



2017 WATER QUALITY REPORT

Ceasetown

Public Water Supply ID# PA2409002

Watres

Public Water Supply ID# PA2409011



Este informe contiene información importante acerca de su agua potable. Haga que 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 report very good news about the quality of your drinking water. This annual Water Quality Report provides the results of local water testing between January and December 2017, and as you will see, we continue to supply your community with water that meets or surpasses all regulatory standards.

Water service from Pennsylvania American Water is an exceptional value. To deliver quality water to your tap, we employ a great deal of science, expertise, technology and infrastructure to bring water from the source, treat it and ensure it is clean and safe. In addition, our plant operators, water quality experts, engineers and maintenance crews work around the clock to make sure reliable water service is always there when you need it.

Delivering high-quality water service also requires significant investment to replace and upgrade aging pipe, equipment and facilities. **In 2017 alone, we invested nearly \$300 million in system improvements across the Commonwealth.**

Water is essential for public health, fire protection, economic development and our overall quality of life. Every Pennsylvania American Water employee takes this responsibility very seriously and works hard to keep water flowing not only today but for the next generation. Please take the time to read this report and learn more about the source and quality of your drinking water.



Sincerely,

Jeffrey L. McIntyre
President, Pennsylvania American Water



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Our Mark of Excellence

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 6,900 dedicated professionals who provide regulated and market-based drinking water, wastewater and other related services to an estimated 15 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](#).

Pennsylvania American Water, a subsidiary of American Water, is the largest investor-owned water utility in the state, providing high-quality and reliable water and/or wastewater services to approximately 2.4 million people.

We are once again proud to present our annual water quality report. This edition covers all testing completed from January through December 2017. 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 (PAW) maintains two main surface water treatment facilities that supply water to your area: the Ceasetown Water Treatment Plant (WTP) and the Watres WTP. The Ceasetown WTP, a 16 million gallons per day (MGD) rated facility, is supplied by the surface water Ceasetown Reservoir and Harvey's Creek, a supplemental surface water source. The Watres WTP, a 16 MGD rated facility, is supplied by the surface water Watres Reservoir and two supplemental surface water sources, Mill Creek Reservoir and Gardner Creek Reservoir. 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](#)



Cryptosporidium (Measured on Raw Source Water Prior to Treatment) – Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) Round 2 Cryptosporidium Monitoring Results

Starting in 2016 and ending September 2017, monthly cryptosporidium monitoring was conducted on the raw source water for the Ceasetown Water Treatment Plant (WTP) and Watres WTP. In monthly samples, Rice Dam via Harvey's Creek, which is an emergency reserve source for the Ceasetown Plant and was not used in 2016 and 2017, had an average concentration of *cryptosporidium* of 0.049 oocyst/L. The range of results from all samples collected was ND through 0.455 spores/L. Rice Dam via Harvey's Creek follows into Bin 2 classification, which means if the source is brought on-line, additional treatment will be required. There were no detections in Watres supplemental surface water surface, Gardner Creek, for *cryptosporidium*. There was one monthly sample that had a detection in the Ceasetown Reservoir and one monthly sample in the Watres/Mill Creek Reservoirs. The concentration of those results was 0.91 oocysts/L (Ceasetown) and 0.091 oocysts/L (Watres/Mill Creek). As a result of this monitoring, no additional treatment is required for Ceasetown Reservoir, Watres Reservoir, Mill Creek Reservoir or Gardner Creek Reservoir.

In 2016, monitoring for *Cryptosporidium*, a microbial parasite commonly found in surface water, was conducted as part of the Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR). Current test methods are not able to determine if the organisms detected are dead or if they are capable of causing disease. No individual point sources of *Cryptosporidium* have been identified in the watershed. Typical sources would be fecal material from wildlife such as deer, other mammals, and warm blooded animals that are present in the watershed. *Cryptosporidium* must be ingested for it to cause disease, and may be transmitted through means other than drinking water. Symptoms of infection include nausea, diarrhea, and abdominal cramps. These symptoms can also be the result of different food related organisms, flu or ingesting untreated water such as while swimming in lakes or reservoirs. Most healthy individuals are able to overcome the disease within a few weeks. However, some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people living with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk. These people should seek advice 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 Safe Drinking Water Hotline (1-800-426-4791).

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 well below the MCL of 10 ppm. Nitrates enter 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 may cause spotting on glassware. The hardness of the water presents no health issues. Hardness levels in 2017 ranged from 16 ppm to 66 ppm, or approximately 0.9 to 3.9 grain per gallon of water. Based on typical averaged hardness levels, the water is classified as slightly hard to moderately hard.



How much sodium is in your water?

The sodium level is approximately 9 ppm in both Ceasetown and Watres distribution systems

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

Water produced by both Ceasetown and Watres treatment facilities in 2017 averaged 7.3 pH units. A pH of 7.0 is considered neutral, neither acidic nor basic.

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 17 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 links on the Internet:

[Pennsylvania American Water Web Page](#)

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

[United States Environmental Protection Agency Web Page](#)

Safe Drinking Water Hotline: (800) 426-4791

[Center for Disease Control and Prevention 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, EPA prescribes regulations which limit the amount of certain contaminants 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. 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 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.



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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

Starting with a **Substance**, read across. **Year Sampled** is usually in 2017 or year prior. **MCL** shows the highest level of 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 (less is better). **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.

Non-regulated 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 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 (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.

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

<: means less than.



Water Quality Statement

We are pleased to report that during calendar year 2017, 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 2017. 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

Substance (units)	Year Sampled	MCLG	MCL	Highest Single Measurement or Lowest Monthly % of Samples ≤ 0.3 NTU	Compliance Achieved	Typical Source
Turbidity (NTU) ¹	2017	NA	TT = 1 NTU for a single measurement	0.09 (Highest Reading) (Ceasetown)	Yes	Soil runoff
				0.09 (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.

Total Organic Carbon (TOC) Removal - Measured on the Water Leaving the Treatment Facility

Substance (units)	Year Sampled	MCL (TT)	Range of Removal Required (%)	Range of Removal Achieved (%)	Number of Quarters Out of Compliance	Compliance Achieved	Typical Source
TOC Removal Efficiency (%) ²	2017	Meet EPA Removal Requirements	35 (Ceasetown)	43 - 56 (Ceasetown)	0 (Ceasetown)	Yes	Naturally present in the environment
			35 (Watres)	49 - 57 (Watres)	0 (Watres)		

² 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 the disinfectants used at the treatment facility to form these by-products. There are several compliance criteria that can be used to meet this requirement. Both Ceasetown and Watres treatment facilities met the treatment technique for TOC removal in 2017.

Entry Point Disinfectant Residual - Measured on the Water Leaving the Treatment Facility

Substance (units)	Year Sampled	Minimum Disinfectant Residual Required By DEP	Lowest Level Detected	Range Low - High	Compliance Achieved	Typical Source
Entry Point Chlorine (ppm)	2017	0.2	1.4 (Ceasetown)	1.4 – 2.6 (Ceasetown)	Yes	Water additive used to control microbes
			1.2 (Watres)	1.2 – 3.1 (Watres)		



Regulated Substances - Measured on the Water Leaving the Treatment Facility

Substance (units)	Year Sampled	MCL	MCLG	Highest Amount Detected	Range Low - High	Compliance Achieved	Typical Source
Nitrate (ppm)	2017	10	10	0.22 (Ceasetown)	SS	Yes	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
				0.19 (Watres)			
Chromium, total (ppb) ³	2015	100	100	0.3 (Ceasetown)	0.2 – 0.3 (Ceasetown)	Yes	Discharge from steel and pulp mills; Erosion of natural deposits

³ Total chromium was monitored for Ceasetown for first 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 on the Water in the Distribution System

Substance (units)	Year Sampled	MRDL	MRDLG	Highest Amount Detected ⁵	Range Low - High	Compliance Achieved	Typical Source
Distribution Chlorine (ppm) ⁴	2017	4	4	1.6 (Ceasetown)	1.1 – 1.6 (Ceasetown)	Yes	Water additive used to control microbes
				1.9 (Watres)	1.3 – 1.9 (Watres)		

⁴ MRDL (maximum residual disinfectant level) applies. Routine samples were collected monthly with the results from all locations averaged each month.

⁵ Highest monthly average for individual sample points

Tap Water Samples: Lead and Copper Results - Measured on the Water 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)	2016	15	0	30 (Ceasetown)	1 (Ceasetown)	0 (Ceasetown)	Yes	Corrosion of household plumbing systems; Erosion of natural deposits
				30 (Watres)	<1 (Watres)	0 (Watres)		
Copper (ppm)	2016	1.3	1.3	30 (Ceasetown)	0.09 (Ceasetown)	0 (Ceasetown)	Yes	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
				30 (Watres)	0.10 (Watres)	0 (Watres)		

Other Regulated Compounds - Measured on the Water in the Distribution System

Substance (units)	Year Sampled	MCL	MCLG	Results ⁶	Range Low – High ⁷	Compliance Achieved	Typical Source
Total Trihalomethanes TTHM (ppb)	2017	80	NA	75 (Ceasetown)	23 – 79 (Ceasetown)	Yes	By-product of drinking water chlorination
				64 (Watres)	17 – 71 (Watres)		
Haloacetic Acids (ppb)	2017	60	NA	34 (Ceasetown)	16 – 42 (Ceasetown)	Yes	By-product of drinking water chlorination
				40 (Watres)	16 – 64 (Watres)		

⁶ Highest annual running average for individual sample points

⁷ Range represents sampling at individual sample points.



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. Ceasetown first 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 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) ⁸	Year Sampled	Average	Range Low - High	Comments
Chromium 6 or Hexavalent Chromium (ppb)	2015 ⁹	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 ⁹	0.13 (Watres)	0.05 – 0.20 (Watres)	
Strontium (ppb)	2015 ⁹	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 ⁹	28.4 (Watres)	25.0 – 31.7 (Watres)	

⁸ 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.

⁹ 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.

