



2014 Annual

# Water Quality Report

Glade Springs District

PWS ID: WV3304111



WEST VIRGINIA  
AMERICAN WATER

This report contains important information about your drinking water. We encourage you to read and share this annual Water Quality Report that can be viewed electronically at [www.amwater.com/ccr/gladesprings.pdf](http://www.amwater.com/ccr/gladesprings.pdf)

## A Message from the West Virginia American Water President

To Our Valued Customer:



West Virginia American Water is proud to be your local water service provider, and I am pleased to share with you good news about the quality of your drinking water. Each year, we provide you with our annual water quality report. Like so many years prior – you will find that we continue to supply water that meets or surpasses all state and federal water quality regulations.

It is no simple task to move water from rivers and reservoirs through the water treatment process to our distribution lines and tanks, and, finally your home, school or place of work. It requires having the right team of experts and technologies in place, and our scientists, chemists, engineers, operators and maintenance crews are always on the job. Delivering high-quality, reliable water service to your tap around the clock also requires significant investment in our water infrastructure. In 2014 alone, we invested more than \$36.5 million in water system improvements statewide. From upgrading our treatment facilities to replacing more than 18 miles of aging water pipelines, we invested prudently and with purpose. We also invested in new laboratory equipment and online, multi-panel source water quality monitoring devices for early detection of source water contamination to comply with new state requirements. Because we invest our dollars responsibly, we provide our water at about a penny per gallon – an exceptional value for a service that is so essential to our daily lives.

Our regulatory compliance record is a testament to our commitment to water quality and environmental

stewardship. In 2014, there were more than 4,000 health-based or monitoring/reporting drinking water Notices of Violation (NOVs) issued to community drinking water systems in West Virginia. We are extremely proud that West Virginia American Water once again did not receive any drinking water NOVs over the course of the year. Furthermore, just over 400 surface water treatment plants nationally are part of USEPA's Partnership for Safe Water Program, which is a voluntary effort designed to increase protection against microbial contamination through treatment optimization. All nine West Virginia American Water surface water treatment plants participate in this program and are the only plants in West Virginia to receive the program's nationally recognized Director's Awards.

We hope you agree that high quality, reliable water service is worth every penny and worth learning more about. Please take the time to review this report. It provides details about the source and quality of your drinking water using the data from water quality testing conducted for your local water system from January through December 2014. For an electronic copy of this report, visit us online at [www.westvirginiaamwater.com](http://www.westvirginiaamwater.com) and click "Water Quality Reports" under the Water Quality & Stewardship tab.

At West Virginia American Water, our customers are our top priority, and we are committed to providing you with the highest quality drinking water and service possible now and in the years to come.

Sincerely,

Jeffrey L. McIntyre  
President, West Virginia American Water



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**WE CARE ABOUT WATER. IT'S WHAT WE DO.®**

## 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, or the Safe Drinking Water Hotline (800) 426-4791, or at <http://www.epa.gov/safewater/lead>.

### How much sodium is in my water?

The sodium level is approximately 27.2 ppm (or mg/L).

### Is there fluoride in my water?

Fluoride is added to a level of near 0.8 ppm to assist in the prevention of dental cavities.

## Where Does My Water Come From?

The Glade Springs District of WV 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. To learn more about our watershed on the internet, go to the U.S. EPA's Search Your Watershed at [www.epa.gov/owow/](http://www.epa.gov/owow/).

## 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)

## 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?

During 2014, 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 monitors and controls these plant processes to assure the production of water which meets or exceeds all regulatory requirements.

## 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.westvirginiaamwater.com](http://www.westvirginiaamwater.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)

## Additional 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, 2008 and 2009. Based on the results of our *Cryptosporidium* monitoring, no additional treatment will be required under the new US EPA regulation.

## 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.

### 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.

### 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 2014. 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.

### Water Quality Statement

West Virginia American Water, a subsidiary of American Water (NYSE: AWK), is the largest investor-owned water utility in the state, providing high-quality and reliable water services to approximately 560,000 people.

Founded in 1886, American Water is the largest publicly traded U.S. water and wastewater utility company. With headquarters in Voorhees, N.J., the company employs approximately 6,400 dedicated professionals who provide drinking water, wastewater and other related services to an estimated 15 million people in more than 45 states and parts of Canada. More information can be found by visiting [www.amwater.com](http://www.amwater.com).

The staff and management of West Virginia American Water are pleased to report that the water provided to our Glade Springs customers during the past year met all the state and federal standards set for drinking water.





## 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.

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.

## Water Quality Results

### 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)	2014	MRDLG = 4	MRDL = 4	1.0	0.7 – 1.6	Yes	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb) <sup>1</sup>	2014	0	60	38.8	27.3 – 53.6	Yes	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs) (ppb) <sup>2</sup>	2014	0	80	54.8	29.2 – 77.3	Yes	By-product of drinking water chlorination

### Regulated Substances (Measured on Water Leaving Beckley's Glade Creek Water Treatment Plant)

Substance (units)	Year Sampled	MCLG	MCL	Amount Detected	Range Low-High	Compliance Achieved	Typical Source
Alpha emitters (pCi/L)	2013	0	15	0.22	NA	Yes	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Combined Radium	2013	0	5	0.41	NA	Yes	Erosion of natural deposits
Fluoride (ppm)	2014	4	4	0.78	0.54 – 1.04	Yes	Water additive which promotes strong teeth
Barium (ppm)	2014	2	2	0.04	NA	Yes	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Nitrate (ppm)	2014	10	10	0.3	NA	Yes	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Total Organic Carbon (Removal Ratio) <sup>3</sup>	2014	NA	TT	1.7	0.9 – 3.0	Yes	Naturally occurring in the environment
Turbidity (NTU) <sup>4</sup>	2014	NA	TT	0.09	0.03 – 0.09	Yes	Soil runoff



## Bacterial Results (from WVAW's Glade Springs Distribution System)

Substance (units)	Year Sampled	MCL	MCLG	Highest Number Detected	Compliance Achieved	Typical Source
Total coliform (# of Positive samples per calendar month)	2014	≤ 1 Positive sample	0	0	Yes	Bacteria naturally present in the environment

## Unregulated Substance (Measured on the Water Leaving Beckley's Glade Creek Treatment Plant)

Substance (units)	Year Sampled	Average Results	Secondary MCL	Range Low-High	Typical Source
Sodium (ppm) <sup>5</sup>	2014	27.2	NA	NA	Element that occurs naturally in water and soil; Road salt; Water softeners
Sulfate (ppm)	2014	7.1	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 90 <sup>th</sup> Percentile	Number of Samples	Homes Above Action Level	Compliance Achieved	Typical Source
Copper (ppm)	2012	1.3	1.3	0.055	10	0	Yes	Corrosion of household plumbing
Lead (ppb)	2012	0	15	< 1	10	0	Yes	Corrosion of household plumbing

<sup>1</sup>Based on a yearly running average. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer. Amount detected is Running Annual Average of samples taken in the Glade Springs distribution system under Stage II of the Disinfection Byproducts Rule.

<sup>2</sup>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. Amount detected is Running Annual Average of samples taken in the Glade Springs distribution system under Stage II of the Disinfection Byproducts Rule.

<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 at the Glade Creek Treatment Plant of Beckley Water Company, our supplier. During the reporting year, a minimum of 100 % 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.

