



Bedford County Public Service Authority

2009 Consumer Confidence Report

Stewartsville Water System

This Annual Drinking Water Quality Report for calendar year 2009 is designed to inform you about your drinking water quality. Our goal is to provide you with a safe and dependable supply of drinking water, and we want you to understand the efforts we make to protect your water supply. The quality of your drinking water must meet state and federal requirements administered by the Virginia Department of Health.

The 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 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 storm water 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 storm water runoff, and residential use;
- Organic contaminants, including synthetic and volatile organic compounds, which are byproducts of industrial processes and petroleum production; these can come from gas stations, urban storm water runoff, and septic systems;
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

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. Food and Drug Administration regulations establish limits

for contaminants in bottled water which must provide the same protection for public health.

The Bedford County Public Service Authority (BCPSA) purchases the water it provides you from the Western Virginia Water Authority (WVWA). The primary source of your drinking water is provided by Falling Creek Reservoir, a surface water source located in Bedford County east of Vinton; it covers 21 acres and stores 85 million gallons of water at full pond. It is fed by Beaver Reservoir that covers 69 acres and stores 435 million gallons of water at full pond. The treatment process is a conventional sand filter, with a capacity of 1.5 million gallons a day. The WVWA can also supply water to the BCPSA for Stewartsville from their Crystal Springs, Carvins Cove, and Spring Hollow water supplies.

Source water assessments (SWA) have been prepared for all of these supplies; they determined that the WVWA's water sources are susceptible to contamination. This designation does not mean that the source water has been impacted or that it will be impacted. It does mean that if there is a release of pollutants in the assessment area, the source water could be impacted. The VDH completed a SWA of Spring Hollow Reservoir's water source, the Roanoke River, and determined that the Roanoke River may be susceptible to contamination because it is surface water exposed to a wide array of contaminants at varying concentrations. Also, changing hydrologic, hydraulic, and atmospheric conditions promote migration of contaminants from land use activities of concern into the Roanoke River. The SWA also determined that the Water Authority's wells might be susceptible to contamination because they are located in areas that promote migration of contaminants from land use activities of concern. More specific information about the SWAs may be obtained by contacting the Western Virginia Water Authority's Water Division at 540-853-5700.

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Visit the website
www.bcpsa.com
 and click on the Water Quality Link for more information pertaining to your service area. If you have any questions about the water quality report please call our Office at: 540-586-7679

Frequently Asked Questions-Consumer Confidence Reports

Q. What is a consumer confidence report (CCR)?

A. The Consumer Confidence Report, or CCR, is an annual water quality report that a community water system is required to provide to its customers. The CCR helps people make informed choices about the water they drink. They let people know what contaminants if any, are in their drinking water, and how these contaminants may affect their health. CCRs also give the system a chance to tell customers what it takes to deliver safe drinking water.

Q. How do renters get water quality information about their drinking water?

A. A community water system must make a good faith effort to reach consumers who do not get water bills, such as renters or workers. An adequate good faith effort would include a mix of methods appropriate to the particular system such as: posting the reports on the Internet; mailing to postal patrons in metropolitan areas; advertising the availability of the report in the news media;

delivery of multiple copies for distribution by single-billed customers such as apartment buildings, nursing homes, schools or large private employers and community organizations.

Q. Why does the current CCR contain results from previous calendar years?

A. Federal regulations require that if a system is allowed to monitor for regulated contaminants less often than once a year, the table must include the date and results of the most recent sampling. Thus, the table in the CCR may reflect the date and result of the last samples taken.

Q. How is the average citizen supposed to interpret or use the data in the CCR or water quality report?

A. The presence of a particular ingredient does not mean that the water is unsafe to drink. However, if something is detected above the maximum level, the PWS must discuss the potential health effects, and actions taken to correct the problem.

Definitions

Contaminants in your drinking water are routinely monitored according to Federal and State regulations. The following table shows the results of our monitoring for the period of January 1st to December 31st 2009. In the table and elsewhere in this report you will find many terms and abbreviations you might not be familiar with. The following definitions are provided to help you better understand these terms:

BDL: Below detection level

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.

pCi/L: picocuries per liter (a measurement of radiation).

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, or MCL: 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, or MCLG: 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.

Treatment Technique or TT: a required process intended to reduce the level of a contaminant in drinking water. We constantly monitor for various contaminants in the water supply to meet all regulatory requirements. The table lists only those contaminants which had some level of detection. Many other contaminants have been analyzed but were not present or were below the detection limits of the lab equipment. Maximum contaminate levels (MCL's) are set at very stringent levels by the Environmental Protection Agency (EPA). In developing the standards, the EPA assumes that the average adult consumes 2 liters of water daily throughout a 70 year lifespan. The EPA

generally sets MCL's 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 contaminate.

Maximum Residual Disinfectant Level Goal or MRDLG: the level of drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefit of the use of disinfectants to control microbial contaminants.

Maximum Residual Disinfectant Level or MRDL: the maximum level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Secondary Maximum Contaminant Level or SMCL: the highest level recommended for a contaminant in drinking water, based on aesthetic consideration.

Nephelometric Turbidity Units (NTU): nephelometric turbidity units is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person

Important Information about Lead and Copper:

Lead (ppb)- Copper (ppm): 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. Bedford County Public Service Authority 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 or at <http://www.epa.gov/safewater/lead>.

2009 Water Quality Data: Stewartsville PWSID #5019795

Contaminant	MCL	Level Found	Violation	Range	Typical Source of
Chlorine (ppm)	4-MDRL	1.2	No	1.1-1.4	Required disinfectant added during treatment process to eliminate bacteria
Fluoride (ppm)	4	0.9	No	0.8 - 1.3	Erosion of natural deposits; Water additive which promotes strong teeth
Total Nitrate and Nitrite (as N)(ppm)	10	ND	No		Runoff from fertilizer use; Leaching from septic tanks, sewage
TTHM (ppb)	80	28	No	1-75	By-product of drinking water chlorination
HAA5 (ppb)	60	22	No	1-45	By-product of drinking water chlorination
pH (pH units)	6.5-8.5	8.2	No	8.0-8.4	Acidity or basicity of water
Turbidity (NTU)	TT		No	0.06-0.3	Soil runoff
Total Coliforms (Present / Absent)	Presence of coliform bacteria in > 5% of monthly samples	0	No	NA	Naturally occurring in the environment
Gross Alpha (pCi/L)	15	0.1	No		Erosion of natural deposits
Gross Beta (pCi/L)	50	1.3	No		Decay of natural and man-made deposits
Radium 226/228 (pCi/L)	5	0.1	No		Erosion of natural deposits
Lead (ppb)	AL = 15	0 samples exceeded AL90th percentile 4	No		Corrosion of household plumbing systems, erosion of natural deposits
Copper (ppm)	AL = 1.3	0 samples exceeded AL90th percentile 0.603	No		Corrosion of household plumbing systems, erosion of natural deposits
Iron (ppm)	0.3	0.02	No		Naturally occurring in the environment
Manganese (ppm)	0.05	0.05	No		Naturally occurring in the environment
Zinc (ppm)	5	0.27	No		Naturally occurring in the environment
Alkalinity (ppm)		17	N/A		Measurement naturally occurring carbonates
Hardness (ppm)		15	N/A		Measurement of naturally occurring hardness metals
Ortho-Phosphate (ppm)		0.9	N/A	0.9-1.0	Corrosion inhibitor added during treatment
Conductivity (umhos/cm)		84	N/A		Physical property of water
Silica (ppm)		17.1	N/A		Naturally present in the environment
Sodium (ppm)		11.5	N/A		Naturally present in the environment
Corrosivity	< 2.0 highly aggressive >0.0 non aggressive	-1.72	N/A		Physical property that occurs when water reacts with metal

The information in this table was provided by the Western Virginia Water Authority (www.wvwa.org) for the Falling Creek Water Treatment Plant. Figures with a range were derived from running annual averages. The Western Virginia Water Authority constantly monitors its water supplies for various contaminants to meet all regulatory requirements. The table lists only those contaminants that had some level of detection. Many other contaminants have been analyzed but were not present or were below the maximum contaminant level. WVWA have tested for volatile organics (VOC's), pesticides, synthetic organic compounds (SOCs) and total organic carbons (TOCs), all of which met with current state and federal standards for drinking water.

2009 Water Quality Data: Stewartsville PWSID #5019795

Constituents (Unit of measure)	Violation	Level Found (range)	AL	MCLG	MCL	Date of Sample	Typical Source of Contamination
The following data was collected by the Bedford County PSA							
Microbiological Contaminants							
Total Coliform Bacteria, (Presence or absence)	No	1 samples (n/a)	—	0	1 positive sample per month	August 2009	Coliforms are naturally present in the environ- ment and are used as an indicator that other potentially harmful bacteria may be present.
Volatile Organic Contaminants							
TTHM (ppb) Trihalomethanes	Yes: 1st, 2nd, and 4th Quarter 2009	87 average (37.4 to 82.5)	—	0	80	Quarterly 2009	By-product of drinking water chlorination disinfection
HAA5 (ppb) Haloacetic Acids	No	34 average (3.3 to 45.3)	—	0	60	Quarterly 2009	By-product of drinking water chlorination disinfection
Inorganic Contaminants							
Lead (ppb)	No	90th percentile value = 6 0 above Action Limit	15	0	—	Sept. 2008	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppb)	No	90th percentile value = 0.109 0 above Action Limit (0.048 to 0.141)	1.3	1.3	—	Sept. 2008	Corrosion of household plumbing systems; erosion of natural deposits
Note: Many other contaminants were analyzed but were not detected.							

Keep Your Family Safe

Some people may be more vulnerable to contaminants in drinking water than the general population. People undergoing chemotherapy or living with HIV/AIDS, transplant patients, children and infants, the frail elderly, and pregnant women and their fetuses can be particularly at risk for infections. These people should seek advice about drinking water from their health care providers. The Environmental Protection Agency (EPA) and the Center for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by microbacterial contaminants are available from the national Safe Drinking Water Hotline at (800)-426-4791.

Many customers wish to know if bottled water is safer than regular tap water. Food and Drug Administration regulations establish limits for contaminants in bottled water that 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. Research repeatedly shows bottled water to be not safer than conventional tap water provided by public water systems in the United States.

More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800)-426-4791 or online at www.EPA.gov/OGWDW. For a survey of bottled water companies, contact the National Resources Defense Council at 212-727-2700, or visit their Web site: <http://www.nrdc.org/>.

For more information about this report...

Thank you for allowing us to continue providing your family with clean, quality water this year. The staff at Bedford County Public Service Authority work diligently to provide the best water quality possible to every tap. Our staff is constantly being trained on new technologies, safety issues, customer service issues and other related items to assist us in achieving our goal of providing the highest quality water and the best customer service possible. We ask that our customers help us to protect our water sources, which are the heart of our community, our way of life and our children's future.

The time and location of regularly scheduled board meetings are the third Tuesday of every month at 7:00 PM in the Bedford County PSA Board Meeting Room located at our offices at 1723 Falling Creek Road in Bedford.

If you have questions about this

report or need any additional information about any aspect of your drinking water or want to participate in decisions that may affect the quality of your drinking water, please contact the **Bedford County Public Service Authority** at (540)-586-7679, listen for the Water Quality prompt, you will then be given site specific locations, once prompted, enter the numeral that represents your area for system information such as violation notices, and frequently asked questions or you may log onto our website www.bcpsa.com and follow the Water Quality Links for specific system information in your area and links to various information sites. Information concerning your area is listed by zip code as well as location.

Any other questions you may have concerning your water quality may be addressed via E-mail at customerservice@bcpsa.com.



Bedford County Public Service Authority
1723 Falling Creek Road
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Visit our Website at www.bcpsa.com for additional information and services that are provided by the BCPSA. Phone: 540-586-7679 customerservice@bcpsa.com

Mission Statement:

As an independent Authority the Bedford County Public Service Authority exists to anticipate the needs of the County for clean, high quality, water and wastewater services. We shall strive to provide these services to the people of Bedford County, when and where economically possible, at rates that are reasonable and just.