



2022 Annual
**WATER QUALITY
REPORT**

Yardley
PWS ID: PA1090074

**QUALITY. ONE MORE WAY
WE KEEP LIFE FLOWING.**



**PENNSYLVANIA
AMERICAN WATER**

WE KEEP LIFE FLOWING®

What is a Consumer Confidence Report (CCR)

Once again, we proudly present our Annual Water Quality Report, also referred to as a Consumer Confidence Report (CCR). CCRs let consumers know what contaminants, if any, were detected in their drinking water as well as related potential health effects. CCRs also include details about where your water comes from and how it is treated. Additionally, they educate customers on what it takes to deliver safe drinking water and highlight the need to protect drinking water sources.

We are committed to delivering high quality drinking water service. To that end, we remain vigilant in meeting the challenges of source water protection, water conservation, environmental compliance, sustainability and community education while continuing to serve the needs of all our water users.

This report contains important information about your drinking water. Translate it, or speak with someone who understands it at 1-800-565-7292.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien al 1-800-565-7292.

Ntawm no yog ib co lus qhia tseem ceeb heev txog koj cov dej seb huv npaum li cas. Yog tias koj xav tau kev pab txhais cov lus qhia no, thov hu rau pab ntawm 1-800-565-7292.

這是關於您的水質的十分重要的資訊。如果您需要幫助翻譯此資訊請致電 **1-800-565-7292** 與我們聯繫。

आपके पानी की गुणवत्ता के बारे में यह बहुत महत्वपूर्ण सूचना है। यदि इस सूचना के अनुवाद के लिए आपको सहायता की जरूरत हो, तो कृपया **1-800-565-7292** र हमें काल करें।

Это очень важная информация о качестве Вашей воды. Если Вам требуется перевод этой информации, позвоните нам по телефону 1-800-565-7292.

Ito ay isang napakahalagang impormasyon tungkol sa kalidad ng iyong tubig. Kung iyong kailangan ng tulong sa pagsalin ng impormasyon na ito, mangyaring tumawag sa amin sa 1-800-565-7292.

Đây là thông tin rất quan trọng về chất lượng nước của quý vị. Nếu quý vị cần thông dịch thông tin này, xin gọi chúng tôi theo số 1-800-565-7292.

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A message from **Pennsylvania American Water's President**



Justin Ladner

President, Pennsylvania
American Water

Dear Pennsylvania American Water Customer,

Providing you with safe, reliable water service is our top priority. From source to tap and back to the source again, our team of professionals works hard to deliver high quality water and wastewater service to help keep life flowing for our customers and protect our precious water resources and the environment. I am pleased to share with you our 2022 Annual Water Quality Report (also called a Consumer Confidence Report), which is a testament to the hard work and dedication of our employees.

In this report, you'll find that we monitor and test your water at multiple points throughout our process of drawing it from its source, treating it to meet drinking water standards, and delivering it to our customers through our distribution systems. In fact, we test for about 100 regulated contaminants as required by state and federal drinking water standards.

AWARD WINNING WATER QUALITY

Pennsylvania American Water has received more Directors Awards than any other water utility in the nation. We take water quality so seriously that 33 of our water treatment plants have been nationally recognized with the Directors Award from EPA's Partnership for Safe Water program. This is the result of a long-term commitment to optimizing operations, achieving outstanding performance, and protecting public health and the environment.

INVESTING TODAY FOR THE FUTURE

We also invest heavily in maintaining and improving our facilities to keep them operating efficiently and meeting regulatory standards. In 2022 alone, Pennsylvania American Water invested approximately \$490 million to improve our water and wastewater treatment and pipeline systems.

COMMITMENT TO OUR CUSTOMERS

We hope our commitment to you and our passion for water shines through in this report detailing the source and quality of your drinking water in 2022. We will continue to work to keep your life flowing – today, tomorrow and for future generations.

Proud to be your local water service provider,

A handwritten signature in black ink that reads "Justin".

Justin Ladner
Pennsylvania American Water

This report contains important information about your drinking water. Translate it or speak with someone who understands it at (800) 565-7292, Monday-Friday, 7 a.m. to 7 p.m.



ATTENTION: Landlords and Apartment Owners

Please share a copy of this notice with your tenants. It includes important information about their drinking water quality.

Mark of Excellence



EVERY STEP OF THE WAY.

Our team monitors and tests your water at multiple points throughout our process of drawing it from its source, treating it to meet drinking water standards, and distributing it through our pipeline systems. **In fact, American Water performs over one million tests annually for about 100 regulated contaminants, nationwide.**



EXPERTISE. RECOGNIZED AT THE HIGHEST LEVEL.

American Water is an expert in water quality testing, compliance and treatment and has established industry-leading water testing facilities. Our dedicated team of scientists and researchers are committed to finding solutions for water quality challenges and implementing new technologies. American Water is recognized as an industry leader in water quality and works cooperatively with the EPA so that drinking water standards and new regulations produce benefits for customers and public water suppliers. American Water has earned awards from the EPA's Partnership for Safe Water as well as awards for superior water quality from state regulators, industry organizations, individual communities, and government and environmental agencies.



WATER QUALITY. DOWN TO A SCIENCE.

Our team also has access to American Water's Central Laboratory in Belleville, Illinois, which conducts sophisticated drinking water testing and analysis. American Water scientists refine testing procedures, innovate new methods, and set new standards for detecting potentially new contaminants—even before regulations are in place.



MAINTAINING QUALITY FOR FUTURE GENERATIONS.

Just as Pennsylvania American Water is investing in research and testing, we also understand the importance of investing in the infrastructure that provides high-quality water service to you. Last year alone, **we invested approximately \$490 million to improve our water and wastewater treatment and pipeline systems.**

NOT JUST MEETING DRINKING WATER STANDARDS— SURPASSING THEM.

The EPA regulates about 100 potential contaminants and sets stringent standards for each one. **Pennsylvania American Water takes water quality so seriously that:**

- **33 of our water treatment plants, including the treatment plant serving your area, have been nationally recognized with Directors Awards** from the EPA's Partnership for Safe Water program for our long-term commitment to optimizing operations, achieving outstanding performance, and protecting public health and the environment.
- **9 of these plants received the Elite Phase IV Presidents Award** (Bangor, Brownell, Clarion, Crystal Lake, Hershey, Nesbitt, Norristown, Phillipsburg and Indiana).

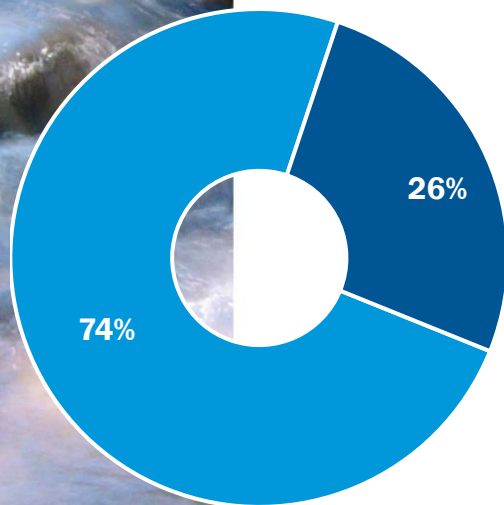


About Your Drinking Water Supply

WHERE YOUR WATER COMES FROM

The raw drinking water supply is a combination of surface water and groundwater sources. The Delaware River Watershed is 12,800 square miles and covers parts of New York, Pennsylvania, New Jersey, Maryland, and Delaware. Learn more about local waterways at <https://mywaterway.epa.gov/> and groundwater conditions at <https://water.usgs.gov/ogw>.

The Pennsylvania Department of Environmental Protection (DEP) completed a source water assessment for the Yardley System in 2002 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 most vulnerable to transportation corridors and runoff from agriculture, industrial, and residential activities. To get a copy of the assessment, contact DEP at (717) 705-4732 or visit: <http://www.depgreenport.state.pa.us/elibrary/>



SOURCE OF SUPPLY FOR THE SYSTEM

- Surface Water
- Groundwater



QUICK FACTS ABOUT THE YARDLEY SYSTEM

Communities served:

Borough of Yardley and portions of Lower Makefield and Falls Townships.

Water source:

The Delaware River and four groundwater wells

Average amount of water supplied to customers on a daily basis:
3.05 million gallons per day

Disinfection treatment:

Groundwater supplies and surface water supplies are treated with chloramines to maintain water quality in the distribution system.



SPECIAL HEALTH INFORMATION

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 can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control and Prevention (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 (800-426-4791).

What are the Sources of Contaminants?

To provide tap water that 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 (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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 Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, aquifers and/or groundwater. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

CONTAMINANTS THAT MAY BE PRESENT IN SOURCE WATER INCLUDE:

Microbial Contaminants	such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
Inorganic Contaminants	such as salts and metals, which can be naturally occurring or may result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
Pesticides and Herbicides	which may come from a variety of sources, such as agriculture, urban storm water runoff, and residential uses.
Organic Chemical Contaminants	including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also, come from gas stations, urban storm water runoff, and septic systems.
Radioactive Contaminants	which can be naturally occurring or may be the result of oil and gas production and mining activities.



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:

- Properly dispose of pharmaceuticals, household chemicals, oils and paints. Materials can impact water ways if poured down the drain, flushed down the toilet, or dumped on the ground.
- 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. Check with the local refuse facility for proper disposal.
- Clean up after your pets and limit the use of fertilizers and pesticides.
- Take part in watershed activities.

Report any spills, illegal dumping or suspicious activity to the Pennsylvania DEP:

www.dep.pa.gov/About/ReportanIncident/Pages/EnvironmentalComplaints.aspx

FOR MORE INFORMATION

To learn more about your water supply and local activities, visit us online at www.amwater.com/paaw, or contact the regional Source Water Protection Lead, Kristi English at PA.SWP.Team@amwater.com.

WHAT ARE WE DOING?

Our priority is to provide reliable, quality drinking water service for 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.



Environmental Grant Program: Each year, we fund projects that improve water resources in our local communities.



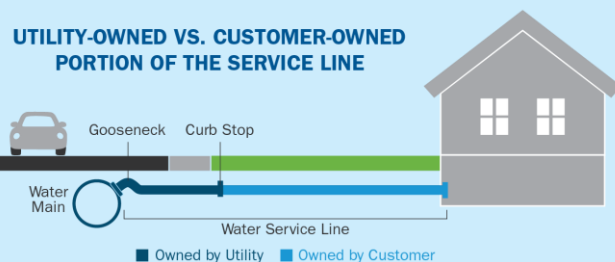
Pharmaceutical Collection: We sponsor drop box locations across the Commonwealth for residents to safely dispose of unwanted drugs for free. This helps keep pharmaceutical products from entering water supplies.



Protect Our Watersheds Art Contest: Open to fourth, fifth and sixth graders, the contest encourages students to use their artistic skills to express the importance of protecting our water resources.

About Lead

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. American Water is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.



Please note: This diagram is a generic representation. Variations may apply.

The most common source of lead in tap water is from the customer's plumbing and their service line.

The utility-owned water mains are not made of lead; however, the water service line that carries the water from the water main in the street to your home could be. Homeowners' service lines may be made of lead, copper, galvanized steel or plastic. You can assess your service line material where it enters your home, typically in your basement, crawl space or garage, near the inlet valve.

MINIMIZING YOUR POTENTIAL EXPOSURE

You cannot see, smell or taste lead, and boiling water will not remove lead. Here are steps you can take to reduce your potential exposure if lead exists in your home plumbing.

CHECK YOUR PLUMBING AND SERVICE LINE

If you live in an older home, consider having a licensed plumber check your plumbing for lead. If your service line is made of lead, and you're planning to replace it, be sure to contact us at 1-800-565-7292.



1. Flush your taps. The longer the water lies dormant in your home's plumbing, the more lead it might contain. If the water in your faucet has gone unused for more than six hours, flush the tap with cold water for 30 seconds to two minutes before drinking or using it to cook. To conserve water, catch the running water and use it to water your plants.



2. Use cold water for drinking and cooking. Hot water has the potential to contain more lead than cold water. If hot water is needed for cooking, heat cold water on the stove or in the microwave.



3. Routinely remove and clean all faucet aerators.



4. Look for the "Lead Free" label when replacing or installing plumbing fixtures.



5. Follow manufacturer's instructions for replacing water filters in household appliances, such as refrigerators and ice makers, as well as home water treatment units and pitchers. Look for NSF 53 certified filters.



6. Flush after plumbing changes. Changes to your service line, meter, or interior plumbing may result in sediment, possibly containing lead, in your water supply. Remove the strainers from each faucet and run the water for 3 to 5 minutes.

Determining Your Service Line Material

Homeowners' service lines are most commonly made of lead, copper, galvanized steel or plastic. Homes built before 1930 are more likely to have lead plumbing systems.

There are different ways that you can determine if you have a lead service line.

- You can access your service line material where it enters your home, typically in your basement, crawl space or garage, near the inlet valve and identify the pipe material using the chart on the right.
- A licensed and insured plumber can inspect your pipes and plumbing.
- Lead test kits can be purchased at local hardware and home improvement stores. These kits are used to test paint, but can also be used to test pipe – not the water inside. Look for an EPA recognized kit. Wash your hands after inspecting plumbing and pipes.

TYPES OF PIPE

	• Galvanized: A dull, silver-gray color. Use a magnet - strong magnets will typically cling to galvanized pipes.
	• Copper: The color of a copper penny.
	• Plastic: Usually white, rigid pipe that is jointed to water supply piping with a clamp. Note: It can be other colors, including blue and black.
	• Lead: A dull, silver-gray color that is easily scratched with a coin. Use a magnet - strong magnets will <u>not</u> cling to lead pipes.

YOUR SERVICE LINE MATERIAL

Please note if your service lines contain lead, it does not mean you cannot use water as you normally do. Pennsylvania American Water regularly tests for lead in drinking water and our water meets state and federal water quality regulations, including those set for lead.

For more information on lead in drinking water, please visit <https://www.amwater.com/paaw/water-quality/Lead-and-Drinking-Water/lead-service-line-replacement-program>



Important Information About **Drinking Water**

CHLORAMINES

Chloramines are a state and federally approved alternative to free chlorine for water disinfection. Chloramines can reduce disinfection by-product formation and may help reduce concerns related to taste. Chloramines are also used by many American Water systems and many other water utilities nationally.

Chloramines have the same effect as chlorine for typical water uses with the exception that chloramines must be removed from water used in kidney dialysis and fish tanks or aquariums.

Treatments to remove chloramines are different than treatments for removing chlorine. Please contact your physician or dialysis specialist for questions pertaining to kidney dialysis water treatment. Contact your pet store or veterinarian for questions regarding water used for fish and other aquatic life. You may also contact our Customer Service Center at 1-800-565-7292 for more chloramine information.

FLUORIDE

Fluoride is a naturally occurring substance. It can be present in drinking water from two sources:

1. **By nature** when groundwater comes into contact with fluoride-containing minerals naturally present in the earth; or
2. **By a water purveyor** through addition of fluoride to the water they are providing in the distribution system.

The Yardley System has naturally-occurring fluoride in the groundwater. The naturally-occurring fluoride levels in the Yardley groundwater sources are close to optimal levels (approximately 0.70 ppm). The fluoride levels in the entire system are consistent year-round.

If you have any questions on fluoride, please call Pennsylvania American Water's Customer Service Center at (800) 565-7292.





Important Information About **Drinking Water**

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. Our monitoring indicates the presence of these organisms in our source water and/or finished water. 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. However, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

NITRATES

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

Important Information About **Drinking Water**

PFAS

Per- and polyfluoroalkyl substances (PFAS) are manufactured chemicals used in many household products including nonstick cookware (e.g., Teflon™), stain repellants (e.g., Scotchgard™), and waterproofing (e.g., GORE-TEX™). They are also used in industrial applications such as in firefighting foams and electronics production. There are thousands of PFAS chemicals, and they persist in the environment. Two well-known PFAS chemicals are perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS). These were phased out of production in the United States and replaced by hexafluoropropylene oxide-dimer acid (commonly known as GenX), perfluorobutane sulfonic acid (PFBS) and others.

As a leader in the industry, Pennsylvania American Water has been proactive in our approach to addressing PFAS ahead of Pennsylvania regulations. Pennsylvania American Water has performed voluntary sampling to better understand occurrence of certain PFAS in drinking water sources. This sampling allows us to understand how our water compares against the interim Health Advisory Levels set by U.S. EPA.

Recently, Pennsylvania Department of Environmental Protection finalized drinking water standards for PFOA and PFOS. On January 14, 2023, changes to PA Code 25, Chapter 109 were published in the Pennsylvania Bulletin establishing MCLs and monitoring requirements for PFAS. The regulation sets a maximum contaminant level of 14 ppt for PFOA, and 18 ppt for PFOS. Initial required monitoring will begin in January 2024.

While the regulation does not require monitoring to begin until January 1, 2024, our past sampling has shown that treatment will not be necessary to meet these standards. However, as required by PA DEP, we will complete the required monitoring called for by the regulation. Additionally, over the next few years, the Yardley system will be checking its drinking water for 29 PFAS chemicals through our participation in the U.S. EPA Unregulated Contaminant Monitoring Rule program, or UCMR. Through the UCMR program, water systems collect data on a group of contaminants that are currently not regulated in drinking water at the federal level. U.S. EPA uses this information when deciding if it needs to create new drinking water limits.

The science and regulation of PFAS and other contaminants is always evolving, and Pennsylvania American Water strives to be a leader in research and development. PFAS contamination is one of the most rapidly changing areas in the drinking water field. We have invested in our own independent research, as well as engaging with other experts in the field to understand PFAS occurrence in the environment. We are also actively assessing treatment technologies that can effectively remove PFAS from drinking water, because we believe that investment in research is critically important to addressing this issue.



American Water has a history of leading research to understand contaminants that can make their way through the environment. Our dedicated scientists work with leaders in the water community to develop methods to detect, sample, measure and address these contaminants. Because investment in research is critical to address PFAS, American Water actively assesses treatment technologies that can effectively remove PFAS from drinking water.

Lauren A. Weinrich, Ph.D.
Principal Scientist



Water Quality Results

WATER QUALITY STATEMENT

We are pleased to report that during calendar year 2022, the results of testing of your drinking water complied with all state and federal drinking water requirements.

For your information, we have compiled a list in the table below showing the testing of your drinking water during 2022. The Pennsylvania Department of Environmental Protection 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.

Definition of Terms

These are terms that may appear in your report.

Action Level (AL): The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, that a water system must follow.

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

LRAA: Locational Running Annual Average

Maximum Contaminant Level (MCL): 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. See also Secondary Maximum Contaminant Level (SMCL).

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL): The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

MFL: Million fibers per liter.

micromhos per centimeter ($\mu\text{mhos/cm}$): A measure of electrical conductance.

Minimum Residual Disinfectant Level (MinRDL): The minimum level of residual disinfectant required at the entry point to the distribution system.

NA: Not applicable

ND: Not detected

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

pH: A measurement of acidity, 7.0 being neutral.

picocuries per liter (pCi/L): Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles).

parts per billion (ppb): One part substance per billion parts water, or micrograms per liter.

parts per million (ppm): One part substance per million parts water, or milligrams per liter.

parts per trillion (ppt): One part substance per trillion parts water, or nanograms per liter.

Secondary Maximum Contaminant Level (SMCL): Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

TON: Threshold Odor Number

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

%: Percent

MEASUREMENTS

Parts Per Million



in a 10 gallon fish tank

Parts Per Billion



in a 10,000 gallon swimming pool

Parts Per Trillion



in 35 junior size Olympic pools

Water Quality Results

Pennsylvania American Water conducts extensive monitoring to determine if your water meets all water quality standards. The detections of our monitoring are reported in the following tables. While most monitoring was conducted in 2022, certain substances are monitored less than once per year because the levels do not change frequently. For help with interpreting the tables below, see the “Definition of Terms” on the previous page. Some unregulated substances are measured, but maximum contaminant levels have not been established by the government. These contaminants are shown for your information.

NOTE: Regulated contaminants not listed in this table were not found in the treated water supply.

LEAD AND COPPER MONITORING PROGRAM - At least 30 tap water samples collected at customers' taps every 3-years								
Substance (with units)	Year Sampled	Compliance Achieved	MCLG	Action Level (AL)	90 th Percentile	No. of Homes Sampled	Homes Above Action Level	Typical Source
Lead (ppb)	2022	Yes	0	15	1	30	1	Corrosion of household plumbing systems.
Copper (ppm)	2022	Yes	1.3	1.3	0.14	30	0	Corrosion of household plumbing systems.

REVISED TOTAL COLIFORM RULE - At least 30 samples collected each month in the distribution system						
Substance (with units)	Year Sampled	Compliance Achieved	MCLG	MCL	Highest No. of Samples	Typical Source
Total Coliform ¹	2022	Yes	0	TT = No more than 1 positive monthly sample	0	Naturally present in the environment.
E. Coli ²	2022	Yes	0	MCL = No confirmed samples	0	Human and animal fecal waste.

NOTE: Coliforms are bacteria that are naturally present in the environment and are used as an indicator of the general bacteriological quality of the water. We are reporting the highest percentage of positive samples / highest number of positive samples in any month.

1 - The Treatment Technique for Total Coliforms requires that if the number of total coliform positive samples are exceeded a system assessment must be conducted, any sanitary defects identified, and corrective actions completed. Additional Level 1 Assessments or Level 2 Assessments are required depending on the circumstances.

2 - The Treatment Technique for E. Coli requires that for any total coliform positive routine sample with one or more total coliform positive check samples and an E. coli positive result for any of the samples a Level 2 Assessment must be conducted, any sanitary defects identified, and corrective actions completed. The E. Coli MCL is exceeded if routine and repeat samples are total coliform-positive and either is E. coli-positive, or the system fails to take repeat samples following an E. coli-positive routine sample, or the system fails to analyze total coliform-positive repeat samples for E. coli..

DISINFECTION BYPRODUCTS - Collected in the Distribution System

Substance (with units)	Year Sampled	Compliance Achieved	MCLG	MCL	Highest LRAA	Range Detected	Typical Source
Total Trihalomethanes (TTHMs) (ppb)	2021 – 2022	Yes	NA	80	56.9	16.3 to 85.8	By-product of drinking water disinfection.
Haloacetic Acids (HAAs) (ppb)	2021 - 2022	Yes	NA	60	47.1	11.8 to 72.9	By-product of drinking water disinfection.

NOTE: Compliance is based on the running annual average at each location (LRAA). The Highest LRAA reflects the highest average at any location and the Range Detected reflects all samples used to calculate the running annual averages.

DISINFECTANTS - Collected in the Distribution System and at the Treatment Plant

Substance (with units)	Entry Point	Year Sampled	Compliance Achieved	MRDLG	MRDL	Minimum Chlorine Residual	Compliance Result	Range Detected	Typical Source
Entry Point Chlorine Residual (ppm)¹	Entry Point 101 - Yardley WTP	2022	Yes	4	4	0.20	0.51	0.51 to 2.64	Water additive used to control microbes.
Entry Point Chlorine Residual (ppm)¹	Entry Point 104 - Highland Drive	2022	Yes	4	4	0.40	0.9	0.9 to 3.21	Water additive used to control microbes.
Entry Point Chlorine Residual (ppm)¹	Entry Point 107 - College Avenue	2022	Yes	4	4	0.40	0.68	0.68 to 2.3	Water additive used to control microbes.
Distribution System Chlorine Residual (ppm)²	Distribution	2022	Yes	4	4	0.20	1.24	0.68 to 1.24	Water additive used to control microbes.

1 - Data represents the lowest residual entering the distribution system from our water treatment plant.

2 - Data represents the highest monthly average of chlorine residuals measured throughout our distribution system.

TREATMENT BYPRODUCTS PRECURSOR REMOVAL - Collected at the Treatment Plant								
Substance (with units)	Year Sampled	Compliance Achieved	MCLG	MCL	Range of % Removal Required	Range of % Removal Achieved	Number of Quarters Out of Compliance	Typical Source
Total Organic Carbon (TOC)	2022	Yes	NA	TT	25% to 35%	36.7% to 62%	0	Naturally present in the environment.

NOTE: Compliance achieved based on the approved alternative criteria for an annual running average source water TOC of less than 2 ppm.

TURBIDITY - Continuous Monitoring at the Treatment Plant							
Substance (with units)	Year Sampled	Compliance Achieved	MCLG	MCL	Highest Single Measurement and Lowest Monthly % of Samples ≤ 0.3 NTU	Sample Date of Highest and Lowest Compliance Result	Typical Source
Turbidity (NTU)	2022	Yes	0	TT: Single result >1 NTU	0.19	9/9/22	Soil runoff.
	2022	Yes	NA	TT: At least 95% of samples ≤ 0.3 NTU	100%	NA	Soil runoff.

OTHER REGULATED SUBSTANCES - Collected at the Treatment Plant								
Substance (with units)	Entry Point	Year Sampled	Compliance Achieved	MCLG	MCL/SMCL	Highest Compliance Result	Range Detected	Typical Source
Gross Alpha (pCi/L)	Entry Point 104 – Highland Drive	2020	Yes	0	15	3.1	3.1	Erosion of natural deposits
Gross Alpha (pCi/L)	Entry Point 107 – College Avenue	2020	Yes	0	15	4	4	Erosion of natural deposits

OTHER REGULATED SUBSTANCES - Collected at the Treatment Plant (Continued)								
Substance (with units)	Entry Point	Year Sampled	Compliance Achieved	MCLG	MCL/SMCL	Highest Compliance Result	Range Detected	Typical Source
Barium (ppm)	Entry Point 104 – Highland Drive	2021	Yes	2	2	0.5	0.5	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Barium (ppm)	Entry Point 107 – College Avenue	2021	Yes	2	2	0.1	0.1	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Nitrate (ppm)	Entry Point 101 – Yardley WTP	2022	Yes	10	10	3.45	0.75 to 3.45	Runoff from fertilizer use; industrial or domestic wastewater discharges; erosion of natural deposits.
Sodium ¹ (ppm)	Entry Point 101 – Yardley WTP	2022	NA	NA	NA	39.1	25.2 to 39.1	Erosion from naturally occurring deposits: Used in water softener regeneration.

1 - For healthy individuals the sodium intake from water is not important because a much greater intake of sodium takes place from salt in the diet. However, sodium levels above the recommended upper limit may be of concern to individuals on a sodium restricted diet.

OTHER SUBSTANCES OF INTEREST - Collected at the Treatment Plant			
Substance (with units)	Year Sampled	Average	Comments
pH	2022	7.43	pH is a measure of the acid/base properties of water.
Total Hardness (ppm)	2022	64 (3.7 grains per gallon)	Naturally occurring.
Iron (ppm) ¹	2022	0.02	Corrosion of pipes; leaching of iron salts from soil and rocks, and industrial pollution. Essential dietary trace nutrient.
Manganese (ppm) ¹	2022	0.014	Naturally-occurring elemental metal; largely used in aluminum alloy production. Essential dietary trace nutrient.
Phosphate (as PO ₄) (ppm)	2022	1.17	Chemical added to water to reduce corrosion tendencies of water as it travels from the treatment plant to our customer's homes.
Zinc (ppm)	2022	0.38	Naturally-occurring by erosion of minerals from rocks and soil.

1 – Substances with Secondary MCLs do not have MCLGs; these limits are primarily established to address aesthetic concerns.

PFAS MONITORING

Before the Pennsylvania Department of Environmental Protection set maximum contaminant levels for PFAS, Pennsylvania American Water performed voluntary sampling to better understand the occurrence of certain PFAS in drinking water sources. This voluntary sampling effort was necessary because protecting public health is always the number one priority. Collecting PFAS data from all our drinking water sources in the state has allowed us to compare our results against health advisory levels set by the EPA, and MCL's set by the state.

PFAS Chemicals					
Parameter	Units	Year Sampled	Average Result	Range Detected	Typical Source
Perfluorooctanoic Acid (PFOA)	ppt	2021	8.35	6.3 to 9.8	Manufactured chemical(s); used in household goods for stain, grease, heat and water resistance
Perfluorooctanesulfonic Acid (PFOS)	ppt	2021	6.7	5 to 8	

In 2022, U.S. EPA set health advisory levels for four PFAS chemicals – PFOA (0.004 part per trillion (ppt)), PFOS (0.02 ppt), GenX (10 ppt), and PFBS (2,000 ppt). These are interim health advisory levels and will remain in place until EPA establishes a National Primary Drinking Water Regulation. Based on current analytical methods, however, the health advisory levels for PFOA and PFOS are below the level of both detection (determining whether or not a substance is present) and quantitation (the ability to reliably determine how much of a substance is present). This means that it is possible for PFOA or PFOS to be present in drinking water at levels that exceed health advisories even if testing indicates no level of these chemicals.

On January 14, 2023, changes to PA Code 25, Chapter 109 were published in the Pennsylvania Bulletin establishing MCLs and monitoring requirements for PFAS. The regulation sets a maximum contaminant level of 14 ppt for PFOA, and 18 ppt for PFOS. Initial required monitoring will begin in January 2024.

Finally, PFAS chemicals are unique, so two PFAS chemicals at the same level typically do not present the same risk. Therefore, you should not compare the results for one PFAS chemical against the results of another.

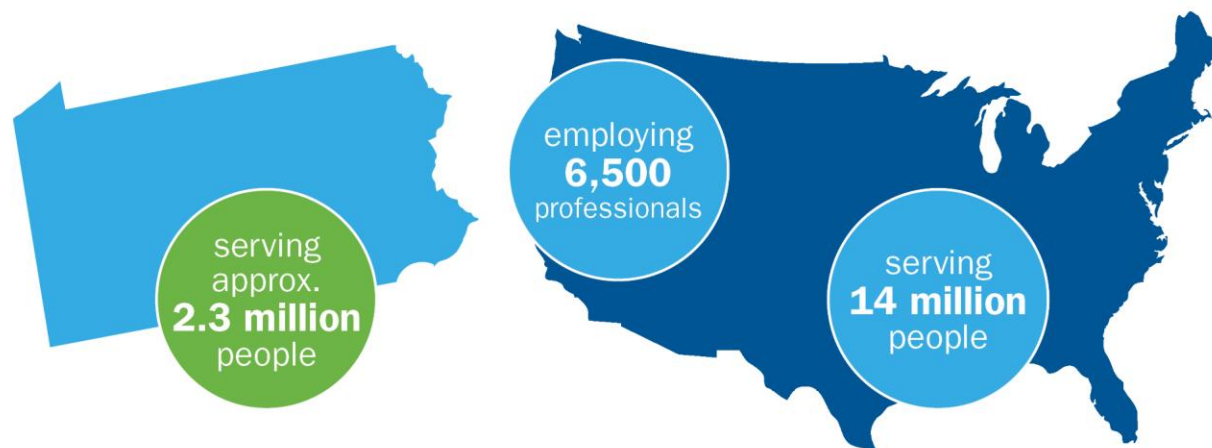
For more information on PFAS, please visit <https://www.amwater.com/resources/pdf/american-water-PFAS.pdf>.



About Us

Pennsylvania American Water, a subsidiary of American Water, is the largest investor-owned water utility in the Commonwealth, providing high-quality and reliable water and/or wastewater services to approximately 2.3 million people. For more information, visit pennsylvaniaamwater.com and follow us on Twitter, Facebook, Instagram, YouTube and LinkedIn.

With a history dating back to 1886, **American Water (NYSE: AWK)** is the largest and most geographically diverse U.S. publicly traded water and wastewater utility company. The company employs approximately 6,500 dedicated professionals who provide regulated and regulated-like drinking water and wastewater services to an estimated 14 million people in 24 states. American Water provides safe, clean, affordable, and reliable water services to our customers to help keep their lives flowing.



PENNSYLVANIA AMERICAN WATER FACTS AT A GLANCE

- **COMMUNITIES SERVED**
417 communities in
37 counties
- **CUSTOMERS SERVED**
680,000 water customers
(92% residential, 7% commercial and
1% industrial); 97,000 wastewater
customers
- **EMPLOYEES**
Approx. 1,200
- **TREATMENT FACILITIES**
37 surface water treatment plants
and 95 active groundwater sources
(average daily delivery including surface
water, groundwater and purchased
water is 195 million gallons per day
(MGD); 25 wastewater plants
(65 MGD permitted capacity)
- **MILES OF PIPELINE**
11,650 miles of water
and sewer pipe
- **STORAGE AND TRANSMISSION**
272 water storage facilities;
435 water and wastewater pumping
stations
- **SOURCE OF SUPPLY**
92% surface water,
7% groundwater and
1% purchased water
- **PARTNERSHIP FOR
SAFE WATER AWARDS**
33 of our treatment plants received
Directors Awards for the Partnership for
Safe Water

How to Contact Us

If you have any questions about this report, your drinking water, or service, please contact Pennsylvania American Water's Customer Service Center Monday to Friday, 7 a.m. to 7 p.m. at 1-800-565-7292.

WATER INFORMATION SOURCES

Pennsylvania American Water

www.amwater.com/paaw

Pennsylvania DEP Bureau of Safe Drinking Water:

<https://www.dep.pa.gov/Business/Water/BureauSafeDrinkingWater/pages/default.aspx>

United States Environmental Protection Agency (USEPA):

www.epa.gov/safewater

Safe Drinking Water Hotline: (800) 426-4791

Centers for Disease Control and Prevention: www.cdc.gov

American Water Works Association: www.awwa.org

Water Quality Association: www.wqa.org

National Library of Medicine/National Institute of Health:

www.nlm.nih.gov/medlineplus/drinkingwater.html

This report contains important information about your drinking water. Translate it, or speak with someone who understands it at 1-800-565-7292.

This report contains important information about your drinking water. Translate it, or speak with someone who understands it at 1-800-565-7292.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien al 1-800-565-7292.

Ntawm no yog ib co lus qhia tseem ceeb heev txog koj cov dej seb huv npaum li cas. Yog tias koj xav tau kev pab txhais cov lus qhia no, thov hu rau peb ntawm 1-800-565-7292.

這是關於您的水質的十分重要的資訊。如果您需要幫助翻譯此資訊請致電 1-800-565-7292 與我們聯繫。

आपके पानी की गुणवत्ता के बारे में यह बहुत महत्वपूर्ण सूचना है। यदि इस सूचना के अनुवाद के लिए आपको सहायता की जरूरत हो, तो कृपया 1-800-565-7292 र हमें काल करें।

Это очень важная информация о качестве Вашей воды. Если Вам требуется перевод этой информации, позвоните нам по телефону 1-800-565-7292.

Ito ay isang napakahalagang impormasyon tungkol sa kalidad ng iyong tubig. Kung iyong kailangan ng tulong sa pagsalin ng impormasyon na ito, mangyaring tumawag sa amin sa 1-800-565-7292.

Đây là thông tin rất quan trọng về chất lượng nước của quý vị. Nếu quý vị cần thông dịch thông tin này, xin gọi chúng tôi theo số 1-800-565-7292.