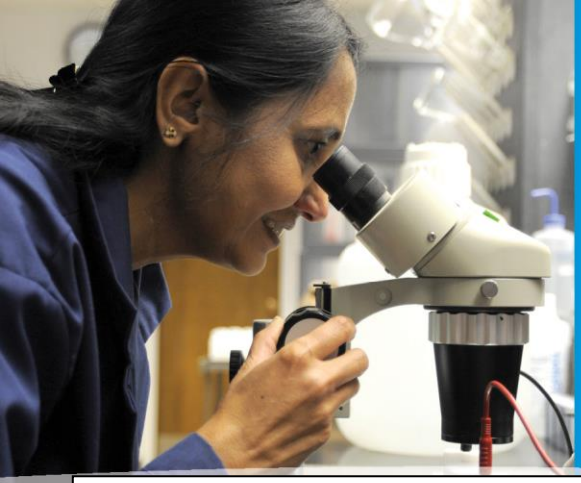


2018 Annual Water Quality Report

Montgomery Heights District
PWS ID: WV3301017

WEST VIRGINIA AMERICAN WATER

We encourage you to read and share this annual Water Quality Report that can be viewed electronically at www.amwater.com/ccr/montgomerybeights.pdf

A Message from the West Virginia American Water President

To Our Valued Customer:

At West Virginia American Water, water is all we think about. We are the providers and protectors of this precious resource, working around the clock to constantly monitor our treatment facilities, maintain miles of pipeline, and perform countless quality tests each year. We do all of this to provide you with safe, clean, reliable and affordable water service to make sure we keep your life flowing.

I am pleased to share with you another excellent report on the quality of your drinking water. As you read through this annual water quality information, you will see that we continue to supply water that meets or surpasses state and federal water quality standards.

Last year, we invested $67 million to upgrade our water treatment and pipeline systems across West Virginia to improve water quality, water pressure and service reliability for our customers. That's an investment of nearly $400 per customer.
These investments included:

- Replacing aging water lines and valves
- Upgrading existing water treatment plant intakes, pumps, filters, chemical feed systems instrumentation and technology
- Constructing new pump stations and tanks
- Ensuring fire protection by upsizing water lines and replacing fire hydrants
- Upgrading water treatment processes to comply with the latest water quality standards
- Enhancing source water monitoring systems to detect contaminants in sources of drinking water

We take water quality so seriously that seven of our eight water treatment plants have been nationally recognized with prestigious Directors Awards from the U.S. EPA's Partnership for Safe Water program for surpassing federal and state drinking water standards. All of our plants that have received this award have maintained it in every subsequent year – some as many as 20 consecutive years – and are the only water treatment plants in West Virginia to do so.

We remain committed to protecting our sources of drinking water and are currently piloting advanced technology that notifies us of raw water quality changes at our treatment facilities. This state-of-the-art program is new to the industry for this type of use. Our Kanawha Valley and Huntington treatment plants are also part of the ORSANCO Organics Detection System monitoring network, providing additional continuous source water monitoring data.

We hope our commitment to you and our passion for water shines through in this report detailing the source and quality of your drinking water over the last year. We will continue to work around the clock to keep your life flowing – today, tomorrow and for future generations.

Proud to be your local water service provider,

Robert Burton
President, West Virginia American Water

AT ABOUT A PENNY PER GALLON WATER IS A GREAT VALUE™

Where Does My Water Come From?

The Montgomery Heights District of West Virginia American Water purchased water for its customers from Armstrong Public Service District (PWSID # WV3301004.) The source of supply for Armstrong PSD was the Kanawha River, which is a surface water source. This report covers this time frame.

To learn more about our watershed on the internet, go to the U.S. EPA's Search Your Watershed at www.epa.gov/surf2

Commonly Asked Questions

Is there lead in my water?
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. West Virginia American Water 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 30 seconds to 2 minutes 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.

How much sodium is in my water?
The sodium level is approximately 5.73 ppm (or mg/L).

Is there fluoride in my water?
Armstrong/Deepwater PSD does not feed fluoride in their drinking water.

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 the Armstrong PSD 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. Armstrong PSD completed their Source Water Protection Plan on September 2015. For more detailed information on this report contact our Water Quality Manager at 800-685-8660 or 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.

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

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

Special Monitoring:

Chromium, a metallic element, is found in rocks, soil, plants, and animals. Chromium is also used in steel making, metal plating, leather tanning, paints, dyes and wood preservatives. The most common forms of chromium in the environment are trivalent (chromium-3), hexavalent (chromium-6) and the metal form, chromium-0. EPA currently regulates chromium-6 as part of the total chromium drinking water standard. New health effects information has become available since the original standard was set, and EPA is reviewing this information to determine whether there are new health risks that need to be addressed. While this review is underway, the EPA suggested that systems begin voluntary monitoring for chromium -6. Additional information can be found at http://water.epa.gov/drink/info/chromium/index.cfm.

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 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 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 storm water 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.

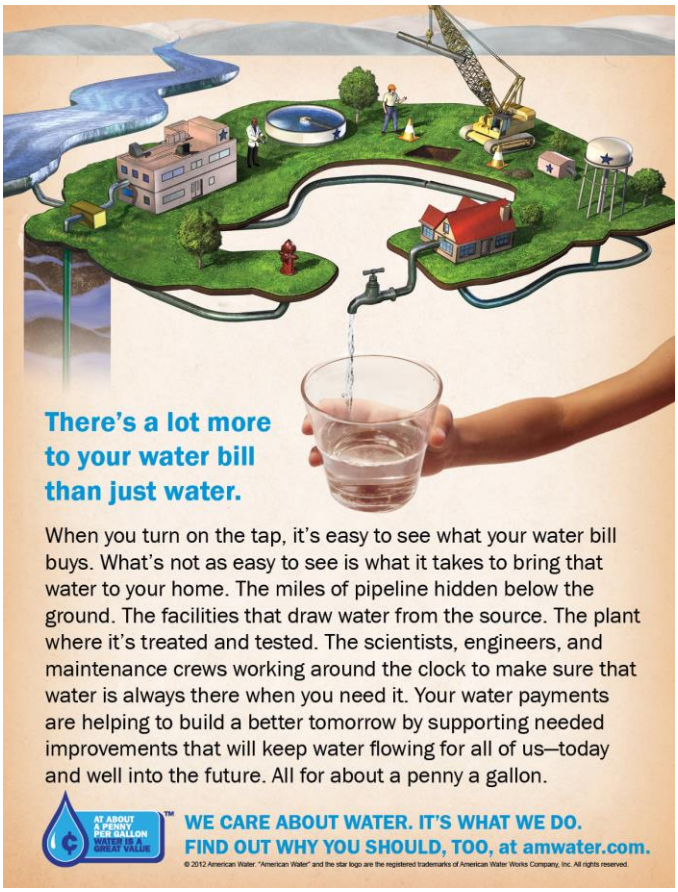
Special Health Information

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 2018. 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.



About American Water

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 530,000 people.

With a history dating back to 1886, American Water is the largest and most geographically diverse U.S. publicly traded water and wastewater utility company. The company employs more than 7,100 dedicated professionals who provide regulated and market-based drinking water, wastewater and other related services to more than 13 million people in 46 states and Ontario, Canada. American Water provides safe, clean, affordable and reliable water services to our customers to make sure we keep their lives flowing. For more information, visit amwater.com and follow American Water on Twitter, Facebook and LinkedIn.

Water Quality Statement

The Montgomery Heights District received Notices of Violations (NOV) from the WV Bureau for Public Health in 2018 for exceeding the maximum contaminant level for Haloacetic Acids (HAA5s), a byproduct of the disinfection process. The highest running annual average for HAA5s in 2018 was 72 ppb, above the maximum contaminant level of 60.0 ppb. Public notification was provided to our customers shortly after the NOVs were received; describing the issue and indicating that it did not pose an immediate health risk. With the assistance of the WV Bureau for Public Health, treatment changes were made at Armstrong/Deepwater PSD and the water they provide to the West Virginia American Water Montgomery Heights District returned to regulatory compliance.

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

Armstrong/Deepwater PSD received 6 Notice of Violations in the 2018 for exceeding the maximum contaminant level for HAA5s and for failure to monitor turbidity. Individual NOVs are listed on the next page.

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 is included, along with the year in which the sample was taken.

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.
- **µg/L:** Micrograms per liter or parts per billion.
- **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 Results

Regulated Substances (Measured on the Water Leaving the Armstrong Treatment Facility unless noted)

Substance (units)	Year Sampled	MCLG	MCL	Amount Detected	Range Low-High	Compliance Achieved	Typical Source
Barium (ppm)	2018	2	2	0.0288	NA	Yes	Discharge of drilling waste; Discharge of from metal refineries; Erosion of natural deposits
Nitrate (ppm)	2018	10	10	0.67	NA	Yes	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrate – Nitrite (ppm)	2016	10	10	0.6	NA	Yes	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Total Organic Carbon (Removal Ratio) [1]	2018	NA	TT	1.88	1.15 – 1.88	Yes	Naturally decaying vegetation
Turbidity (NTU) [2]	2018	NA	TT	0.59	< 0.30	No	Soil runoff

[1] The Treatment Technique (TT) is met if the TOC Removal Ratio (based on a four quarter running annual average) is greater than or equal to 1.0.
[2] Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of filtration. A minimum of 100% of all samples taken to measure turbidity met the treatment technique requirement.

Unregulated Substances (Measured on Water Leaving the Armstrong Treatment Facility)

Substance (units)	Year Sampled	Average Results	Secondary MCL	Range Low—High	Typical Source
Sodium (ppm)	2018	4.36	NA	NA	Element that occurs naturally in water and soil; road salt; water softeners
Sulfate (ppm)	2018	15.1	250	NA	Mineral that occurs naturally in the soil

During the 2018 Calendar year, the water system that we purchase water from had the following violations of drinking water regulations.

Violations Issued to Armstrong PSD (potable water source for the Montgomery Heights system) in 2018.

Water System	Type	Category	Analyte	Compliance Period
Armstrong PSD	MCL, LRAA	MCL	Total Haloacetic Acids (HAA5)	1/1/2018 – 3/31/2018
Armstrong PSD	MCL, LRAA	MCL	Total Haloacetic Acids (HAA5)	4/1/2018 – 6/30/2018
Armstrong PSD	Monitoring, Routine (IESWTR/LT1), Minor	Monitoring	Turbidity	5/1/2018 – 5/31/2018
Armstrong PSD	Monitoring, Routine (IESWTR/LT1), Minor	Monitoring	Turbidity	6/1/2018 – 6/30/2018
Armstrong PSD	Monitoring, Routine (IESWTR/LT1), Minor	Monitoring	Turbidity	7/1/2018 – 7/31/2018
Armstrong PSD	Monitoring, Routine (IESWTR/LT1), Minor	Monitoring	Turbidity	9/1/2018 – 9/30/2018

Regulated Substances for Montgomery Heights Distribution System (as monitored by West Virginia American Water)

Substance (units)	Year Sampled	MCLG	MCL	Amount Detected	Range Low – High	Compliance Achieved	Typical Source
Haloacetic Acids (HAAs) (ppb) [3]	2018	0	60	72	30 – 114.5	Yes	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs)(ppb) [4]	2018	0	80	58	28.1 – 68.8	Yes	By-product of drinking water chlorination
Chlorine (ppm) [5]	2018	4	4	1.3	0.3 – 2.0	Yes	Water additive to control microbes

[3] Based on a yearly running average. Some people who drink water containing Haloacetic Acids 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.
[4] 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.
[5] Data from samples collected in the Montgomery Heights System

Regulated Substances: Lead and Copper Results (Samples Taken from Customer Taps in the Montgomery Heights System as Measured by West Virginia American Water)

Substance (units)	Year Sampled	MCLG		Action Level	Amount Detected 90th Percentile	Number of Samples	Homes Above Action Level	Compliance Achieved	Typical Source
Copper (ppm)	2017	1.3		1.3	0.053	6	0	Yes	Corrosion of household plumbing systems, erosion of natural deposits
Lead (ppb)	2017	0		15	2	6	0	Yes	Corrosion of household plumbing systems, erosion of natural deposits

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. Your water system 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 30 seconds to 2 minutes 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.

Bacterial Results (from the Montgomery Heights Distribution System as measured by West Virginia American Water)

Substance (units)	Year Sampled	MCLG	MCL	Result	Compliance Achieved	Typical Source
Total coliform (% Positive samples)	2018	0	No more than 1 positive monthly samples	In the month of April, 1 sample returned positive	Yes	Bacteria naturally present in the environment

During the 2018 Calendar year, we had the below noted violations of drinking water regulations.

Violations Issued to Montgomery Heights PSD in 2018, based on the quality of water provided by Armstrong PSD to serve the Montgomery Heights System.

Type	Category	Analyte	Compliance Period
MCL, LRAA	MCL	Total Haloacetic Acids (HAA5)	1/1/2018 – 3/31/2018
MCL, LRAA	MCL	Total Haloacetic Acids (HAA5)	4/1/2018 – 6/30/2018
MCL, LRAA	MCL	Total Haloacetic Acids (HAA5)	7/1/2018 – 9/30/2018