



2018 WATER QUALITY REPORT

New Castle

Public Water Supply ID# PA6370034



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 share with you another excellent annual report on the quality of your drinking water. This Water Quality Report provides the results of local water testing between January and December 2018. 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. We employ a great deal of expertise, technology and infrastructure to bring water from the source, treat it to make it safe and clean, and deliver it to you around the clock. Our plant operators, water quality experts, engineers and maintenance crews work continuously 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 2018 alone, we invested nearly \$352 million in system improvements across the Commonwealth.** We also remain committed to protecting our drinking water supplies, and we continue to support efforts to improve our watersheds and use advanced technology to monitor the quality of our water sources.

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 life flowing today and for the next generation. We hope that our commitment to you and our passion for water shines through in this report, and we encourage you to take the time to read more about the source and quality of your drinking water.

Proud to be your local water service provider,

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 7,100 dedicated professionals who provide regulated and market-based drinking water, wastewater and other related services to an estimated 14 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 2018. 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

The raw drinking water supply is surface water from the Shenango River. The watershed covers approximately 790 square miles in Pennsylvania and Ohio. The Shenango River watershed is largely agricultural with some forested land and pockets of urban or developed lands. Learn more about local waterways at <https://watersgeo.epa.gov/mywaterway>.

The Pennsylvania Department of Environmental Protection (DEP) completed a source water assessment for the New Castle System in 2003 to meet Federal requirements of the Safe Drinking Water Act. The study looked at the drainage area and ranked its vulnerability to contamination. The water supply is most vulnerable to transportation accidents and road deicing. Sewer overflows and stormwater runoff can carry harmful materials to the river. This can include pesticides and herbicides from golf courses, croplands, and lawns. Wastewater contamination from malfunctioning on-lot septic systems may serve as a source of potential contamination. Overall, our source has moderate risk of significant contamination. To get a copy of the assessment, contact DEP at (717) 705-4732 or visit: <http://www.depgreenport.state.pa.us/elibrary/>

Protecting Your Drinking Water Supply

Protecting drinking water at its source is an important part of the process to treat and deliver high quality water. It takes a community effort to protect our shared water resources. This includes utilities, businesses, residents, government agencies and organizations. Everyone who lives, works, and plays in the area has a role and stake in clean water supplies.

What Can You Do? Quality drinking water starts upstream. Everyone can help maintain and improve drinking water supplies through the following actions:

- Dispose of pharmaceuticals, household chemicals, oils and paints at proper waste collection sites. Materials can impact water ways if poured down the drain, flushed down the toilet, or dumped on the ground. Contact your county waste authority to find out how to dispose of these materials properly.
- Check for leaks from automobiles and heating fuel tanks. Clean up any spills using an absorbent material like cat litter. Sweep up the material and put it in a sealed bag in the trash.
- Clean up after your pets and limit the use of fertilizers and pesticides.
- Look for local opportunities to take part in watershed activities.
- Report any spills, illegal dumping or suspicious activity to DEP here: <https://www.dep.pa.gov/About/ReportanIncident/Pages/default.aspx>



What Are We Doing? Our vision is *Clean Water for Life*. Our priority is to provide reliable, quality drinking water for our customers. The source of supply is an important part of that mission. We work to understand and reduce potential risks to your drinking water supply.

We have developed a Source Water Protection Plan under the Pennsylvania Source Water Protection Technical Assistance Program (SWPTAP). This is a voluntary program to identify and address potential threats to drinking water supplies. Stakeholder involvement is an important part of the program. We partner with DEP to host annual meetings to review progress on the plan with stakeholders. We also welcome input on the plan or local water supplies through our online feedback [form](#).

Here are a few of the efforts underway to protect our shared water resources:

- **Community Involvement:** We have a proactive public outreach program to help spread the word and get people involved. This includes school education, contests, and other community activities. For more information, visit: <https://amwater.com/paaw/news-community/community-involvement>
- **Environmental Grant Program:** Each year, we fund projects that improve water resources in our local communities. In 2018, six organizations received grant funds totaling around \$40,000 for local watershed projects. For more information on the program, visit: <https://amwater.com/paaw/news-community/environmental-grant-program>.
- **Pharmaceutical Collection:** We sponsor drop box locations across the Commonwealth for residents to safely dispose of unwanted drugs for free. This helps keep pharmaceutical products from entering water supplies. For drop box locations near you, visit: <https://amwater.com/paaw/water-quality/pharmaceuticals-and-drinking-water>.

To learn more about your water supply and local activities, please contact the regional Source Water Protection Lead, Josh Dunkle, at 724-873-3667.

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](#)

We also take steps to reduce the potential for lead to leach from your pipes into the water. This is accomplished by adding a corrosion inhibitor to the water leaving our treatment facility. For more information, please review our Lead and Drinking Water Fact Sheet at: <https://amwater.com/paaw/water-quality/lead-and-drinking-water>.

Pennsylvania American Water is currently updating our customer records to identify homes with lead service lines and homes with copper pipes and lead solder installed between 1983 and 1988. If your home meets these criteria or you're not sure, please contact us at 800-565-7292 to schedule a free evaluation of your plumbing material. You may qualify for free lead and copper testing of your drinking water.

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 – and will vary seasonally. 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. The hardness levels at the New Castle Treatment Facility range from 62 ppm to 176 ppm, or 4 to 10 grains per gallon of water.



How much sodium is in your water?

The sodium level is approximately 21 ppm.

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

Water in the distribution system averages 7.1 pH units. A pH of 7.0 is considered neutral, neither acidic nor basic.

Is there fluoride in your water?

PAW adds fluoride to a level of approximately 0.7 ppm to assist in the prevention of dental cavities.

Partnership for Safe Drinking Water Program

In 2000, the New Castle System 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 New Castle System has met the voluntary goals of the program for 18 continuous years.



How to Contact Us

Additional copies of this report can be printed directly from this site at www.amwater.com/ccr/newcastle.pdf.

Additional information can be gathered by calling our Customer Service Department at 1-800-565-7292 or by viewing the following information 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 at (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.

Cryptosporidium

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes *Cryptosporidium*, the most commonly-used filtration methods cannot guarantee 100 percent removal. If the organism was detected, current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of *Cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. Based on the results of the first round of *Cryptosporidium* monitoring, no additional treatment was required by the US EPA regulations. The New Castle System completed a second round of source monitoring from the Shenango River from 2016 to 2018. In this monthly sampling, the average level of *Cryptosporidium* found in the source water was 0.116 oocysts/L. Results between 0.075 oocysts/L and 1.0 oocysts/L require plants to increase the level of treatment for *Cryptosporidium*. PAWC will be making upgrades to the disinfection system at our New Castle treatment plant to address the increase in *Cryptosporidium* in our source water and to meet regulatory requirements.

How to Read This Table

Starting with a **Substance**, read across. **Year Sampled** is usually in 2018 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.

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.

Water Quality Statement

We are pleased to report that during calendar year 2018, 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 2018. 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	MCLG	MCL	Highest Single Measurement	Compliance Achieved	Typical Source
New Castle Plant	Turbidity (NTU) ¹	2018	NA	TT	0.49	Yes	Soil runoff

¹99.5% of 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 the measure of cloudiness of the water and is monitored to indicate the effectiveness of our filtration system.

Disinfectant Residual - Measured on the Water Leaving the Treatment Facility

Substance (units)	Sample Date	Minimum Disinfectant Residual Required	Lowest Amount Detected	Range Low - High	Compliance Achieved	Typical Source
Chlorine (ppm)	2018	0.20	0.69	0.69 – 2.87	Yes	Water additive to control microbes

Regulated Substances - Measured on the Water Leaving the Treatment Facility

Substance (units)	Year Sampled	MCLG	MCL	Highest Amount Detected	Range Low - High	Compliance Achieved	Typical Source
Nitrate (ppm)	2018	10	10	0.82	SS	Yes	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Fluoride (ppb)	2018	2	2	0.99	0.54 - 0.99	Yes	Water additive which promotes strong teeth.



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Total Organic Carbon Removal – Measured within the Treatment Facility

Substance (units)	Year Sampled	TT	Percent Removal Required	Range of Percent Removal Achieved	Compliance Achieved	Typical Source
Total Organic Carbon (TOC) (% removal) ²	2018	Meet EPA Removal Requirements	35 - 45	50 - 84	Yes	Naturally present in the environment

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.

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

Substance (units)	Year Sampled	Action Level	MCLG	Number of Samples Collected	90 th Percentile	Number of Samples Above the Action Level	Typical Source
Lead (ppb)	2016	15	0	30	3	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	2016	1.3	1.3	30	0.15	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

Other Regulated Compounds – Measured in the Distribution System

Substance (units)	Year Sampled	MCLG	MCL	Average Result ³	Range Low – High ⁴	Compliance Achieved	Typical Source
Total Trihalomethanes (TTHM) (ppb)	2018	NA	80	35	30 - 45	Yes	By-product of drinking water chlorination
Haloacetic Acids (HAA5) (ppb)	2018	NA	60	12	2 - 20	Yes	By-product of drinking water disinfection
Total Chromium (ppb)	2015	100	100	0.5	0.4 – 0.5	Yes	Discharge from steel and pulp mills; Erosion of natural deposits.

³ Highest running annual average for individual sampling points.

⁴ Range represents sampling at individual sample points.

Disinfectant Level - Measured in the Distribution System

Substance (units)	Year Sampled	MRDLG	MRDL	Highest Level Detected	Range Low - High	Compliance Achieved	Typical Source
Total Chlorine Residual (ppm) ⁵	2018	4	4	2.03	1.47 – 2.03	Yes	Water additive to control microbes

⁵ Range represents the calculated monthly average of the results for the routine individual samples.



Notice of Unregulated Contaminant Monitoring (UCMR4) –

During 2018, PAW New Castle began monitoring for contaminants listed in the Unregulated Contaminant Monitoring Rule 4 (UCMR4). Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. There were no detections of these unregulated contaminants in the water leaving the New Castle treatment facility thus far. For additional information, you can call the Safe Drinking Water hotline at (800) 426-4791.

