

2008 Annual Water Quality Report




WEST VIRGINIA
AMERICAN WATER



**Bluestone
District**

PWS ID: WV3304513

**This report contains important
information about your drinking water.**

Dear West Virginia American
Water Customer,

You, our customer, are our top priority. We pride ourselves on our ability to deliver clean, reliable, water to you all day, every day, at about a penny per gallon.

Each year, West Virginia American Water publishes a report to better educate you about the source of that water and what is in it. This brochure provides details about the quality of your water throughout the 2008 year.

We are pleased to announce that investment in our water treatment plants and equipment, combined with the dedication of our experienced employees, allows us to deliver drinking water that meets state and federal drinking water requirements. In addition to ensuring that we continue to follow current standards, we work closely with regulators to anticipate future water quality treatment requirements. We promise to remain vigilant in providing the high-quality drinking water that you, our customer, deserve and expect.

We encourage you to review this report either in this printed form or on our website at www.wvawater.com. If you ever have any questions, please don't hesitate to contact our customer service representatives at (800) 685-8660 or (800) 782-2043 TDD for the hearing impaired. Representatives are available 24 hours a day, seven days a week to serve you. After all, you are our first priority.

Thank you for being a West Virginia American Water customer.

Sincerely,

*Wayne Morgan
President, West Virginia American Water*

Commonly Asked Questions

Is there lead in my water?

Although we regularly test lead levels in your drinking water, it is possible that lead and/or copper levels at your home are higher because of materials used in your plumbing. If present, elevated levels of lead can potentially cause health problems, especially for pregnant women and young children. If you are concerned about possible elevated levels, run your faucet for 30 seconds to 2 minutes before using your water; use cold water for cooking, drinking, or making baby formula; use low lead containing faucets; and when replacing or working on pipes, use lead-free solder. West Virginia American Water remains in full compliance with all of the requirements dealing with lead in drinking water. More information is available from the National Lead Information Center (800) 424-5323, Safe Drinking Water Hotline (800) 426-4791 or at <http://www.epa.gov/safewater/lead>.

How hard is my water?

Hardness is a measure of the concentration of two minerals, calcium and magnesium, naturally present in water. Hardness levels range from 50 to 120 ppm, or 3 to 7 grains per gallon of water.

How much sodium is in my water?

The sodium level is approximately 7 ppm (or mg/L).

What is the pH (acidity) range of my water?

Water in the distribution system averages 7.2 pH units. A pH of 7.0 is considered neutral, neither acidic nor alkaline.

Is there fluoride in my water?

West Virginia American Water adds fluoride to a level of near 1 ppm to assist in the prevention of dental cavities.

Where Does My Water Come From?

West Virginia American Water and its customers in the Bluestone system are fortunate because we enjoy an abundant water supply from the Bluestone Reservoir (an impoundment of the New River) which is a surface water source. The current treatment plant provided roughly 946 million gallons of clean drinking water in 2008. To learn more about our watershed on the internet, go to the U.S. EPA's Search Your Watershed at www.epa.gov/owow/.

Partnership for Safe Drinking Water Program

The West Virginia American Water is a member of the national Partnership for Safe Water (an association of water utilities and government) which is committed to providing drinking water quality that is far better than what is required by federal regulation. WVAV's Bluestone treatment facility has completed its self-assessment and has received the prestigious "5 Year Director's Award" presented by the administrator of the US Environmental Protection Agency.

Source Water Assessment Completed

A 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. The intake that supplies drinking water to WVAV's Bluestone Water Treatment Facility has a high susceptibility to contamination, due to the sensitive nature of surface water supplies and the potential contaminant sources identified within the area. This does not mean that this intake will become contaminated; only that conditions are such that the surface water could be impacted by a potential contaminant source. Future contamination may be avoided by implementing protective measures. The report, which included more detailed information, is available for viewing by calling our Water Quality Manager at (800) 685-8660 or by contacting the West Virginia Bureau for Public Health at (304) 558-2981.

Share This Report

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

How Is My Water Treated And Purified?

Current treatment processes include coagulation and settling followed by filtration and disinfection. An inhibitor is added for corrosion control and fluoridation is provided for reduction of dental cavities. Throughout the process dedicated plant operations and water quality staff continuously monitor and control these plant processes to assure you, our customers, a superior quality water.

Information on the Internet

The U.S. EPA Office of Water and the Centers for Disease Control and Prevention websites provide a substantial amount of information on many issues relating to water resources, water conservation and public health. You may visit these sites or West Virginia American Water's website at the web addresses below:

West Virginia American Water

www.wvawater.com

West Virginia Bureau for Public Health

www.wvdhhr.org/oehs

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

Substances Expected to be in Drinking Water

To ensure that tap water is of high quality, U.S. Environmental Protection Agency prescribes regulations limiting the amount of certain substances 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. West Virginia American Water's advanced water treatment processes are designed to reduce any such substances to levels well below any health concern.

The source 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.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

New Regulatory Requirements

Cryptosporidium is a microbial pathogen found in surface water throughout the US. Although Cryptosporidium can be removed through commonly-used filtration methods, US EPA issued a new rule in January 2006 that requires systems with higher Cryptosporidium levels in their source water to provide additional treatment. In compliance with this rule, WVAV's Bluestone Treatment Plant monitored for Cryptosporidium in its raw water in 2005-2007. Based on the results of our Cryptosporidium monitoring, no additional treatment will be required under the new US EPA regulation.

How to Read the Data Tables

For your information, we have compiled a list in the adjacent table showing what substances were detected in our drinking water during 2008. Although all of the substances listed are under the Maximum Contaminant Level (MCL) set by the U.S. EPA, we feel it is important that you know exactly what was detected and how much of the substance was present in the water. Please carefully review this report as it provides important information about drinking water and your health. The company remains committed to providing the highest quality water to our customers. For help with interpreting this table, see the "Table Definitions" section.

Unregulated substances are measured, but maximum allowed contaminant levels have not been established by the government.

Table Definitions and Abbreviations

- **Action Level:** The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that 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. 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
- **NTU - Nephelometric Turbidity Units:** Measurement of the clarity, or turbidity, of water.
- **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.
- **ppb (parts per billion):** One part substance per billion parts water, or micrograms per liter.
- **ng/L (parts per trillion):** One part substance per trillion parts water, or nanograms per liter
- **pH:** A measurement of acidity, 7.0 being neutral.
- **Secondary MCL (Secondary Maximum Contaminant Level):** Contaminants levels that may result in cosmetic or aesthetic effects in drinking water.
- **TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.

Water Quality Statement

This report contains important information about your drinking water. The staff and management of West Virginia American Water are pleased to report that the water provided to you during the past year from our Bluestone water facility met all the state and federal standards set for drinking water.

The state requires a water utility to monitor 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.

Regulated Substances (Measured on the Water Leaving the Treatment Facility)								
Substance (units)	Year Sampled	MCL	MCLG	Amount Detected	Range Low-High	Compliance Achieved	Typical Source	
Alpha emitters (pCi/L)	2002	15	0	0.7	NA	Yes	Radioactive decay of natural deposits	
Barium (ppm)	2008	2	2	0.02	NA	Yes	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	
Chlorine (ppm)	2008	MRDL=4	MRDLG=4	1.6	0.3 - 2.6	Yes	Water additive used to control microbes	
Combined radium (pCi/L)	2002	5	0	0.3	NA	Yes	Radioactive decay of natural deposits	
Fluoride (ppm)	2008	4	4	0.9	0.6 - 1.1	Yes	Water additive which promotes strong teeth	
Haloacetic Acids (HAA5s) (ppb) ¹	2008	60	0	29	12 - 48	Yes	By-product of drinking water chlorination	
Nitrate (ppm)	2008	10	10	0.92	NA	Yes	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	
Total Trihalomethanes (THMs)(ppb) ²	2008	80	0	48	21 - 84	Yes	By-product of drinking water chlorination	
Total Organic Carbon (Removal Ratio) ³	2008	TT	NA	1.30	1.08 - 1.55	Yes	Naturally decaying vegetation	
Turbidity (NTU) ⁴	2008	TT	NA	0.19	0.02 - 0.19	Yes	Soil runoff	
Bacterial Results (from the Distribution System)								
Substance (units)	Year Sampled	MCL	MCLG	Highest Percentage Detected	Compliance Achieved	Typical Source		
Total coliform (% positive samples)	2008	5 % positive samples	0	0	Yes	Bacteria naturally present in the environment		
Unregulated Substances (Measured on the Water Leaving the Treatment Facility)								
Substance (units)	Year Sampled	Secondary MCL	Average Results	Range Low - High	Typical Source			
Sodium (ppm)	2008	NA	7	NA	Element that occurs naturally in water and soil; road salt; water softeners			
Sulfate (ppm)	2008	250	15.8	NA	Mineral that occurs naturally in the soil			
Zinc (ppm)	2008	5	0.24	0.09 - 0.45	Element that occurs naturally in the water; constituent of corrosion control additive			
Tap Water Samples: Lead and Copper Results								
Substance (units)	Year Sampled	Action Level	MCLG	Amount Detected 90th Percentile	Number of Samples	Homes Above Action Level	Compliance Achieved	Typical Source
Copper (ppm)	2007	1.3	1.3	0.16	30	0	Yes	Corrosion of household plumbing
Lead (ppb)	2007	15	0	< 9	30	3	Yes	Corrosion of household plumbing
¹ Based on a yearly running average. Range includes data from special IDSE disinfection by-product sampling done in 2008. ² Based on a yearly running average. 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. Range includes data from special IDSE disinfection by-product sampling done in 2008. ³ The Treatment Technique (TT) is met if the TOC Removal Ratio (based on a four quarter running annual average) is greater or equal to 1.0. ⁴ 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 100 % of all samples taken to measure turbidity met the treatment technique requirements.								

Additional Water Quality Parameters of Interest

This table shows average levels of additional water quality parameters which are often of interest to consumers. Values shown here are averages of operating data for 2008. Values may vary from day to day. There are no health-based limits for these substances in drinking water.

Additional Constituents			
Substance (units)	Year Sampled	Average Amount Detected	Range Low - High
Alkalinity, Total (ppm)	2008	53	34 - 72
Hardness, Total (ppm)	2008	76	50 - 120
pH (standard units)	2008	7.2	7.0 - 7.4

Special Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800) 426-4791 or by calling our Customer Service Center at (800) 685-8660.