Charles City County Virginia

2015 Annual Drinking Water Quality Report

Wayside Area

Introduction

We are pleased to present this year's **Annual Drinking Water Quality Report** *(Consumer Confidence Report)* as required by the **Safe Drinking Water Act (SDWA)**. This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. The quality of your drinking water must meet state and federal requirements administered by the Virginia Department of Health (VDH). This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies.

If you want additional information about any aspect of your drinking water or want to know how to participate in decisions that may affect the quality of your drinking water, please contact *Michael A. Mee, Director of Public Works at 10900 Courthouse Road, Charles City, VA 23030 (804) 652-4730.* The Charles City County Board of Supervisors meets the 4th Tuesday of each month at the Government and School Board Administration Building, 10900 Courthouse Road, Charles City, VA @ 7:30 P.M.

General Information

The sources of drinking water (both tap and bottled) include wells, rivers, lakes, and springs. 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: microbial contaminants, such as viruses and bacteria, that 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 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 can also come from gas stations, urban stormwater runoff, and septic systems; and radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. To ensure that tap water is safe to drink, the US EPA prescribes and the Virginia Department of Health enforces the regulations, which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration and Virginia Department of Agriculture address bottled water.

All drinking water, including bottled drinking 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 may be obtained by calling the *Environmental Protection Agency's Safe Drinking Water Hotline (800) 426-4791.*

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 microbiological contaminants are available from the *Environmental Protection Agency's Safe Drinking Water Hotline (800) 426-4791.*

Additional Information 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. Charles City 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 or at *http://www.epa.gov/safewater/lead*.

Sources and Treatment of your Drinking Water

The source of your drinking water is groundwater from two groundwater wells – one located along Kimages Road and the other along Wayside Road. Sodium hypochlorite provides disinfection prior to the introduction of the water to the water distribution-piping network.

Source Water Assessment and Its Availability

As a first step toward protection of our sources of drinking water, the Virginia Department of Health (VDH) evaluated the susceptibility of Virginia's water supplies to contamination. The Virginia Department of Health conducted a source water assessment of our system during 2002. The Wayside Area wells were determined to be of low 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, an inventory of known land use activities of concern and documentation of any know contamination with the last 5 years from the date of the assessment.

Water Conservation Tips

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature.

- Take short showers - a 5-minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.

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- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit *www.epa.gov/watersense* for more information.

Source Water Protection Tips

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use EPA's Adopt Your Watershed to locate groups in your community, or visit the Watershed Information Network's How to Start a Watershed Team.
- Organize a storm drain-stenciling project with your local government or water supplier. Stencil a message next to the street drain reminding people "Dump No Waste - Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

Definitions

Contaminants in your drinking water are routinely monitored according to Federal and State regulations. The table on the next few pages shows the results of our monitoring for calendar year 2015. In the tables and elsewhere in this report you will find many terms and abbreviations you might not be familiar. The following definitions are provided to help you better understand these terms:

Unit Descriptions	
Term	**Definition**
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)

positive samples/month	positive samples/month: Number of samples taken monthly that were found to be positive
positive samples	positive samples/yr: The number of positive samples taken that year
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.

Important Drinking Water Definitions	
Term	Definition
MCLG	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.
MCL	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.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection 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.
MRDL	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.
MNR	MNR: Monitored Not Regulated

MPL	MPL: State Assigned Maximum Permissible Level

Water Quality Results

In order to ensure that tap water is safe to drink, EPA prescribes regulations, which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one-year-old.

Microbiological Contaminants

Contaminants	MCLG	MCL	No. of Samples Indicating Presence of Bacteria	Violation (Y/N)	No. of Samples in 2015	Typical Source of Contamination	Health Effects
Fecal Indicator –E Coli	NA	TT	0	N	12	Human and animal fecal waste	Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
Total Coliform	0		0	N	12	Naturally present in the environment	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present.

Lead and Copper Contaminants

Contaminants	MCLG	AL	Your Water	Sample Date	No. of Samples Exceeding AL	Exceeds AL	Typical Source of Contamination	Health Effects
Lead – action level at consumer tap (ppb)	0	15	3.4	2014	0	No	Corrosion of household plumbing systems; Erosion of natural deposits	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
Copper –action	1.3	1.3	0.015	2014	0	No	Corrosion of	Copper is an essential nutrient, but some people who drink water

					household plumbing systems; Erosion of natural deposits	containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
level at consumer taps (ppm)						

Other Contaminants

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Low	High	Sample Date	Violation	Typical Source of Contamination	Health Effects
Fluoride (ppm)	4	4	1.73	1.30	2.0	2014	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.
Nitrate	10	10	ND	NA	NA	2014	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Sodium (ppm)	NA	MPL	86	85.9	86	2013	No	Erosion of natural deposits; Leaching	Too much sodium may lead to high blood pressure in some people. It may also lead to a serious buildup of fluid in people with congestive heart failure, cirrhosis of the liver, or kidney disease.

Radioactive Contaminants

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Low	High	Sample Date	Violation	Typical Source of Contamination	Health Effects
Alpha emitters (pCi/L)	0	15	1.2	ND	1.2	2013	No	Erosion of natural deposits	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

Violation Information

No MCL, TT, monitoring or reporting violations occurred during this year.

Contact Information

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