

# *Town of Bowling Green's Annual Drinking Water Quality Report*

*PWSID # 6033550*

## **INTRODUCTION**

This Annual Drinking Water Quality Report for the 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 (VDH).

If you have questions about this report, or 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: Mr. William Stanley, Director of Public Works at (804) 633 – 9474. The time and location of regularly scheduled board meetings are the first Thursday of each month at 7:30 p.m. at Bowling Green Town Hall, 117 Butler Street.

## **GENERAL INFORMATION**

The sources of drinking water (both tap and bottled) 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 materials 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 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; Radioactive contaminants, which can be naturally-occurring or be the results 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. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health. Water from surface sources is treated to make it drinkable while groundwater may or may not have any treatment.

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

## **INFORMATION REGARDING LEAD AND COPPER FOR INFORMATIONAL PURPOSES**

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.

The Town of Bowling Green 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 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.com>

## **SOURCE(S) and TREATMENT OF YOUR DRINKING WATER**

The Town of Bowling Green water supply consists of a three drilled well ground water system; a 60,000 gallon elevated storage tank, a 100,000 gallon elevated storage tank, a 200,000 gallon ground storage tank with two booster pumps and a hypochlorination system. The water system uses hypochlorination to disinfect the water prior to the water going out for distribution. In 2009, the chlorine residual at the wells ranged from .21 to 1.96 ppm and in the distribution system it ranged from .21 to 1.96 ppm.

A source water assessment of our system was conducted by the Virginia Department of Health. The wells were determined to be of high susceptibility 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 for review by contacting Bowling Green Public Works, at (804) 633 – 9474, for an appointment.

## **DEFINITIONS**

Contaminants in your drinking water are routinely monitored according to Federal and State regulations. The table on the next few pages shows the most recent results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2009. In the tables 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:

*Non-detects (ND) - lab analysis indicates that the contaminant is not present*

*Parts per million (ppm) - one part per million corresponds to one minute in two years or a single penny in \$10,000.*

*Parts per billion (ppb) - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.*

*Parts per trillion (ppt) - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.*

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

**DEFINITIONS CONTINUED**

*Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity, or cloudiness, of water. Turbidity in excess of 5 NTU is just noticeable to the average person. Turbidity is monitored because it is a good indicator of the effectiveness of our filtration system.*

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

*Treatment Technique (TT) - a required process intended to reduce the level of a contaminant in drinking water.*

*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.*

**WATER QUALITY RESULTS**

We constantly monitor for various contaminants in the water supply to meet all regulatory requirements. The tables list only those contaminants that 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.

**I. Microbiological Contaminants** – We are pleased to report to you that there were no detection’s of total coliform or fecal coliforms in the monthly samples collected during calendar year 2009.

Regulated Contaminant	MCLG	MCL	No. of Samples Indicating Presence of Bacteria	Violation (Y/N)	Sampling Year	Typical Source of Contamination
Total coliform bacteria	0	Presence in more than 1 sample each month.	0	N	2009	Naturally present in the environment.
Fecal coliform bacteria	0	A routine sample and a repeat sample are total coliform positive, and one is also fecal positive.	0	N	2009	Human and animal fecal waste.

## WATER QUALITY RESULTS

### II. Lead and Copper Contaminants

Regulated Contaminant	Units of Measurement	Action level	MCLG	90 <sup>th</sup> Percentile Value	Action Level Exceedance (Y/N)	Sampling Year	# of Sampling Sites Exceeding Action level	Typical Source of Contamination
Lead	ppb	15	0	2	N	2009	0	Corrosion of household plumbing systems.
Copper	ppm	1.3	1.3	0.060	N	2009	0	Corrosion of household plumbing systems.

### III. Regulated Chemical and Radiological Contaminants

Regulated Contaminant	Units of Measurement	MCLG	MCL	Level Detected	Violation (Y/N)	Range of Detection at Sampling Points	Sampling Year	Typical Source of Contamination
Gross Alpha	pCi/l	0	15	14	N	5.84-14.18	2008	Erosion of natural deposits
Combined Radium	pCi/l	0	5	.63	N	0 – .63	2008	Erosion of natural deposits
Uranium	ug/l	0	30	.51	N	0 – .51	2008	Erosion of natural deposits
Fluoride	ppm	4	4	.65	N	0.48 – 0.65	2008	Erosion of natural deposits
TTHMs - Total Trihalomethanes	ppb	n/a	80	1.8-2.5	N	1.8-2.5	2007 2008	By-product of drinking water chlorination
Chlorine	ppm	MRDL = 4	MRDL = 4	1.93	N	.21 – 1.96	2009	Water additive used to control microbes

MRDL = Maximum Residual Disinfectant Level

### IV. Unregulated Chemical Contaminants

Unregulated Contaminant	Units of Measurement	Average Level Detected	Range of Detection at Sampling Points	Sampling Year
Sulfates	ppm	36.5	27.9 – 45.0	2008

### **DATA INFORMATION**

Our water quality data is from testing done in 2009. However, the state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Even though some of our data may be more than one year old, it is accurate.

MCL's are set at very stringent levels by the U.S. Environmental Protection Agency. In developing the standards 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.

### **VIOLATION INFORMATION**

Our water system did not have any violations during the 2009 calendar year.

### **ADDITIONAL INFORMATION**

There may be information concerning our water system that is not in this report that maybe you would think should be. Such as, from time to time you may see black, brown or green stains in your sink or tub. This problem is likely an aesthetic problem versus a health concern. While they may be unsightly, they are not a cause for a health concern. With our water system, the stains are normally caused by the different materials used in the home or building's water pipes.

Another concern that a few customers reported has been a sour or rotten egg smell associated with the water. Some have experienced the smell in the cold water side and some have reported the smell in the hot water side. In most cases on the cold water side, flushing all sinks in the home for a 2 to 5 minute period usually will alleviate the smell and problem. The smell in the hot water side is usually due to the hot water heater not being flushed periodically to remove sediments. If the hot water heater is new it is possible that the new water heater has been installed with a magnesium electrode that is designed to collect deposits. This type of electrode will decay much faster in a public water system due to the hardness, chlorination of the water, and different types of pipes used in the system that the water may pass through. This does not mean that the water heater is no longer serviceable; the magnesium electrode may be removed from the water heater and replaced by several other electrode options available at your local hardware store. The two above mentioned remedies have seemed to help most of the Town of Bowling Green water consumers with alleviating their water issues.

Please contact us if you have any questions concerning your water system.

This Drinking Water Quality Report was prepared by:

Mr. William Stanley

219 Anderson Ave.

Bowling Green, Va. 22427

(804) 633 – 9474

e-mail – [publicworksdirector@townofbowlinggreen.com](mailto:publicworksdirector@townofbowlinggreen.com)