	38.3 - 43.2	Soil Runoff
Vanadium (ug/L)	2014	0.5	0.3 - 0.5	Discharge from power plants; erosion of natural deposits
Chromium VI (ug/L)	2014	0.07	0.05 - 0.07	Discharge from steel and pulp mills
Chlorate (ug/L)	2014	470	ND - 470	By Product of disinfection

<sup>1</sup> Year sampled: The state requires monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

<sup>2</sup> Beta/ photon emitters: The MCL for Beta/ photon emitters is written as 4 mrem/year. EPA considers 50 pCi/L as the level of concern for beta emitters.

<sup>3</sup> Total Organic Carbon: The value reported under "Average Amount Detected" is the lowest quarterly running annual average ratio between the percentage of TOC actually removed and the TOC required to be removed. A value of greater than or equal to 1.0 indicates that the water system is in compliance with TOC removal requirements. TOC is covered by a treatment technique (TT).

<sup>4</sup> Turbidity: Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. During the reporting year, a minimum of 99.9% of all samples taken to measure turbidity met water quality standards.

<sup>5</sup>Trihalomethanes: Some people who drink water-containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

<sup>6</sup> Amount detected is the locational running annual average of the 4 Stage 2 compliance sample sites

<sup>7</sup> The range is determined using all compliance sites

<sup>8</sup> Unregulated Substances (from the distribution system) are results from disinfection by-product sampling locations.

<sup>9</sup>. Cryptosporidium and Giardia are conducted on water entering the facility from the Appomattox River.

