2015 Annual

Water Quality Report

Ceasetown
PWS ID: PA2409002

Watres
PWS ID: PA2409011

PENNSYLVANIA AMERICAN WATER

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo tradúzca para usted, ó hable con alguien que loentienda. (This report contains important information about your drinking water. Have someone translate it 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.

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 system between January and December 2015.

Sincerely,

Kathy L. Pape
President, Pennsylvania American Water

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

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

Two main surface sources supply water to your area: the Ceasetown Reservoir and the Watres Reservoir. Pennsylvania American Water (PAW) maintains a treatment facility on the Ceasetown Reservoir capable of processing a maximum of 16 million gallons of water per day (MGD) and a treatment facility on the Watres Reservoir capable of processing a maximum of 16 million gallons of water per day (MGD). Depending on your location within the distribution system, you may be receiving water solely from either the Ceasetown or Watres facility, or a combination of both. The water supply is distributed for residential, commercial, and industrial use.

Protecting Your Water Source

The Pennsylvania Department of Environmental Protection (DEP) and PAW completed an assessment of the drinking water sources for the Watres and Ceasetown surface water supplies in 2002. Although no man-made contaminants were detected, the water sources were considered most vulnerable to the following potential impacts: roadways, manufacturing plants, quarry activity, boating, storm water runoff associated with auto repair shops, truck and bus terminals, farm and animal feed lots, and active timbering sites. An assessment of the Mill Creek and Gardner Creek reservoirs, which are supplemental sources to Watres reservoir, was completed in 2009. Although no man-made contaminants were detected, the water sources were considered most vulnerable to the following potential impacts: underground petroleum storage tank, utility substation, fuel oil storage tanks, household cleaning supplies, highway spills, highway salt applications, lawn care supplies, on-lot sewage disposal, petroleum pipelines, swimming pools, wells, and boreholes.

A summary of the completed Source Water Assessments is available from the DEP and may be viewed on their website by following the links at the bottom of this paragraph. Additional information can also be obtained by calling the local office of the DEP at (570) 826-2511. PAW encourages you to take an active part in protecting your water supply by participating in local watershed activities as they occur in your area.

Ceasetown Source Water Assessment Program

Watres Source Water Assessment Program

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: U.S. Environmental Protection Agency Web Page on Lead

Does your water contain nitrates?

PAW'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 in 2015 ranged from 20 ppm to 70 ppm, or 1.2 to 4.1 grains per gallon of water. The water is classified as slightly hard to moderately hard.

How much sodium is in your water?

The sodium level is approximately 11 ppm in the Ceasetown distribution system and approximately 13 ppm in the Watres distribution system.

What is the pH range of your water?

Water produced by the Ceasetown treatment facility in 2015 averaged 7.2 pH units and the Watres treatment facility averaged 7.3 pH units. A pH of 7.0 is considered neutral, neither acidic nor basic.

Is there fluoride in your water?

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

Partnership for Safe Drinking Water Program

In 2000, the Ceasetown and Watres systems were 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 than those required by federal and state drinking water standards. We are proud to report that the Ceasetown and Watres systems have met the voluntary goals of the program for 15 continuous years.

How to Contact Us

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

Pennsylvania American Water Web Page

Pa. Department of Environmental Protection Web Page

U.S. Environmental Protection Agency Web Page

Center for Disease Control and Prevention 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, 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 (FDA) 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 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 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 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.

Cryptosporidium

Cryptosporidium is a microbial pathogen found in surface water throughout the US. Although *Cryptosporidium* can be removed through commonly used filtration methods, the US EPA issued a new rule in January 2006 that requires systems with higher *Cryptosporidium* levels in their source water to provide additional treatment. Ceasetown and its supplemental source Harvey's Creek; and Watres, along with its supplemental sources of Mill and Gardner Creek reservoirs, monitored for *Cryptosporidium* in 2015. Based on the results of our *Cryptosporidium* monitoring, no additional treatment will be required by this US EPA regulation. We will continue to monitor the source water in 2016 and 2017 to confirm these results.

How to Read This Table

Start with a **Substance** and read across. **Year Sampled** is usually in 2015 or year prior. **MCL** shows the highest level of each substance (contaminant) allowed. **MCLG** is the goal level for that substance (goal may be set lower than what is allowed). **Highest Amount Detected** represents the measured amount (lower 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** shows 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.

EP (Entry Point): 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.

MRDL (Maximum Residual Disinfectant Level): 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.

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

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

pCi/L (picocuries per liter): Measurement of the natural rate of disintegration of radioactive contaminants in 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 (µg/L).

SS: Single sample

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

%: means percent.

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.

<: means less than.

≤: means less than or equal to.

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. EPA 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 Facilities

Substance (units)	Year Sampled	MCLG	MCL	Highest Single Measurement or Lowest Monthly % of Samples ≤ 0.3 NTU	Compliance Achieved	Typical Source
Turbidity (NTU) [1]	2015	NA	TT = 1 NTU for a single measurement	0.08 (Highest Reading) (Ceasetown)	Yes	Soil runoff
				0.06 (Highest Reading) (Watres)		
		NA	TT = at least 95% of monthly samples ≤ 0.3 NTU	100% (Ceasetown)	Yes	Soil runoff
				100% (Watres)		

[1] All turbidity readings were below the treatment technique requirement of 0.3 NTU in 95% of all samples taken for compliance on a monthly basis. Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration process.

Entry Point Disinfectant - Measured on the Water Leaving the Treatment Facilities

Substance (units)	Year Sampled	Minimum Disinfectant Residual Level Required	Lowest Amount Detected	Range Low - High	Compliance Achieved	Typical Source
Entry Point Chlorine (ppm) [2]	2015	0.2	1.7 (Ceasetown)	1.7 - 2.5 (Ceasetown)	Yes	Water additive used to control microbes.
			1.5 (Watres)	1.5 – 3.1 (Watres)		

[2] All chlorine readings were above the treatment technique requirement of not less than 0.2 ppm for more than 4 hours on water being supplied to the distribution system.

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

Substance (units)	Year Sampled	MCLG	MCL	Range of Removal Required (%)	Range of Removal Achieved (%)	Number of Quarters Out of Compliance	Compliance Achieved	Typical Source
TOC Removal Efficiency (%) [3]	2015	NA	TT	35	46 - 57 (Ceasetown)	0 (Ceasetown)	Yes	Naturally present in the environment
				35	39 - 50 (Watres)	0 (Watres)		

[3]Adequate removal of TOC may be necessary to control the unwanted formation of chlorinated by-products. Naturally occurring organic matter present in the source water can react with disinfectants used at the treatment plant to form these by-products. The Ceasetown and Watres systems met the required treatment technique for TOC reductions during 2015.

Bacterial Results (from the Distribution Systems)

Substance	Year Sampled	MCLG	MCL	Highest Percentage Detected	Compliance Achieved	Typical Source
Total Coliform Bacteria	2015	Zero bacteria	No more than 5% of the monthly samples can be positive.	0 % (Ceasetown)	Yes	Naturally present in the environment
				0 % (Watres)		

Regulated Substances - Measured on the Water Leaving the Treatment Facilities

Substance (units)	Year Sampled	MCLG	MCL	Highest Amount Detected	Range Low – High	Compliance Achieved	Typical Source
Nitrate as Nitrogen (ppm)	2015	10	10	0.26 (Ceasetown) 0.21 (Watres)	SS	Yes	Runoff from fertilizer use; Leaching from septic tanks; Sewage; Erosion of natural deposits
Chromium, total (ppb) [4]	2015	100	100	0.3 (Ceasetown)	0.2 – 0.3	Yes	Discharge from steel and pulp mills; Erosion of natural deposits

[4] Total chromium was monitored for Ceasetown for 1 quarter 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 0.3 ppb for Ceasetown.

Disinfectant Residual - Measured in the Distribution System

Substance (units)	Year Sampled	MRDLG	MRDL	Highest Monthly Average Detected	Range Low - High	Compliance Achieved	Typical Source
Distribution Chlorine (ppm)[5]	2015	4	4	1.5 (Ceasetown) 1.7 (Watres)	0.8 - 1.7 (Ceasetown) 1.1 - 1.7 (Watres)	Yes	Added as a disinfectant to the treatment process

[5] Routine individual samples were collected monthly with the results from all locations averaged each month. The monthly averages were then used to calculate a running annual average computed each quarter. The result represents the highest running annual average computed quarterly for the year. The range represents the range of monthly average results reported for compliance during the entire year.

Tap Water Samples: Lead and Copper Results

Substance (units)	Year Sampled	Action Level	MCLG	Number of Samples	90th Percentile	Number of Samples Above Action Level	Compliance Achieved	Typical Source
Lead (ppb)	2013	15	0	30 (Ceasetown) 30 (Watres)	<1 (Ceasetown) <1 (Watres)	0 (Ceasetown) 0 (Watres)	Yes	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	2013	1.3	1.3	30 (Ceasetown) 30 (Watres)	0.09 (Ceasetown) 0.41 (Watres)	0 (Ceasetown) 0 (Watres)	Yes	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

Regulated Compounds (Measured in the Distribution System)

Substance (units)	Year Sampled	MCLG	MCL	Results	Range Low - High	Compliance Achieved	Typical Source
Total Trihalomethanes (TTHM) (ppb) [6]	2015	NA	80	54 (Ceasetown)	12 - 86 (Ceasetown)	NA	By-product of drinking water chlorination
				48 (Watres)	10 - 69 (Watres)		
Haloacetic Acids (HAA5) (ppb) [6]	2015	NA	60	38 (Ceasetown)	11 - 67 (Ceasetown)	NA	By-product of drinking water chlorination
				38 (Watres)	9 - 64 (Watres)		

[6] 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 Range represents the results at individual sample results for all locations from all four quarters.

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

Our Watres and Ceasetown water systems have completed all 4 quarters monitoring for several unregulated contaminants. Watres' first quarter monitoring started June 2013 with final quarter monitoring completed March 2014 and Ceasetown 1st quarter monitoring started April 2014 with final quarter monitoring completed January 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 in 2015 [8] are summarized below. If you are interested in examining the results, please contact Nancy Donahue at (570) 674-0525 X3.

Unregulated Compounds (Measured on Water Leaving the Treatment Facilities and in the Distribution System)

Substance (units) [7]	Year Sampled	Average	Range Low - High	Comments
Chromium 6 or Hexavalent Chromium (ppb)	2015 [8]	0.04 (Ceasetown)	0.03 – 0.05 (Ceasetown)	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
	2014 [8]	0.13 (Watres)	0.05 – 0.20 (Watres)	
Strontium (ppb)	2015 [8]	40.7 (Ceasetown)	39.0 – 42.4 (Ceasetown)	Naturally-occurring element; historically, commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions
	2014 [8]	28.4 (Watres)	25.0 – 31.7 (Watres)	

[7] 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 7.

[8] Ceasetown's results are for the final fourth quarter monitoring completed January 2015 and Watres' results are from the final fourth quarter monitoring completed March 2014.

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.

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

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