



2022 Annual **WATER QUALITY REPORT**

SYSTEM NAME

PWS ID: NJ1435003

American Water O&M-Picatinny Arsenal
1390 Farley Avenue
Picatinny Arsenal, N.J. 07806
(862) 397-5990

Landlords must distribute this information to every tenant as soon as practicable, but no later than three business days after receipt. Delivery must be done by hand, mail, or email, and by posting the information in a prominent location at the entrance of each rental premises, pursuant to section 3 of P.L. 2021, c. 82 (C.58:12A-12.4 et seq.).



AMERICAN WATER

Military Services

WE KEEP LIFE FLOWING™

What is a Consumer Confidence Report (CCR)



Each year, American Water Picatinny Arsenal produces a Water Quality Report. For more information about this report, please contact American Water-Picatinny Arsenal at (862)397-5990.

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.

The Military Service Group American Water is 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.

Public Participation

Public meetings are not routinely held but input concerning water quality is always welcome. Water quality suggestions may be forwarded directly to the following:

Mail: American Water O&M – Picatinny Arsenal
1390 Farley Avenue, Picatinny Arsenal, N.J. 07806
Phone: (862) 397-5990

Share This Report

Businesses, schools, hospitals and other groups are encouraged to share this important information with water users at their location who may not receive this report directly.

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A message from **American Water- Military Services Group President**

American Water's Military Services Group owns and operates water and wastewater utilities under the Utilities Privatization program and proudly provides water and wastewater services to military communities around the country, including yours. Our Company's Vision – "We Keep Life Flowing" - drives everything we do for you, our customers. To reinforce our vision and maintain your trust, it's important that we share with you information about our commitment to providing high-quality water service.

I am pleased to provide you with the 2022 Annual Water Quality Report with detailed information about the source and quality of your drinking water. We have prepared this report using the data from water quality testing conducted for your local water system from January through December 2022.

With equal importance, we place a strong focus on acting as stewards of our environment. In all the communities we serve, we work closely with the local directorates of public works, civil engineering squadrons, local environmental departments, and state regulatory agencies to protect environmental quality, educate customers on how to use water wisely, and ensure the high quality of your drinking water every day.

At American Water, our values – safety, trust, environmental leadership, teamwork, and high performance – mean more than simply making water available "on-demand". It means every employee working to deliver a key resource for public health, fire protection, mission assurance, the economy, and the overall quality of life we all enjoy. For more information or for additional copies of this report, visit us online at www.amwater.com.

Steve Curtis
Military Services Group
American Water

This report contains important information about your drinking water. Translate it or speak with someone who understands it at (862)-397-5990, Monday-Friday, 7:30 a.m. to 4:30 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.



About Your Drinking Water Supply

WHERE YOUR WATER COMES FROM

Building 1390 houses the American Water Picatinny Arsenal water treatment plant (WTP). Constructed in 2018, the WTP is rated at 1.0 million gallons per day (MGD) and serves the Picatinny Arsenal base only. Well pumps transfer raw water through 2 greensand filters. Sodium hypochlorite and potassium permanganate are introduced into the raw water prior to the filters to assist with the iron and manganese removal process. From there it goes through an air stripping tower where VOC's are removed. Two high service pumps move the water from the air stripper wet well under pressure through 2 granulated activated carbon chambers (GAC) for PFAS removal.

This is followed again by sodium hypochlorite treatment for disinfection. Finished water is then moved through a pipe designed to administer the required detention/contact time (completing the disinfection process) to storage tanks located throughout the distribution system.

The greensand filter media is backwashed using potable water which is collected in a backwash water storage tank. The backwash storage tank decant water is recycled to the head of the plant while the wastes and residuals are discharged in the sanitary sewer system.

The new water treatment facility, located at 1390 Farley Avenue, was placed into full time service in May 2020. All water leaving the facility to the distribution system meets all federal and state regulations.

NOTICE OF SOURCE WATER ASSESSMENT (SWA)

An assessment of the drinking water sources for the American Water – Picatinny Arsenal water system was completed in December 2004. The sources are considered vulnerable to the following (associated with contamination detected in the water supply):

- known contaminant plumes;
- historic waste dumps/landfills
- high-density housing
- apartments and condominiums
- home manufacturing
- parks
- parking lots/malls
- office buildings/complexes
- schools
- medical/dental/veterinary offices/clinics
- low- and high-density septic systems
- sewer collection systems; waste transfer/recycling station
- wastewater treatment plants
- fertilizer, pesticide/herbicide application
- irrigated/non-irrigated crops
- golf courses
- automobile repair shops and gas stations
- fleet/truck/bus terminals
- utility station maintenance areas
- motor pools
- historic gas stations
- machine shops
- electrical/electronic manufacturing
- chemical/petroleum processing/storage
- metal plating/finishing/fabricating
- plastics/synthetics producers
- photo processing/printing
- chemical/petroleum pipelines
- food processing
- construction/demolition staging areas
- appliance/electronic repair
- hotels and motels
- agricultural/irrigation wells
- oil, gas, geothermal wells
- water supply wells
- monitoring/test wells
- injection wells/dry wells/sumps
- research laboratories
- hospitals
- contractor or government agency equipment storage yards
- hardware/lumber/parts stores
- historic and active mining operations
- sand/gravel mining
- underground storage tanks (decommissioned inactive tanks), upgraded/registered-active tanks, non-regulated tanks, and not yet upgraded or registered tanks.

Protecting Your Water Sources

WHAT IS S.W.A.P.

The Source Water Assessment Program (SWAP) is a program of the New Jersey Department of Environmental Protection (NJDEP) to study existing and potential threats to the quality of public drinking water sources throughout the state. Sources are rated depending upon their contaminant susceptibility.

SUSCEPTIBILITY RATINGS FOR PICATINNY AMERICAN WATER

The table below illustrates the susceptibility ratings for the seven contaminant categories (and radon) for each source in the system. The table provides the number of wells and intakes that rated high (H), medium (M), or low (L) for each contaminant category. For susceptibility ratings of purchased water, refer to the specific water system's source water assessment report. Source Water Assessment Reports and Summaries available at <http://www.nj.gov/dep/watersupply/swap/index.html>, or by contacting the NJDEP, Bureau of Safe Drinking Water at 609-292-5550 or watersupply@dep.nj.gov.

CONTAMINANT CATEGORIES

The NJDEP considered all surface water highly susceptible to pathogens, therefore all intakes received a high rating for the pathogen category. For the purpose of the SWAP, radionuclides are more of a concern for ground water than surface water. As a result, surface water intakes' susceptibility to radionuclides was not determined and a low rating was assigned.

If a system is rated highly susceptible for a contaminant category, it does not mean a customer is or will be consuming contaminated drinking water. The rating reflects the potential for contamination of source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any contaminants are detected at frequencies and concentrations above allowable levels.

As a result of the assessments, the NJDEP may customize (change existing) monitoring schedules based on the susceptibility ratings.

Source water protection is a long-term dedication to clean and safe drinking water. It is more cost effective to prevent contamination than to address contamination after the fact. Every member of the community plays an important role in source water protection. The NJDEP recommends controlling activities and development around drinking water sources, whether it is through land acquisition, conservation easements or hazardous waste collection programs. We will continue to keep you informed of SWAP's progress and developments.

SUSCEPTIBILITY CHART DEFINITIONS

- **Pathogens:** Disease-causing organisms such as bacteria and viruses. Common sources are animal and human fecal wastes.
- **Nutrients:** Compounds, minerals and elements that aid growth, that are both naturally occurring and man-made. Examples include nitrogen and phosphorus.
- **Volatile Organic Compounds:** Man-made chemicals used as solvents, degreasers, and gasoline components. Examples include benzene, methyl tertiary butyl ether (MTBE), and vinyl chloride.
- **Pesticides:** Man-made chemicals used to control pests, weeds and fungus. Common sources include land application and manufacturing centers of pesticides. Examples include herbicides such as atrazine, and insecticides such as chlordane.
- **Inorganics:** Mineral-based compounds that are both naturally occurring and man-made. Examples include arsenic, asbestos, copper, lead, and nitrate.
- **Radionuclides:** Radioactive substances that are both naturally occurring and man-made. Examples include radium and uranium.
- **Radon:** Colorless, odorless, cancer-causing gas that occurs naturally in the environment. For more information go to <http://www.nj.gov/dep/rpp/radon/index.htm> or call (800) 648-0394.
- **Disinfection By-product Precursors:** A common source is naturally occurring organic matter in surface water. Disinfection by-products are formed when the disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (for example leaves) present in surface water.

Sources	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radionuclides			Radon			Disinfection Byproduct Precursors		
	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L
Well 131			X	X				X		X					X		X			X		X		
Well 302D		X				X			X	X				X		X			X		X			
Well 410		X		X					X	X				X		X		x			X			



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 Picatinny Arsenal Police Department (973)724-6666.

FOR MORE INFORMATION

To learn more about your water supply and local activities, visit us online at www.amwater.com

WHAT ARE WE DOING?

American Water O&M LLC – Picatinny Arsenal provides water service to approximately 6,950 customers. 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 6,800 dedicated professionals who provide regulated and market-based drinking water, wastewater and other related services to 15 million people in 46 states. 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. The web sites of US EPA Office of Water, the Centers for Disease Control and Prevention and New Jersey Department of Environmental Protection Division of Water Supply, provide a substantial amount of information on many issues relating to water resources, water conservation and public health.



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.

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).

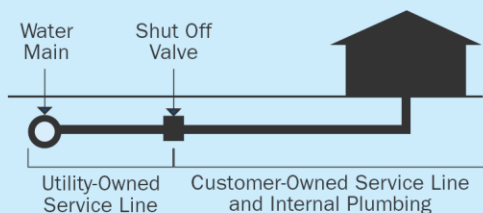
CONTAMINANTS THAT MAY BE PRESENT IN SOURCE WATER INCLUDE:

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.

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. Your water utility 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>.

UTILITY-OWNED VS. CUSTOMER-OWNED PORTION OF THE SERVICE LINE



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 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 1-862-397-5990.



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.

IS THERE LEAD IN MY WATER?

Although we regularly test lead levels in your drinking water, it is possible that lead and/or copper levels at your home are higher because of materials used in your home plumbing. If present, elevated levels of lead can cause serious 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.

We take steps to reduce the potential for lead to leach from your pipes into the water. This is accomplished by maintaining the quality of your water leaving our treatment facilities. There are steps that you can take to reduce your household's exposure to lead in drinking water.

If you are concerned about lead in your drinking 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 EPA Safe Drinking Water Hotline at 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>

A Lead Service Line inventory for buildings on Picatinny Arsenal can be found online at:

https://www.amwater.com/corp/resources/PDF/Military-Services/Picatinny/Picatinny_Lead_%20Service_Line_Inventory.pdf



Important Information
About **Drinking Water**

Important Information About **Drinking Water**

COMPLIANCE WITH OTHER DRINKING WATER REGULATIONS

The Safe Drinking Water Act regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, volatile organic chemicals and synthetic organic chemicals. Our system has received monitoring waivers for the following:

Asbestos Waiver – The NJDEP determined that our system is not considered to be vulnerable to asbestos contamination. Our water was found to not be corrosive, and our wells are not located in an area known to have asbestos-bearing rock formations. NJDEP has granted American Water an asbestos monitoring waiver for the nine-year compliance cycle 2020-2028.

Pesticides and Synthetic Organic Compounds (SOC's) – The NJDEP determined that our system is not considered to be vulnerable based on an extensive survey of the Arsenal land use. The NJDEP issued a waiver to Picatinny Arsenal for the period for compliance period 1/1/2020 through 12/31/2022. SOC waiver was not yet issued for this compliance period.

DETECTED CONTAMINANTS

A detected contaminant is any contaminant detected at or above its minimum detection limit (MDL). The EPA requires that this report show the HIGHEST level of each detected contaminant that is above the MINIMUM detection limit. A contaminant below the MDL is considered to be Non-Detectable (ND).



Important Information About Drinking Water



UNREGULATED CONTAMINANT MONITORING RULE (UCMR)

The EPA created the Unregulated Contaminants Monitoring Rule (UCMR) to assist them in determining the occurrence of unregulated contaminants in drinking water and whether new regulations are warranted. The first Unregulated Contaminants Monitoring Rule (UCMR1) testing was completed in 2003 for a list of contaminants specified by the EPA. Unregulated contaminants are those for which the EPA has not established drinking water standards. UCMR2 testing was conducted between November 2008 and August 2009, and UCMR3 assessment monitoring was conducted between January 2013 and December 2016. The fourth list of contaminants to monitor as part of the UCMR was published by the EPA in December 2016. UCMR4 testing began in 2018 and was completed in 2020. The results from the UCMR monitoring are reported directly to the EPA. The results of this monitoring are incorporated in the data tables in this report as appropriate. For more information, contact our Customer Service Center at 1-862-397-5990.

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.

American Water- Picatinny Arsenal 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 non-enforceable Health Advisory Level set by U.S. EPA. Sampling allows us to understand how our water compares against NJDEP MCL of 13 ppt for Perfluorononanoic Acid and Perfluorooctane Sulfonic Acid and 14 ppt for Perfluorooctanoic Acid.

Additionally, in 2024, American Water- Picatinny Arsenal will be checking our 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 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

Health Effects of Contaminants

TECHNICAL INFORMATION

CCR's require a brief discussion of any contaminants that have an established Maximum Contaminant Level (MCL) and register above Minimum Detection Levels (MDL) in the drinking water. CCR's also require an educational discussion of the effects of Cryptosporidium, radon, and other contaminants.

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.

SODIUM (Health effects) – 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. The RUL for sodium is 50 parts per million (ppm) and our water system detected sodium at 102 ppm in 2021.

HARDNESS - There are no negative health effects associated with high levels of hardness in drinking water.

MANGANESE – The recommended upper limit for manganese is based on staining of laundry. Manganese is an essential nutrient, and toxicity is not expected from levels which would be encountered in drinking water.

CHLORIDE - Not much is known about the health effects of chlorides. Negative health effects are usually associated with salts like sodium, calcium, and potassium that they are attached to.

LEAD - Infants and children: delays in physical or mental development: children could show slight deficits in attention span and learning abilities. Adults may have kidney problems and high blood pressure.

COPPER - Short term exposure: gastrointestinal distress. Long term exposure: liver or kidney damage. People with Wilson's disease should consult their personal doctor if their water exceeds the action level.

1,3-DICHLOROBENEZE - Some people who drink water containing 1,3-Dichlorobenezene in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory system. (Sources) Discharge from industrial chemical factories.

1,1-DICHLOROETHANE - Some people who drink water containing 1,1, Dichloroethane in excess of the MCL over many years could experience problems with their kidneys. (Sources) Discharge from metal degreasing sites and other factories.

NAPHTHALENE - Some people who drink water containing Naphthalene in an excess of the MCL over many years could experience problems with cataracts and hemolytic anemia. (Sources) Discharge from industrial chemical factories, exposure to mothballs.

1,1,2,2-TETRACHLOROETHANE - Some people who drink water containing 1,1,2,2-Tetrachloroethane in excess of the MCL over many years could experience problems with their liver, kidneys, and central nervous system. (Sources) Discharge from industrial chemical factories.

Health Effects of Contaminants

METHYL TERTIARY BUTYL ETHER (MTBE) - MTBE is used to increase the octane rating of gasoline, and more recently has been added to gasoline to meet the requirements of the clean air act, which requires increased oxygen content of gasoline in both CO and ozone non-attainment areas. Typical concentrations in gasoline are 2 – 8 % by volume for increasing octane ratings. A MCL of 70 ug/l for MTBE has been derived based on increased kidney weight seen in sub-chronic gavage studies and its classification as a possible human carcinogen.

TRICHLOROETHENE - The EPA sets drinking water standards and has determined that trichloroethene is a health concern at certain levels of exposure. This chemical is a common metal cleaning and dry-cleaning fluid. It generally gets into drinking water by improper waste disposal. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed to high levels over their lifetimes. Chemicals that cause cancer in laboratory animals may also increase the risk of cancer in humans that are exposed to lower levels over long periods of time. EPA has set forth the enforceable drinking water standard of 5.0 ug/l (New Jersey has a maximum contaminant level of 1 ug/l) to reduce the risk of cancer or other adverse health effects which may have been observed in laboratory animals. Drinking water that meets this standard is associated with little to any of this risk and should be considered safe.

DIBROMOCHLOROMETHANE - Dibromochloromethane are formed as by-products when chlorine is added to water supply systems. High levels of Dibromochloromethane can damage the liver and kidneys and affect the brain. Dibromochloromethane has been found in at least 141 and 172, respectively, of the 1636 National Priority List sites identified by the EPA.

TOTAL TRIHALOMETHANE - Trihalomethanes are formed as by-products when chlorine is added to water supply systems. High levels of Trihalomethanes can damage the liver, kidneys and affect the brain. The MCL is 80 ppb and the water is tested at the furthest part in the distribution system to allow for the longest time for the parameters to develop.

HALOACETIC ACIDS (HAA5) - Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

TOTAL DISSOLVED SOLIDS (TDS) - This contaminant may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water.

PERFLUOROCTANE SULFONATE (PFOS) - studies indicate that exposure over certain levels may result in adverse health effects including, developmental effects to fetuses during pregnancy or to breastfed infants, liver effects, immune effects and thyroid effects.

PERFLUOROCTANE ACID (PFOA) - studies indicate that exposure over certain levels may result in adverse health effects including, developmental effects to fetuses during pregnancy or to breastfed infants, liver effects, immune effects and thyroid effects

BARIUM - Water containing high levels of Barium may cause an increase in blood pressure.

SULFATE - Water containing high levels of sulfate may cause diarrhea similar to laxatives.

ZINC - This contaminant may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water.

IRON - This contaminant may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water.

CHROMIUM - Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.



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 New Jersey 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.

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

American Water Military Service Group – Picatinny Arsenal 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 Used in This Report” 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

HOW TO READ THIS TABLE (FROM LEFT TO RIGHT)

- Starting with **Substance (with units)**, read across.
- **Year Sampled** is usually in 2022 but may be prior years.
- A **Yes** under **Compliance Achieved** means the amount of the substance met government requirements.
- **MCLG/MRDLG** is the goal level for that substance (this may be lower than what is allowed).
- **MCL/MRDL/TT/Action Level** shows the highest level of substance (contaminant) allowed.
- **RL** Reporting limit
- **Highest, Lowest or Average Compliance Result** represents the measured amount detected.
- **Range** tells the highest and lowest amounts measured.
- **Typical Source** tells where the substance usually originates.

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

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LEAD AND COPPER MONITORING PROGRAM - At least 20 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 Buildings / Homes Sampled	Buildings/ Homes Above Action Level	Typical Source
Lead (ppb)	2021	Yes	0	AL=15	0	20	0	Corrosion of household plumbing systems.
Copper (ppm)	2021	Yes	1.3	AL=1.3	.267	20	0	Corrosion of household plumbing systems.

REVISED TOTAL COLIFORM RULE - At least 7 samples collected each month in the distribution system

Contaminants	Year Sampled	Compliance Achieved	MCLG	MCL	Total Number of Positive Samples	Typical Source
Total Coliform (Triggered Assessment)	2022	Yes	0	*MCL = Less than 5% OR MCL = No more than 1 positive monthly sample	0	Naturally present in the environment.
E. Coli	2022	Yes	0	TT = 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.

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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)	2022	Yes	NA	80	9.74	2.49 to 9.73	By-product of drinking water disinfection.
Haloacetic Acids (HAAs) (ppb)	2022	Yes	NA	60	0	0 to 0	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 average.

DISINFECTANTS - Collected in the Distribution System and at the Treatment Plant								
Substance (with units)	Year Sampled	Compliance Achieved	MRDLG	MRDL	Minimum Chlorine Residual	Annual Average	Range Detected	Typical Source
Entry Point Chlorine Residual (ppm) ¹	2022	Yes	4	4	0.84	1.31	0.84 to 1.74	Water additive used to control microbes.
Distribution System Chlorine Residual (ppm) ²	2022	Yes	4	4	0.33	0.80	0.35 to 1.41	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.

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REGULATED SUBSTANCES - Collected at the Treatment Plant required every 3yrs							
Substance (with units)	Year Sampled	MCLG	MCL	RL	Highest Compliance Result	Exceeded Standard MCL	Typical Source
Arsenic (ppb)	2021	0	5	0.500	ND	NO	Erosion from natural deposits; Runoff from orchards; Runoff from glass and electronics productions wastes
Barium (ppm)	2021	2	2	0.002	0.0507	NO	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Beryllium (ppb)	2021	4	4	0.250	ND	NO	Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries
Cadmium (ppb)	2021	5	5	0.500	ND	NO	Corrosion of galvanized pipes; Erosion of natural deposits; Metal refineries discharge; Waste batteries and paint runoff
Chromium (ppb)	2021	100	100	0.500	1.49	NO	Discharge from steel and pulp mills, Erosion of natural deposits
Nickel (ppb)	2021	100	100	0.500	1.65	NO	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Antimony (ppb)	2021	6	6	0.400	ND	NO	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Nitrate (ppm)	2021	10	10	0.200	ND	NO	Runoff from fertilizer use; industrial or domestic wastewater discharges; erosion of natural deposits.
Selenium (ppb)	2021	50	50	6.0	ND	NO	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Mercury (ppb)	2021	2	2	0.200	ND	NO	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Thallium (ppb)	2021	2	2	0.250	ND	NO	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories
Fluoride (ppm)	2021	4	4	0.200	ND	NO	Erosion from natural deposits; Water additive which promotes strong teeth
Cyanide (ppb)	2021	200	200	10.0	ND	NO	Discharge from steel /metal factories; Discharge from plastic and fertilizer factories

VOLATILE ORGANIC COMPOUNDS - Collected at the Treatment Plant							
Substance (with units)	Year Sampled	Compliance Achieved	MCLG	MCL	Highest Compliance Result	Range Detected	Typical Source
Naphthalene (ppb)	2022	Yes	300	300	ND	NA	Discharge from industrial chemical factories, mothballs.
1,1,2,2-Tetrachloroethane (ppb)	2022	Yes	1	1	ND	NA	Discharge from industrial chemical factories

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RADIOACTIVE CONTAMINANTS - Collected at the Treatment Plant (TP001013) required every 6 yrs

Substance (with units)	Year Sampled	MCLG Treated Water	MCL Treated Water	Result	MDL	Exceeded Standard MCL	Likely Source of Contaminant
Gross Alpha (pCi/l)	2018	0	15	2.159	1.296	No	Radioactive contaminants can be naturally-occurring or be the result of oil and gas production and mining activities.
Radium 226/228 (pCi/l)	2018	0	5	<0.13/<0.42	0.13/0.42	No	Radioactive contaminants can be naturally-occurring or be the result of oil and gas production and mining activities.
Uranium (ug/l)	2018	0	30	<0.44	0.44	No	Radioactive contaminants can be naturally-occurring through erosion of natural deposits or be the result of oil and gas production and mining activities.

SECONDARY CONTAMINANTS - Collected at the Treatment Plant (TP001013) required every 3 years

Substance (with units)	Year Sampled	RUL Treated Water	Result	RL	Exceedance Standard MCL	Typical Source
Hardness (ppm)	2021	250	295	2.50	No	Naturally occurring minerals
Silver (ppm)	2021	0.1	ND	.002	No	Naturally occurring element
Aluminum (ppm)	2021	0.2	ND	.010	No	Naturally occurring element
Iron (ppm)	2021	0.3	ND	.200	No	Naturally occurring element
Manganese (ppm)	2021	0.05	ND	.002	No	Naturally occurring element
Sodium (ppm)	2021	50	102	2.00	Yes	Erosion of natural deposits; Road salting/de-icing
Sulfate (ppm)	2021	250	19.5	4.00	No	Erosion of natural deposits
Zinc (ppm)	2021	5	.0116	0.010	No	Naturally occurring element
Chloride (ppm)	2021	250	178	5.00	No	Erosion of natural deposits; Road salting/de-icing
Alkalinity (ppm)	2021	N/A	140	2.00	No	Physical Characteristic
pH (Standard Units)	2021	6.5 – 8.5	7.40	.010	No	Physical Characteristic
Color (Color Units)	2021	10	ND	2.00	No	Physical Characteristic
Detergents ABS/LAS (ppm)	2021	0.5	ND	.0500	No	Synthetic Detergents
Odor (Threshold Odor)	2021	3	ND	1.00	No	Physical Characteristic
Total Dissolved Solids (ppm)	2021	500	547	20.0	No	Erosion of natural mineral deposits

PFAS MONITORING

American Water has performed voluntary sampling to better understand the occurrence of certain PFAS in drinking water sources. This sampling allows us to understand how our water compares against the non-enforceable Health Advisory Level set by U.S. EPA. Sampling also allows American Water to be better prepared as New Jersey Department of Environmental Protection has already developed drinking water standards for PFOA and PFOS.

With the newly adopted regulations by the State Agency (NJDEP) effective first quarter 2019, American Water samples for perflourinated compounds within the treated water system.

The laboratory detection value for perflourinated compounds has been reduced from parts per billion (ppb) to parts per trillion (ppt). Similarly, regulatory recommended guidance values have also been established in parts per trillion. In 2017, The New Jersey Department of Environmental Protection (NJDEP) has established a guidance value of 14 ppt for PFOA, and 13 ppt for PFOS and PFNA. We are pleased to report that our Granular Activated Carbon Units (GAC) units are effectively removing these contaminants to below the method detection limit since they have been in service since May 18, 2018.

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PERFLUORINATED COMPOUNDS – Collected at Treatment Plant in 2022

Parameter	Units	MCL	Result	Typical Source
Perfluorooctanoic acid (PFOA)	ppt	14	ND	Manufactured chemical(s); used in household goods for stain, grease, heat, and water resistance.
Perfluorooctane sulfonic acid (PFOS)	ppt	13	ND	
Perfluorobutane sulfonic acid (PFBS)	ppt	None	ND	
Perfluorohexanoic acid (PFHxA)	ppt	None	ND	
Perfluorohexanesulfonic acid (PFHxS)	ppt	None	ND	
Perfluorononanoic acid (PFNA)	ppt	13	ND	

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). 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. U.S. EPA is currently developing drinking water regulations for PFOA and PFOS that take these challenges into consideration and American Water will take appropriate actions to meet any new regulations. 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.epa.gov/pfas>.



Tested for, but Not Detected

- 1,1,1-Trichloroethane
- 1,1,2-Trichloroethane
- 1,1-Dichloroethene
- 1,2,4-Trichlorobenzene
- 1,2-Dibromo-3-chloropropane
- 1,2-Dibromoethane (EDB)
- 1,2-Dichlorobenzene
- 1,2-Dichloroethane
- 1,2-Dichloropropane
- 1,4-Dichlorobenzene
- 2,4,5-T
- 2,4,5-TP (Silvex)
- 2,4-DB
- 3,5-Dichlorobenzoic Acid
- 3-Hydroxycarbofuran Acifluorfen
- Alachlor
- Aldicarb
- Aldicarb Sulfone Aldicarb Sulfoxide
- Aluminum - Total
- Antimony - Total Arochlor-1016
- Arochlor-1221 Arochlor-1232
- Arochlor-1242
- Arochlor-1248 Arochlor-1254
- Arochlor-1260 Arsenic - Total
- Barium - Total Bentazon
- Benzene
- Benzo(a)pyrene Beryllium - Total
- Boron - Total Bromoform Cadmium
- - Total Carbaryl (Sevin) Carbofuran
- Carbon tetrachloride Chlorobenzene
- Chromium - Total
- cis-1,2-Dichloroethene Cobalt - Total
- Copper - Total
- Cyanide, Total
- Dacthal
- Dalapon
- Di(2-ethylhexyl)adipate Di(2-ethylhexyl)phthalate
- Dicamba
- Dichloroprop
- Dinoseb
- Diquat
- Endothall
- Endrin
- Ethyl Benzene
- Gamma-BHC (Lindane) Glyphosate
- Heptachlor
- Heptachlor epoxide
- Hexachlorobenzene
- Hexachlorocyclopentadiene Iron - Total
- Lead - Total
- Manganese - Total
- Mercury - Total
- Methiocarb
- Methomyl
- Methoxychlor
- Methyl tert-Butyl ether (MTBE)
- Methylene chloride
- Molybdenum - Total
- Monobromoacetic Acid Nickel - Total
- Oxamyl (Vydate) Pentachlorophenol
- Perchlorate
- Picloram
- Silver - Total
- Simazine (Princep)
- Styrene
- Technical Chlordane
- Tetrachloroethene (PCE)
- Thallium - Total
- Toluene
- Total PCBs
- Toxaphene
- trans-1,2-Dichloroethene
- Trichloroethene (TCE)
- Vinyl chloride
- Xylene (total)
- Zinc - Total

How to Contact Us

If you have any questions about this report, your drinking water, or service, please contact American Water-Picatinny Monday to Friday, 7:30 a.m. to 4:30 p.m. at (862)-397-5990

For more information, visit amwater.com and follow American Water on Twitter, Facebook and LinkedIn.

The web sites of US EPA Office of Water, the Centers for Disease Control and Prevention and New Jersey Department of Environmental Protection Division of Water Supply, provide a substantial amount of information on many issues relating to water resources, water conservation and public health.

WATER INFORMATION SOURCES

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

New Jersey Department of Environmental Protection Division of Water Supply and Geoscience

www.nj.gov/dep/watersupply