

Buckingham County Water System

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Annual Drinking Water Quality Report 2009

Buckingham County Water System

We are pleased to present to you this year's Annual Quality Water Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. Our water source is a surface water intake.

I am pleased to report that our drinking water is safe and meets all federal and state requirements.

This report shows our water quality and what it means.

If you have any questions about this report or concerning your water utility, please contact **Bruce Smith** at **(434) 983-2853**. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the second Monday of each month at 7:00 p.m. in the Buckingham County Agricultural Center.

Our source water is from the Slate River Watershed. Treatment consists of aeration, chemical addition, flocculation, sedimentation, filtration, fluoridation and disinfection before distribution. A source water assessment of our water system was performed on June 13, 2002 by the Virginia Department of Health. The water source was determined highly susceptible to contamination using the criteria developed by the State in its 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 known contamination within the last 5 years. The report is available by contacting Bruce Smith at 434-983-2853.

The Buckingham County Water System routinely monitors for constituents in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1st, 2009 to December 31st, 2009. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Non-Detects (ND) – laboratory analysis indicates that the constituent is not present.

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) or Micrograms per liter – One part per billion corresponds to one minute in 2,000 years or a single penny in \$10,000,000.

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

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

Maximum Contaminant Level – The “Maximum Allowed” (MCL) 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.

Maximum Contaminant Level Goal – The “Goal”(MCLG) 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.

Maximum Residual Disinfectant Level (MRDL)- The maximum allowable level for chlorine is 4 mg/L.

Picocuries per liter (pCi/L) – Picocuries per liter is a measure of the radioactivity in water.

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

TEST RESULTS						
Contaminant/unit of measurement	Violation Y/N	Level Detected	Sample Date	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants-None Detected (ND)						
Turbidity/NTU 2009	N	Avg=0.08 Range= 0.05 To 0.150	Daily for 2009	NA	TT-5 NTU & TT=95% of samples less than 0.3 NTU	Soil Runoff

Radiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Alpha emitters pCi/L	0	15	0	No	April 2008	Erosion of natural deposits
Beta emitters pCi/L	0	50	0.7	No	April 2008	Decay of natural and man-made deposits
Combined Radium pCi/L	0	5	0.1	No	April 2008	Erosion of natural deposits
Inorganic Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found / Range	Exceedance	Date of Sample	Typical Source of Contamination
Lead ppb	0	AL=15	<2 (90 th percentile) Of the twenty samples collected none exceeded the AL	No	September 2008	Corrosion of household plumbing systems; Erosion of natural deposits
Copper ppm	1.3	AL=1.3	0.142 (90 th percentile) Range: ND to 0.158 Of the twenty samples collected none exceeded the AL.	No	September 2008	Corrosion of household plumbing systems; Erosion of natural deposits
Nitrate Ppm	10	10	<0.05	No	April 2009	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Fluoride ppm	4	4	Avg. 0.96 Range 0.79 to 1.10	No	Monthly 2009	Water additive which promotes strong teeth
Microbiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found / Range	Violation	Date of Sample	Typical Source of Contamination
Total Coliform Bacteria	0	1 positive monthly sample	0	No	Monthly 2009	Naturally present in the environment
Disinfection Byproducts						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found / Range	Violation	Date of Sample	Typical Source of Contamination
HAA5s (Total Haloacetic Acids) ppb	N/A	60	42 Range: 22 to 50	No	Quarterly 2009	By-product of drinking Water disinfection
TTHMs (Total Trihalomethanes) ppb	N/A	80	75 Range: 30 to 127	No	Quarterly 2009	By-product of drinking Water disinfection
Total Organic Carbon ppm	N/A	TT-TOC removal ratio greater than or equal to 1.00	Ave. Ratio: 1.21 Range: 1.02 to 1.53	No	Tested monthly at raw and treated water	Naturally present in the environment

Chlorine Residual in ppm	n/a	MRDL=4 ppm	1.7 Range 1.2 to 2.0	No	Tested several times per day	Chlorine is added to the water to protect our customers from viruses and bacteria that may exist in the reservoir.
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Some of the testing noted in the above table may be from years other than 2009. The state allows monitoring of, for some contaminants, less than once a year because the concentrations of these contaminants do not change frequently. Some of the data, though representative, is more than a year old. In order to insure tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems.

Sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of 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 include microbes 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 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, stormwater runoff and residential uses; organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and can also come from gas stations, stormwater runoff and septic systems; and radioactive contaminants, which can be naturally occurring or be the result of mans activities. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants and potential health effects can be obtained by calling the Environmental Protection Agency’s Safe Drinking Water hotline at 1-800-426-4791.

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 Safe Drinking Water Hotline (1-800-426-4791).

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. Buckingham County Water System 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 and 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 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments. Thank you for understanding.

We at Buckingham County Waterworks work to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life, and our children's future. Please contact our office with any questions.