



2015 Annual

Water Quality Report

Blue Mountain System

PWS ID: PA3480055



PENNSYLVANIA
AMERICAN WATER

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, ó hable con alguien que lo entienda. (This report contains important information on your drinking water. Have someone translate it for you, or speak with someone who understands it if needed.)

A Message from the Pennsylvania American Water President



To Our Valued Customer:

On behalf of all Pennsylvania American Water employees, I am pleased to share some very good news about the quality of your drinking water. As you read through our Annual Water Quality Report based on testing results between January and December 2015, you will see that we continue to supply water that meets or surpasses all state and federal water quality standards. **Better yet, the price you pay for this high-quality water service remains about one penny per gallon.**

This is an exceptional value when you consider the science, expertise, equipment and technology that go into bringing water from the source and treating it, plus the miles and miles of pipe to deliver clean water to your tap. What's more, our plant operators, water quality experts, engineers and maintenance crews work around the clock to make sure that quality water is always there when you need it.

Delivering reliable, high-quality water service also requires significant investment to maintain and upgrade aging infrastructure. **In 2015 alone, we invested approximately \$270 million in system improvements across the commonwealth.**

Water is essential for public health, fire protection, economic development and our overall quality of life. This is a responsibility that Pennsylvania American Water employees take very seriously to ensure that quality water keeps flowing not only today but well into the future. Please take the time to review this report with its details about the source and quality of your drinking water. We hope you agree that your water service is worth every penny.

Sincerely,

Kathy L. Pape
President, Pennsylvania American Water



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

Our Mark of Excellence

American Water is the largest and most geographically diverse publicly traded U.S. water and wastewater utility company. Marking its 130th anniversary this year, the company employs 6,700 dedicated professionals who provide regulated and market-based drinking water, wastewater and other related services to an estimated 15 million people in 47 states and Ontario, Canada. More information can be found by visiting www.amwater.com.

Pennsylvania 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 and/or wastewater services to approximately 2.3 million people.

We are once again proud to present our annual water quality report. This edition covers all testing completed from January through December 2015. Over the years, we have dedicated ourselves to producing drinking water that meets or surpasses all state and federal drinking water standards. We continually strive to adopt new and better methods of delivering the best quality drinking water to you. As regulations and drinking water standards become more stringent, it is our commitment to you to ensure compliance with these standards in an expeditious and cost-effective manner, while maintaining our objective of providing quality drinking water at an affordable price. We are pleased to tell you that our compliance with all state and federal drinking water laws remains exemplary. To that end, we remain vigilant in meeting the challenges of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

For more information about this report, or for any questions relating to your drinking water, please feel free to call our Customer Service Department at 1-800-565-7292.

Source Water Information

Pennsylvania American Water maintains two surface water treatment facilities for the Blue Mountain area. The Stony Garden Treatment Plant, a 3.2 MGD rated facility, is supplied by the Stony Garden Reservoir and several springs in Hamilton and Ross Townships. The Pen Argyl Treatment Plant, a 0.432 MGD rated facility, is supplied by the Pen Argyl Creek. In addition, the Dietz Well is available as a supplemental groundwater source. The water supply from both surface water treatment facilities and the supplemental groundwater source is distributed for residential, commercial, and industrial use.

Protecting Your Water Source

The Pennsylvania Department of Environmental Protection (DEP) and Pennsylvania American Water Company completed a draft assessment of the drinking water sources for the Blue Mountain surface water and groundwater supplies in 2004. Although no man-made contaminants were detected, the water sources were considered most vulnerable to the following potential impacts: industrial parks, underground petroleum storage tanks, lawn care facilities and quarries. The final public meeting and report were completed in March of 2005.

A summary of the completed Source Water Assessment is available on the DEP website by following the link below. Additional information can also be obtained by calling the local office of the DEP at (570) 826-2511. Pennsylvania American Water Company encourages you to take an active part in protecting your water supply by participating in local watershed activities as they occur in your area.

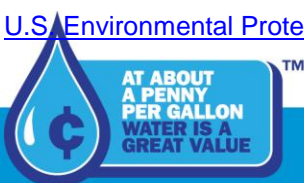
[Blue Mountain Source Water Assessment Link](#)

Other Water Quality Parameters of Interest

Is there lead in your 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. Pennsylvania 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 the following link:

[U.S. Environmental Protection Agency Web Page on Lead](#)



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Does your water contain nitrates?

Pennsylvania American Water Company's normal range of nitrate levels is below the MCL of 10 ppm. Nitrate enters the water supply from fertilizers used on farms and natural erosion of deposits in the watershed. Levels above 10 ppm are a health risk for infants under six months of age and can cause blue baby syndrome. Check with your physician if you have questions.

How hard is your water?

Hardness is a measure of the concentration of two minerals naturally present in water – calcium and magnesium. High hardness levels cause soap not to foam as easily as it would at lower levels and tends to form scale in household plumbing. Hardness levels averaged 22.5 ppm or approximately 1.3 grains per gallon and ranged from 4 ppm to 100 ppm or approximately 0.2 to 5.8 grains per gallon of water. Based on typical averaged hardness levels the water is classified as slightly hard.

How much sodium is in your water?

The sodium level averaged 6.4 ppm and ranged from 6.1 to 6.7 ppm. Although the amount of sodium in drinking water is insignificant compared to the sodium normally consumed in the average diet, it does become a concern to people on low sodium diets recommending less than 20 ppm intake from drinking water. High levels of salt intake may be associated with hypertension in some individuals. To reduce the risks of adverse health effects due to sodium, consult a physician or registered dietitian to plan a healthy diet that reduces the sodium content in your total food intake.

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

Water produced by the treatment facilities averaged 7.2 pH units and ranged from 6.5 to 8.0 pH units. A pH of 7.0 is considered neutral, neither acidic nor basic.

Is there fluoride in your water?

Pennsylvania American Water Company does not add fluoride to your water supply. The naturally occurring fluoride levels are typically at or below 0.1 ppm.

Partnership for Safe Water Program – Treatment



In 2011, the Blue Mountain District's Stony Garden Plant was awarded the prestigious Director's Award – Treatment under the Partnership for Safe Drinking Water Program. The program is administered by the U.S. Environmental Protection Agency, the Pennsylvania Department of Environmental Protection, and other water related organizations. The award honors utilities for achieving operational excellence by voluntarily optimizing their treatment facility operations and adopting more stringent performance goals that those required by federal and state drinking water standards. We are proud to report that the Stony Garden Water Treatment Plant has continuously met the voluntary goals of the program for the past 4 consecutive years.

How to Contact Us

Additional copies of this report can be printed directly from this site www.amwater.com/ccr/bluemountain.pdf. Questions can be presented to our Customer Service Department at 1-800-565-7292. Added information can be gathered by viewing the following links on the Internet:

[Pennsylvania American Water Company Web Page](#)

[Pa. Department of Environmental Protection Web Page](#)

[U.S. Environmental Protection Agency Web Page](#)

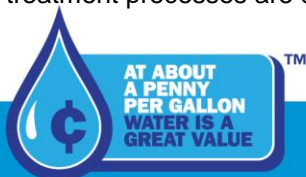
[Center for Disease Control Web Page](#)

[American Water Works Association Web Page](#)

Safe Drinking Water Hotline: 1-800-426-4791

Substances Expected to be in Drinking Water

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. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Pennsylvania American Water's treatment processes are designed to reduce any such substances to levels well below any health concern and the



processes are controlled to provide maximum protection against microbial and viral pathogens which could be naturally present in surface and groundwater.

Drinking water, including bottled 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 about contaminants and potential health effects can be obtained by calling the U.S. Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

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 may 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 microbial contaminants are available from the EPA's Safe Drinking Water Hotline (1-800-426-4791).

The sources of drinking water (both tap water and bottled water) 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 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, and wildlife.

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or 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 can 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.

How to Read This Table

In general, start with a **Substance** and read across the table. **Year Sampled** will be in 2015 or earlier depending on the frequency required by the regulations. **MCL** shows the highest level of each substance (contaminant) allowed. **MCLG** is the goal level for that substance (the goal may be set lower than what is allowed). **Highest Amount Detected** represents the highest measured amount (less is better). In some cases compliance is based on calculated values or values other than the **Highest Amount Detected**. In these instances the **Results** are shown with notations that explain the regulatory requirements. **Range** tells the highest and lowest amounts measured. A **Yes** under **Compliance Achieved** means the amount of the substance met government requirements. **Typical Source** tells where the substance usually originates.

Unregulated substances are measured, but maximum allowed contaminant levels have not been established by the government. These contaminants are shown for your information.

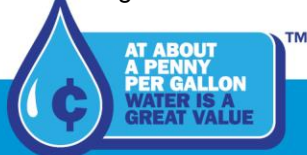
Definitions of Terms Used in This Report

AL (Action Level): The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which 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.

Maximum Residual Disinfectant Level (MRDL): The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.



Maximum Residual Disinfectant Level Goal (MRDLG): 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

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of the water.

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.

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

90th Percentile: The highest concentration of lead or copper in tap water that is exceeded by 10 percent of the sites sampled during a monitoring period. This value is compared to the lead or copper action level (AL) to determine whether an AL has been exceeded.

%: Percent

Water Quality Statement

We are pleased to report that during the past year, the water delivered to your home or business complied with all state and federal drinking water requirements. For your information, we have compiled a list in the table below showing what substances were detected in your drinking water during 2015. The Pennsylvania DEP allows us to monitor for some contaminants less than once per year because the concentration of the contaminants does not change frequently. Some of our data, though representative, are more than one year old. Although all of the substances listed below are under the Maximum Contaminant Levels (MCL) set by the U.S. Environmental Protection Agency and the Pennsylvania DEP, we feel it is important that you know exactly what was detected and how much of each substance was present in the water.

Water Quality Results

Turbidity – A Measure of the Clarity of the Water at the Treatment Facility

Plant	Substance (units)	Year Sampled	MCL	MCLG	Highest Single Measurement	Lowest % of Measurements Meeting TT ^{1 & 2}	Compliance Achieved?	Typical Source
Stony Garden	Turbidity (NTU) ¹	2015	TT	NA	0.17	100	Yes	Soil runoff
Pen Argyl	Turbidity (NTU) ²	2015	TT	NA	0.14	100	Yes	Soil runoff

¹ All turbidity readings were below the Treatment Technique requirements for Stony Garden Plant of not greater than 1 NTU for any single measurement and less than or equal to 0.3 NTU in 95% of all samples taken for compliance on a monthly basis. Treatment Technique requirements for turbidity are based on the type of treatment used at the treatment facility; Stony Garden Plant is classified as "Conventional". Turbidity serves as an indicator of the effectiveness of the filtration process.

² All turbidity readings were below the Treatment Technique requirements for Pen Argyl Plant of not greater than 2 NTU for any single measurement and less than or equal to 1.0 NTU in 95% of all samples taken for compliance on a monthly basis. Treatment Technique requirements for turbidity are based on the type of treatment used at the treatment facility; Pen Argyl Plant is classified as "DE" (diatomaceous earth). Turbidity serves as an indicator of the effectiveness of the filtration process.

Total Organic Carbon (TOC) – A Measure of the Removal of TOC at the Treatment Facility

Plant	Substance (units)	Year Sampled	MCL	MCLG	Lowest Single Removal Efficiency	Range of Removal Efficiencies	Compliance Achieved?	Typical Source
Stony Garden	TOC Removal Efficiency (%) ³	2015	TT	NA	38	38 - 59	Yes	Naturally present in the environment

³ Treatment Technique requirements for TOC removal are related to the removal efficiency. Compliance is based on several criteria and is calculated on the quarterly running annual average of an assigned value determined by the removal efficiency or alternative compliance criteria under certain circumstances. While alternative compliance criteria were



applicable throughout 2015 due to low source and filtered water TOC levels, the average removal efficiency during this period was 45%. The lowest efficiency shown above occurred in April. If alternative criteria were not applicable, the minimum removal efficiency required would have been 35% throughout the year. All efficiencies were above the required level.

Disinfectant Residual – Measured on the Water Leaving the Treatment Facility

Plant	Substance (units)	Year Sampled	MRDL	MRDLG	Lowest Amount Detected	Range Low - High	Compliance Achieved?	Typical Source
Stony Garden	Chlorine Residual (ppm) ⁴	2015	4	4	1.25	1.25 – 2.02	Yes	Added as a disinfectant to the treatment process
Pen Argyl	Chlorine Residual (ppm) ⁴	2015	4	4	0.5	0.5 – 1.73	Yes	Added as a disinfectant to the treatment process

⁴ All chlorine readings were above the Treatment Technique requirement of not less than 0.2 ppm for more than four hours.

Groundwater Disinfectant Residual – Measured on the Water Leaving the Treatment Facility

Facility	Substance (units)	Year Sampled	DEP Approved Minimum Disinfectant Residual	Range of Detections ⁵	Below Required Minimum for More Than 4 Hours	Compliance Achieved?	Typical Source
Dietz Well	Chlorine Residual (ppm) ⁵	2015	0.40	0.55 – 1.5	No	Yes	Water additive used to control microbes

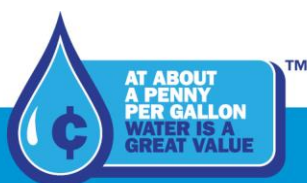
⁵ All chlorine readings were above the Groundwater Rule requirement of not less than the approved minimum disinfectant level of 0.40 ppm for more than four hours.

Regulated Substances – Measured on the Water Leaving the Treatment Facilities

Substance (units)	Year Sampled	MCL	MCLG	Highest Amount Detected	Range Low - High	Compliance Achieved?	Typical Source
Chromium, total (ppb) ⁶	2014 and 2015	100	100	0.6	ND – 0.6	Yes	Discharge from steel and pulp mills; Erosion of natural deposits
Nitrate (ppm)	2014	10	10	0.28	ND – 0.28	Yes	Runoff from fertilizer use; Leaching from septic tanks; Erosion of natural deposits
Xylenes, total (ppm) ⁷	2014 and 2015	10	10	0.0016	ND – 0.0016	Yes	Discharge from petroleum factories; Discharge from chemical factories

⁶ Chromium was monitored during 2014 and 2015 under the Unregulated Contaminants Monitoring Rule 3 (UCMR3) as required in both the water leaving the treatment facilities as well as in the distribution system. The results listed include all samples. The average amount detected from all locations was 0.08 ppb.

⁷ Results represent the most recent available for all locations and include sampling during 2014 and 2015.



Disinfectant Residual – Measured in the Distribution System

Substance (units)	Year Sampled	MRDL	MRDGL	Result	Range Low - High	Compliance Achieved?	Typical Source
Free Chlorine Residual (ppm) ⁸	2015	4	4	1.35	1.12 – 1.45	Yes	Added as a disinfectant in the treatment process

⁸ MRDL (maximum residual disinfectant level) applies and is based on a Running Annual Average calculated quarterly. Routine samples were collected monthly with the results from all locations averaged each month. The monthly average results were then used to calculate a Running Annual Average each quarter. The Result shown represents the highest running annual average calculated quarterly for compliance during the entire year. This occurred during the second quarter of the year; the calculations used to determine compliance include values from 2014. The range represents the range of monthly average results reported for compliance during 2015.

Tap Water Samples: Lead and Copper Results – Measured in the Distribution System

Substance (units)	Year Sampled	Action Level	MCLG	Number of Samples Taken	90 th Percentile	Number of Samples Above the Action Level	Compliance Achieved?	Typical Source
Lead (ppb) ⁹	2013	15	0	30	3	0	Yes	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm) ⁹	2013	1.3	1.3	30	0.394	0	Yes	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

⁹ AL (action level) applies and is based on the 90th percentile value of all samples collected for compliance within the distribution system; 90% of all samples must be equal to or lower than the AL. All sample results were below the established AL for both Lead and Copper.

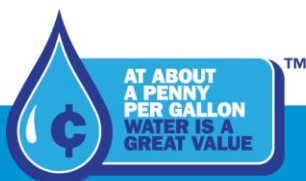
Bacterial Results – Measured in the Distribution System

Substance	Year Sampled	MCL	MCLG	Highest Number of Positive Samples per month	Compliance Achieved?	Typical Source
Total Coliform Bacteria	2015	1 positive sample during the month	Zero bacteria	0	Yes	Naturally present in the environment

Disinfection Byproducts Rule 2 Compounds (Measured in the Distribution System)

Substance (units)	Year Sampled	MCL	MCLG	Result	Range Low - High	Compliance Achieved?	Typical Source
Haloacetic Acids (HAA5) (ppb) ¹⁰	2015	60	NA	27.1	10.7 – 37.6	Yes	By-product of drinking water chlorination
Total Trihalomethanes (TTHM) (ppb) ¹⁰	2015	80	NA	36.5	10.9 – 47	Yes	By-product of drinking water chlorination

¹⁰ MCL (maximum contaminant level) applies and is based on a Locational Running Annual Average (LRAA) calculated quarterly. Under the Disinfection Byproducts Rule 2 (DBPR2) sample sets are collected each quarter and the levels detected at each location are averaged for each location individually on a running annual basis. Compliance is based on the resulting running annual average at each individual location. The Result represents the highest LRAA for all locations during the year; the calculations used to determine compliance through the year include values from 2014. The highest



TTHM and HAA5 LRAA results both occurred during the fourth quarter. The Range represents individual sample results for all locations from all four quarters. The DBPR2 became effective in the fourth quarter of 2013.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER: NOTICE OF UNREGULATED CONTAMINANT MONITORING (UCMR3)

Our water system began monitoring for several unregulated contaminants in the fourth quarter of 2014. Sampling was completed in the third quarter of 2015. Unregulated contaminants are those that do not yet have a drinking water standard set by the EPA. The purpose of monitoring for these contaminants is to help the EPA decide whether the contaminants should be regulated. As our customers, you have a right to know that these data are available. The contaminants detected during the monitoring conducted in 2014 and 2015 are summarized below. If you are interested in examining the results, please contact Charles Motley at (570) 586-6934, Ext. 3.

Unregulated Compounds (Measured on Water Leaving the Treatment Facilities and in the Distribution System) – UCMR3 Monitoring Results

Substance (units) ¹¹	Year Sampled	Average	Range Low - High	Comments
Chlorate (ppb)	2014 and 2015	22	ND – 170	Agricultural defoliant or desiccant; disinfection byproduct; and used in production of chlorine dioxide
Chromium 6 or Hexavalent Chromium (ppb)	2014 and 2015	0.058	ND – 0.15	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Strontium (ppb)	2014 and 2015	70	9.1 – 211.1	Naturally-occurring element; historically, commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions
Vanadium (ppb)	2014 and 2015	0.2	ND – 4	Naturally-occurring element; used in making steel and other high strength metallic alloys; used in axles, bicycle frames, crankshafts, gears, and other critical components requiring high strength and hardness.

¹¹ Substances were monitored under the Unregulated Contaminants Monitoring Rule 3 (UCMR3); Maximum Contaminant Levels (MCL) and Maximum Contaminant Level Goals (MCLG) are not currently established for these substances. Total chromium is currently regulated but was also monitored under the UCMR3 as required. The results for total chromium are summarized in the Regulated Substances table on Page 6.





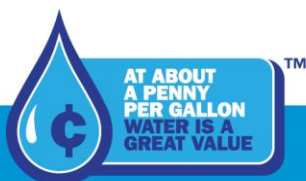
There's a lot more to your water bill than just water.

When you turn on the tap, it's easy to see what your water bill buys. What's not as easy to see is what it takes to bring that water to your home. The miles of pipeline hidden below the ground. The facilities that draw water from the source. The plant where it's treated and tested. The scientists, engineers, and maintenance crews working around the clock to make sure that water is always there when you need it. Your water payments are helping to build a better tomorrow by supporting needed improvements that will keep water flowing for all of us—today and well into the future. All for about a penny a gallon.



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FIND OUT WHY YOU SHOULD, TOO, at amwater.com.

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