

# 2008 Annual Water Quality Report



**Glade Springs  
District**

PWS ID: WV3304111

**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](http://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

### How much sodium is in my water?

The sodium level is approximately 26 ppm (or mg/L).

### Is there fluoride in my water?

Fluoride is added to the water to a level of near 1 ppm to assist in the prevention of dental cavities.

## 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.

## 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 Beckley's Glade Creek 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. To learn more about our watershed on the internet, go to the U.S. EPA's Search Your Watershed at [www.epa.gov/surf2](http://www.epa.gov/surf2).

## Where Does My Water Come From?

The Glade Springs District of West Virginia American Water purchases water for its customers from the Beckley Water Company. Beckley's Glade Creek Plant draws water from the Glade Creek Reservoir, a surface source, which holds about one billion gallons of water. A second source is from an entrapped, subterranean pool located about 275 feet below the surface.

## How Is My Water Treated and Purified?

During 2008, treatment processes at Beckley's Glade Creek Water Treatment Facility included dissolved air flotation followed by filtration and disinfection. An inhibitor is added for corrosion control and fluoridation provided for reduction of dental cavities. Throughout the process dedicated plant operations 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](http://www.wvawater.com)

### West Virginia Bureau for Public Health

[www.wvdhhr.org/oehs](http://www.wvdhhr.org/oehs)

### United States Environmental Protection Agency

[www.epa.gov/safewater](http://www.epa.gov/safewater)

**Safe Drinking Water Hotline:** (800) 426-4791

### Centers for Disease Control and Prevention

[www.cdc.gov](http://www.cdc.gov)

## Lead in Drinking Water

Lead is a naturally occurring element in our environment. Consequently, our water supply is expected to contain small, undetectable amounts of lead. However, most of the lead in household water usually comes from the plumbing in your own home, not from the local water supply. EPA estimates that more than 40 million U.S. residents use water that can contain lead in excess of EPA's Action Level of 15 ppb.

Lead in drinking water is a concern because young children, infants and fetuses appear to be particularly vulnerable to lead poisoning. A dose that would have little effect on an adult can have a big effect on a small body. On average, it is estimated that lead in drinking water contributes between 10 and 20 percent of total lead exposure in young children.

All kinds of water, however, may have high levels of lead. We maintain our drinking water supply at an optimum pH and mineral content level to help prevent corrosion in your home's pipes. To reduce lead levels in your drinking water you should flush your cold-water pipes by running the water until it becomes as cold as it will get (anywhere from 30 seconds to 2 minutes or longer) and use only water from the cold-water tap for drinking, cooking, and especially for making baby formula. Hot water is likely to contain higher levels of lead.

For more information, please contact the National Lead Information Center (800) 424-5323 and the Safe Drinking Water Hotline (800) 426-4791.

## 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
- **ND (Not Detected):** Indicates that the substance was not found by laboratory analysis.
- **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.

## 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, Beckley's Glade Creek Treatment Plant monitored for *Cryptosporidium* in its raw water in 2007 and 2008. Sample results do not show a need to provide additional treatment. Beckley Water Company will continue to monitor the source water in 2009 to confirm these results.

## **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.**

## Water Quality Statement

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 Glade Springs system 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 in WVAW Glade Springs Water System)								
Substance (units)	Year Sampled	MCLG	MCL	Amount Detected	Range Low - High	Compliance Achieved	Typical Source	
Chlorine (ppm)	2008	MRDLG=4	MRDL=4	1.1	0.7 - 1.5	Yes	Water additive used to control microbes.	
Regulated Substances (Measured in Beckley's Water System)								
Substance (units)	Year Sampled	MCLG	MCL	Amount Detected	Range Low - High	Compliance Achieved	Typical Source	
Alpha emitters (pCi/L)	2002	0	15	0.2	NA	Yes	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	
Fluoride (ppm)	2008	4	4	1.04	ND - 1.4	Yes	Water additive which promotes strong teeth	
Haloacetic Acids (HAA5s) (ppb) <sup>1</sup>	2008	0	60	28	20.2 - 61.7	No	By-product of drinking water chlorination	
Nitrate (ppm)	2008	10	10	0.36	NA	Yes	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	
Total Trihalomethanes (TTHMs)(ppb) <sup>2</sup>	2008	0	80	23.1	15.7 - 84.6	Yes	By-product of drinking water chlorination	
Total Organic Carbon (Removal Ratio) <sup>3</sup>	2008	NA	TT	2.0	1.4 - 2.9	Yes	Naturally occurring in the environment	
Turbidity (NTU) <sup>4</sup>	2008	NA	TT	0.77	ND - 0.77	Yes	Soil runoff	
Bacterial Results (from WVAW's Glade Springs 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 Substance (Measured on the Water Leaving Beckley's Glade Creek Water Treatment Facility)								
Substance (units)	Year Sampled	Average Results	Secondary MCL	Range Low - High	Typical Source			
Sodium (ppm) <sup>5</sup>	2008	26.4	NA	NA	Element that occurs naturally in water and soil; road salt; water softeners			
Sulfate (ppm)	2008	7.6	250	NA	Mineral that occurs naturally in the soil			
Lead and Copper Results (From WVAW's Glade Springs Distribution system)								
Substance (units)	Year Sampled	MCLG	Action Level	Amount Detected 90th Percentile	Number of Samples	Homes Above Action Level	Compliance Achieved	Typical Source
Copper (ppm)	2007	1.3	1.3	0.08	10	0	Yes	Corrosion of household plumbing
Lead (ppb)	2007	0	15	2	10	0	Yes	Corrosion of household plumbing
<sup>1</sup> Based on a yearly running average. Range includes data from special IDSE disinfection by-product sampling done in 2008. <sup>2</sup> Based on a yearly running average. Range includes data from special IDSE disinfection by-product sampling done in 2008. 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. <sup>3</sup> The Treatment Technique (TT) is met if the ratio of Actual TOC Removal to the Required TOC Removal is equal to or greater than 1. <sup>4</sup> 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 99.4 % of all samples taken to measure turbidity met the treatment technique requirements. <sup>5</sup> Sodium is an unregulated contaminant. Our sodium level exceeds the guidance MCL of 20 ppm. Anyone concerned about sodium in the water should contact their primary health care provider.								