



2018 WATER QUALITY REPORT



White Deer

Public Water Supply ID# 4490023

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 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 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.

Your Drinking Water Supply

The raw drinking water supply is surface water from the Susquehanna River, Spruce Run Reservoir, and White Deer Creek. The Spruce Run Reservoir and the White Deer Creek sources are in the Susquehanna River Basin. Both streams are classified as high-quality, cold-water fisheries. 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 White Deer 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 supplies are considered vulnerable to runoff from transportation corridors and stormwater runoff. DEP ranked the susceptibility high because the water supplies are above the ground and exposed. 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, Kristi English, at 717-550-1508.

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 much sodium is in your water?

The sodium level is approximately 7 ppm.

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. Hardness levels range from 19 ppm to 115 ppm, or 1 to 7 grains per gallon of water.

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

Water entering the distribution system averages 7.5 pH units. A pH of 7.0 is considered neutral, neither acidic nor basic.

Is there fluoride in your water?

Pennsylvania American Water does not add fluoride to your water supply.



Partnership for Safe Drinking Water Program

In 2011, the White Deer Creek Water Treatment Plant, along with the Milton Water Treatment Plant in 2010, was awarded the prestigious Director's Award under the Partnership for Safe 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 Milton Filter plant has met the voluntary goals of the program for 16 continuous years. The White Deer Creek Filter plant has 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 (www.amwater.com/ccr/whitedeer.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](#)

[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.

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.



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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 US. Although *Cryptosporidium* can be removed through commonly-used filtration methods, US EPA issued a new rule in January 2006 that requires systems with higher *Cryptosporidium* levels in their source water to provide additional treatment. In anticipation of this upcoming rule, the White Deer System monitored for *Cryptosporidium* in its raw water from July 2005 to June 2007. In October 2017, the Milton and White Deer Plants began a second round of *Cryptosporidium* and *Giardia* monitoring. This monitoring was completed in October of 2018, and sample results do not show a need to provide additional treatment.

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 Facilities

Plant	Substance (units)	Year Sampled	MCL	MCLG	Highest Single Measurement	Compliance Achieved	Typical Source
Milton Plant	Turbidity (NTU) ¹	2018	TT	NA	0.11	Yes	Soil runoff
White Deer Creek Plant	Turbidity (NTU) ¹	2018	TT	NA	0.07	Yes	Soil runoff

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.

Total Organic Carbon Removal

Plant	Substance (units)	Year Sampled	TT	Range of Percent Removal Required	Range of Percent Removal Achieved	Compliance Achieved	Typical Source
Milton	Total Organic Carbon (TOC) (% removal) ²	2018	Meet EPA Removal Requirements	35	43	Yes	Naturally present in the environment
White Deer	Total Organic Carbon (TOC) (% removal) ²	2018	Meet EPA Removal Requirements	Not Required	Not Required	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.

Regulated Substances (Measured from the Water Leaving the Treatment Facility)

Substance (units)	Year Sampled	MCL	MCLG	Maximum Level Detected	Range Low - High	Compliance Achieved	Typical Source
Nitrate (ppm)	2018	10	10	0.84	0.06 - 0.84	Yes	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits



Entry Point Disinfection Residual (Measured on the Water Leaving the Treatment Facility)

Substance (units)	Year Sampled	Minimum Disinfectant Residual Level Required	Lowest Amount Detected	Range Low - High	Compliance Achieved	Typical Source
Milton Plant Chlorine (ppm)	2018	0.2	1.15	1.15- 2.04	Yes	Water additive used to control microbes
White Deer Creek Plant Chlorine (ppm)	2018	0.2	1.49	1.49– 2.07	Yes	Water additive used to control microbes

Disinfectant Residual (Measured in the Distribution System)

Substance (units)	Year Sampled	MRDL	MRDLG	Highest Result	Range Low - High	Compliance Achieved	Typical Source
Chlorine (ppm)	2018	4	4	1.90	1.14- 1.90	Yes	Water additive used to control microbes

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)	2016	15	0	30	2	3	Yes	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	2016	1.3	1.3	30	0.12	0	Yes	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives



Other Compounds (Measured in the Distribution System)

Substance (units)	Year Sampled	MCL	MCLG	Results	Range Low – High	Compliance Achieved	Typical Source
Total Trihalomethanes (ppb) ³	2018	80	NA	54	11 - 119	Yes	By-product of drinking water chlorination By-product of drinking water chlorination
Haloacetic Acids (HAA5) (ppb) ³	2018	60	NA	12	12 - 43	Yes	
Chromium (ppb)	2014	100	100	0.08	ND - 0.2	Yes	Discharge from steel and pulp mills; erosion of natural deposits

³ Range represents sampling at multiple locations throughout the distributions system

Unregulated Substances - (Measured on Water Leaving the Treatment Facility and in the Distribution System)

Substance (units)	Year Sampled	MCL / MCLG	Sample Location	Average Amount Detected	Range Low - High	Use or Environmental Source
Chlorate (ppb)	2014	Not Regulated	Treatment Facility	8	ND – 35	Agricultural defoliant or desiccant; disinfection byproduct; and used in production of chlorine dioxide
			Distribution System	7	0 – 31	
Chromium 6 or Hexavalent Chromium (ppb)	2014	Not Regulated	Treatment Facility	0.03	ND-0.05	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
			Distribution System	0.05	ND – 0.09	
1,4-dioxane (ppb)	2014	Not Regulated	Treatment Facility	0.08	ND – 0.33	Cyclic aliphatic ether; used as a solvent or solvent stabilizer in manufacture and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos
Strontium (ppb)	2014	Not Regulated	Treatment Facility	64	13 - 180	Naturally-occurring element; historically, commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions
			Distribution System	63	18 – 170	
Manganese (ppm)	2018	0.05	Treatment Facility	0.0145	.0004-.023	Naturally Occurring Element.
Bromochloroacetic Acid (ppb)	2018	Not Regulated	Distribution System	3.2	1.7 – 8.0	By-product of drinking water chlorination
Bromodichloroacetic acid (ppb)	2018	Not Regulated	Distribution System	2.5	0.98-4.6	By-product of drinking water chlorination
Chlorodibromoacetic acid	2018	Not Regulated	Distribution System	0.70	ND – 1.7	By-product of drinking water chlorination

