



2015 Annual

Water Quality Report

Fernwood
PWSID: PA2450134



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 about your drinking water. Have someone translate it for you if needed.)

A Message from the Pennsylvania American Water President



Dear 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 change, it is our commitment to you to incorporate these changes system-wide 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 need 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 800-565-7292.

Source Water Information

Three groundwater wells supply the Fernwood system's entire service area. The water from each well is pumped to one of the two treatment facilities maintained by Pennsylvania American Water. One of these is a new filtration treatment station brought on-line during October of 2015.

The new Well 9 manganese removal facility has a rated capacity of almost one million gallons of water per day and includes all necessary disinfection and corrosion control chemical treatment, along with the ability to recycle the filter system's backwash and rinse water. The new facility also includes three high rate pressure filters capable of removing the naturally occurring manganese to near non-detect levels.

The Fernwood system as a whole is permitted to produce over 936,000 gallons of water per day. The water supply is distributed for both residential and commercial use.

Protecting Your Water Source

A summary of the completed Source Water Assessment will be made available by Pennsylvania Department of Environmental Protection (DEP) and may be viewed on their website at www.dep.state.pa.us following its release. Additional information can also be obtained by calling the local Swiftwater office of the DEP at (570) 895-4040. Pennsylvania American Water encourages you to take an active part in protecting your water supply by participating in local watershed activities as they occur in your area.

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: <http://www.epa.gov/lead>.

Does your water contain nitrates?

The system's normal range of nitrate levels is well below the MCL of 10 ppm. Nitrate enters the water supply from fertilizers used in the soil 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 primarily 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 may deposit scale on pipes. The hardness levels of the water leaving the treatment facilities ranged from 191 to 295 ppm, or approximately 11 to 17 grains per gallon of water. Based on typical averaged hardness levels the water is classified as very hard water.

How much sodium is in your water?

The sodium levels measured in the water leaving the treatment facilities ranged from 15 to 40 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) of your water?

Water produced by the system's two treatment facilities averaged 7.5 pH units naturally or without chemical adjustment. The pH ranged from 7.1 to 7.9 pH units throughout the year. 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.

How to Contact Us

Additional copies of this report can be printed directly from this site www.amwater.com/ccr/fernwood.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 Web Page](#)

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

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

Safe Drinking Water Hotline: (800) 426-4791

[Center For Disease Control Web Page](#)

[American Water Works Association Web Page](#)

Substances Expected to be in Drinking Water

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations also 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 EPA's Safe Drinking Water Hotline at (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 (800) 426-4791.

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, and 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.

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.

Definition 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.

Entry Point (EP): A point at which finished water representative of each source enters the distribution system.

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 a 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 a 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.

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 and copper action level (AL) to determine whether an AL has been exceeded.

NA: Not applicable

ND: Not detected

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.



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, is 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. In addition, the Fernwood system was selected in 2015 by the U.S. Environmental Protection Agency (EPA) as part of the random small system screening for UCMR3 (Unregulated Contaminant Monitoring Rule) monitoring. Source water and distribution system samples were collected in the first and third quarters of 2015 and analyzed through a contracted laboratory in upstate New York. The samples were not received by Pennsylvania American Water prior to the construction of this report therefore they are not included. The information should be made available by EPA in the near future.

Water Quality Results

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
Nitrate (ppm)	2015	10	10	1.2	0.01 – 1.2	Yes	Runoff from fertilizer use; Leaching from septic tanks; Erosion of natural deposits
Strontium (ppm)	2015	NA	NA	0.3	0.2 – 0.3	NA	Erosion of natural deposits; Unregulated contaminants are those that don't yet have a drinking water standard by USEPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard.

Disinfectant Residual (Measured on the Water Leaving the Treatment Facilities)

Treatment Facility (Entry Point)	Substance (units)	Year Sampled	Approved Minimum Disinfectant Residual	Range of Detections ¹	Below Required Minimum for More Than 4 Hours ¹	Compliance Achieved	Typical Source
Wells 3&6 Combined Treatment Station (EP103)	Entry Point Chlorine Residual (ppm)	2015	0.40	0.94 – 2.2	No	Yes	Water additive used to control microbes
Well 9 Treatment Station (EP109)	Entry Point Chlorine Residual (ppm)	2015	0.40	0.20 – 2.3	No	Yes	Water additive used to control microbes

¹ All chlorine readings were above the Groundwater Rule requirement of not less than the approved minimum disinfectant residual level for more than four hours.



Bacteriological Results (Measured on the Water in the Distribution System)

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

Regulated Compounds (Measured on the Water in the Distribution System)

Substance (units)	Year Sampled	MCL	MCLG	Result	Range Low - High	Compliance Achieved	Typical Source
Haloacetic Acids (HAA) (ppb) ²	2015	60	NA	5	ND – 5	Yes	By-product of drinking water chlorination
Total Trihalomethanes (TTHM) (ppb) ²	2015	80	NA	16	1 – 16	Yes	By-product of drinking water chlorination

² A single set of samples (HAA and TTHM) was collected from each of two distribution system locations during the third quarter of 2015 with the results column representing the highest amount detected from the two locations sampled. The range represents the results at individual sample locations. Compliance is based on the results for each substance at each location.

Disinfectant Residuals (Measured on the Water in the Distribution System)

Substance (units)	Year Sampled	MCL	MRDL	Results	Range Low - High	Compliance Achieved	Typical Source
Distribution Free Chlorine Residual (ppm) ³	2015	NA	4	1.5	0.2 – 1.5	Yes	Added as a disinfectant in the treatment process

³ MRDL (Maximum Residual Disinfectant Level) applies. Routine samples were collected and analyzed on a monthly basis at locations throughout the distribution system. An average was then obtained from all cumulative sampling results for each month. The Results column lists the highest monthly average calculated for 2015. The Range column represents the range of monthly average results reported for compliance during the entire year.

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

Substance (units)	Year Sampled	Action Level	MCLG	Number of Samples Taken	90th Percentile	Number of Samples Above Action Level	Compliance Achieved	Typical Source
Lead (ppb) ⁴	2013	15	0	10	0	0	Yes	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm) ⁴	2013	1.3	1.3	10	1.0	1	Yes	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

⁴ 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.





**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.



**WE CARE ABOUT WATER. IT'S WHAT WE DO.
FIND OUT WHY YOU SHOULD, TOO, at amwater.com.**

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