2015 Annual

Water Quality Report

Pennsgrove System
PWSID: NJ1707001

NEW JERSEY AMERICAN WATER

PARTNERSHIP FOR SAFE WATER

A Message from the New Jersey American Water President

To Our Valued Customer:

New Jersey American Water is proud to be your local water service provider, and I am pleased to share some very good news about the quality of your drinking water. As you read through our Annual Water Quality Report, you will see that we continue to supply water that meets or surpasses all state and federal water quality standards. **Better yet, the price you pay for this high-quality water service remains less than a penny per gallon.**

New Jersey American Water has experienced professionals, the right technologies in use, and a demonstrated commitment to replacing and upgrading our infrastructure so that you can be assured that your drinking water is of the highest standards.

Please take the time to review this report. It provides details about the source and quality of your drinking water using the data from water quality testing conducted for your local system between January and December 2015.

Thanks for allowing us to serve you.

Sincerely

William M. Varley

William M. Varley
President, New Jersey American Water

Share This Report:

Landlords, businesses, schools, hospitals and other groups are encouraged to share this important water quality information with water users at their location who are not customers. Additional copies of this report are available by contacting customer service at 1-800-272-1325.This report contains important information about your drinking water. If you do not understand it, please have someone translate it for you.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

本报告与您的饮用水有关。
如果您不了解其内容，应请别人为您翻译解说。

이 보고서에는 귀하께서 사용하고 계시는 식수에 관한 정보가 들어있습니다.
만약에 이해를 못하시면 누군가에게 번역을 의뢰하십시오.

આ અહેવાલ માં તમારા પીવાના પાણી વિષે
અગત્ય ની જાણકારી આપવા માં આવી છે.
એનો અનુવાદ કરો અથવા જેને સમજણ પડતી
હોય તેની સાથે વાત કરો

AT LESS THAN A PENNY PER GALLON WATER IS A GREAT VALUE™

WE CARE ABOUT WATER. IT'S WHAT WE DO.®

About New Jersey American Water

New Jersey American Water, a subsidiary of American Water (NYSE: AWK), is the largest investor-owned water utility in the state, providing high-quality and reliable water and/or wastewater services to approximately 2.7 million people.

About American Water

Founded in 1886, American Water is the largest publicly traded U.S. water and wastewater utility company. With headquarters in Voorhees, N.J., the company employs approximately 6,600 dedicated professionals who provide drinking water, wastewater and other related services to an estimated 15 million people in more than 40 states and parts of Canada. More information can be found by visiting www.amwater.com.

Water Information Sources

- **New Jersey Department of Environmental Protection**
  Bureau of Safe Drinking Water: (609) 292-5550
  www.state.nj.us/dep
- **New Jersey Board of Public Utilities:** (973) 648-2350
  Two Gateway Center, Newark, NJ 07102
  Division of Customer Relations: 1-800-624-0241
  www.state.nj.us/bpu
- **US Environmental Protection Agency:** www.epa.gov/safewater
  Safe Drinking Water Hotline: 1-800-426-4791
- **American Water Works Association:** www.awwa.org
- **Centers for Disease Control and Prevention:** www.cdc.govPublic Participation

Public Participation

How You Can Get Involved

Customers can participate in decisions that may affect the quality of water by:

- Reading the information provided in bill inserts and special mailings
- Contacting the company directly with questions or to discuss issues
- Responding to company requests for participation in focus groups and roundtables
- Attending open houses conducted by the company
- Responding to survey requests

Our Commitment to Quality

Once again, we proudly present our annual water quality report, which details the results of water quality testing completed from January to December, 2015. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Included in this report are details about where your water comes from, what it contains, and how our water quality results compare to federal and state standards.

We are committed to delivering the best quality drinking water. To that end, we remain vigilant in meeting the challenges of source water protection, water conservation, and community education while continuing to serve the needs of all our water users. We want you to be informed about your drinking water.

How to Contact Us

Thank you... for allowing us to continue to provide you with quality drinking water this year. We ask that all our customers protect our water sources. Please call our Customer Call Center toll-free at 1-800-272-1325 if you have questions.

New Jersey American Water
131 Woodcrest Road, P.O. Box 5079, Cherry Hill, NJ 08034

Protecting Your Water Source

What is S.W.A.P.?

SWAP (Source Water Assessment Program) 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 New Jersey American Water — Pennsgrove System

The table below illustrates the susceptibility ratings for 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 are available for public water systems at www.state.nj.us/dep/swap/ or by contacting the NJDEP's Bureau of Safe Drinking Water at (609) 292-5550.

Pennsgrove		Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radionuclides			Radon			Disinfection By-Product Precursors		
	Sources	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L
	Wells – 7		4	3	7				7		3		4	5	2		7			3	4			7	
	GUDI - 0																								
	Surface Water Intakes - 0																								

Contaminant Categories

DEP considered all surface water highly susceptible to pathogens, therefore all intakes received a high rating for the pathogen category. For the purpose of the Source Water Assessment Program, 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, 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 has an important role in source water protection. 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, those 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 1-800-648-0394.

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.

Where Your Water Comes From

New Jersey American Water – Pennsgrove System is a public community water system consisting of 7 wells that draw from the Potomac-Raritan-Magothy (PRM) Aquifer. This system may receive additional supply through an interconnection with our Logan System, which consists primarily of PRM groundwater, but may also include treated surface water from the Delaware River.

What's in the Source Water Before We Treat It?

In general, the sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activities. industrial processes and petroleum production, and may also come from gas stations, urban storm water runoff and septic systems.

Substances That May Be Present in Source Water Include:

Microbiological Contaminants: such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations or 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 stormwater runoff and residential uses.

Organic Chemical Contaminants: including synthetic and volatile organic chemicals which are by-products of

Radioactive Contaminants: which can be naturally occurring or may be the result of oil and gas production and mining activities.

Do I Need to Take Special Precautions?

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

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 EPA's Safe Drinking Water Hotline at 1-800-426-4791.

Water Quality Statement

The data presented in the Table of Detected Contaminants is the same data collected to comply with U.S. Environmental Protection Agency and New Jersey state monitoring and testing requirements. We have learned through our testing that some contaminants have been detected, however, these contaminants were detected well below the levels set by the EPA to protect public health. To assure high quality water, individual water samples are taken each year for chemical, physical and microbiological tests. Testing is conducted on water collected at the source, during treatment, from the distribution system after treatment and, for lead and copper monitoring, from customers' taps. Testing can pinpoint a potential problem so that preventative action may be taken. 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 systems have received monitoring waivers for synthetic organic chemicals and asbestos.

How Do I Read the Table of Detected Contaminants?

First, determine which table you should read by finding your town in the Towns Served by this System. Starting with the **Contaminant,** read across from left to right. A "**Yes**" under **Compliance Achieved** means the amount of the substance met government requirements. The column marked **MCLG, Maximum Contaminant Level Goal,** is 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. The shaded column marked **MCL, Maximum Contaminant Level,** is 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. The column marked **Highest Level Detected** shows the highest test results during the year. The column marked **Range Detected** shows the highest and lowest test results for the year. **Typical Source** shows where this substance usually originates. Compare the detected values with the MCL column. To be in compliance, the Highest Level Detected must be lower than the MCL standard. Those substances not listed in the table were not found in the treated water supply. The footnotes and the definitions below will help you interpret the data presented in the Table of Detected Contaminants.

Vulnerable Populations Statement

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/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial pathogens are available from the Safe Drinking Water Hotline at 1-800-426-4791.

Towns Served By Pennsgrove System: Borough of Pennsgrove | Carney's Point Township | Pedricktown | Oldmans Township in part. Regulated contaminants not listed in this table were not found in the treated water supply.

Pennsgrove System PWSID NJ 1707001 — 2015 Table of Detected Contaminants

Regulated Substances

Contaminant	Units	Compliance Achieved	MCLG	MCL	Highest Level Detected	Range Detected	Typical Source
Inorganics							
Barium [1]	ppm	Yes	2	2	0.1	ND to 0.1	Erosion of natural deposits
Nickel	ppb	Yes	NA [2]	NA [2]	6	ND to 3	Erosion of natural deposits
Nitrate	ppm	Yes	10	10	2.69	2.69	Runoff from fertilizer use; industrial or domestic wastewater discharges; erosion of natural deposits
Treatment Byproducts							
Five Haloacetic Acids [HAA_5]- (Stage 2)	ppb	Yes	NA	60	6 [3]	ND to 3	By-product of drinking water disinfection
Total Trihalomethanes [TTHM]- (Stage 2)	ppb	Yes	NA	80	25 [3]	1.2 to 21.9	By-product of drinking water disinfection
Disinfectants							
Chlorine	ppm	Yes	MRDLG = 4	MRDL = 4	0.8 [3]	ND to 1.37	Water additive used to control microbes
Radiologicals (2011)[1]							
Alpha Emitters	pCi/L	Yes	0	15	5.6	ND to 5.6	Erosion of natural deposits
Combined Radium (226/228)	pCi/L	Yes	0	5	2.9	ND to 2.9	Erosion of natural deposits
Tap water samples were collected from 34 homes in the service area as part of our Lead and Copper Monitoring Program							
Lead & Copper Monitoring	**Units**	**Compliance Achieved**	**MCLG**	**Action Level**	**90th Percentile**	**Homes Above Action Level**	**Typical Source**
Copper	ppm	Yes	1.3	1.3	0.368	0	Corrosion of household plumbing systems
Lead	ppb	Yes	0	15	0	0	Corrosion of household plumbing systems

Secondaries	Units	Typical Source	RUL	Highest Level Detected	Range Detected	
Sodium	ppm	Naturally Occurring	50	154	31 to 154	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 a concern to individuals on a sodium restricted diet.

Footnotes

[1] The State of New Jersey allows us to monitor for certain contaminants less than once a year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative, are more than one year old.

[2] Nickel monitoring is required. Currently there is no established MCL or MCLG.

[3] Data represents the highest locational quarterly running annual average

[4] Data represents the highest quarterly running annual average

In addition to local ground water, Pennsgrove System receives treated surface water from the Delaware River Regional Water Treatment Plant.

Delaware River Regional Water Treatment Plant							2015 Table of Detected Contaminants
Regulated Substances							
Parameter	**Units**	**Compliance Achieved?**	**MCLG**	**MCL**	**Highest Level Detected**	**Range Detected**	**Typical Source**
Inorganics							
Nitrate	ppm	Yes	10	10	1.09	1.09	Runoff from fertilizer use; industrial or domestic wastewater discharges; erosion of natural deposits
Total Chromium	ppb	Yes	100	100	1.8	ND to 1.8	Naturally-occuring element; used in making steel and other alloys; chromium -3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Disinfectants							
Chlorine	ppm	Yes	NA	TT = ≥ 0.20	0.36 [1]	0.36 to 0.96	Water additive used to control microbes
		Yes	MRDLG = 4	MRDL = 4	0.96 [1]		
Turbidity							
Turbidity [2]	NTU	Yes	0	TT = 1 NTU	0.13	ND to 0.13	Soil runoff
	%	Yes		TT = % of samples <0.3 NTU	100%	NA	Soil runoff
Treatment Byproducts Precursor Removal							
Total Organic Carbon (TOC)	%	Yes	NA	TT ≥ 35% Removal	36% [3]	36% to 88%	Naturally present in the environment.

Footnotes

[1] Data represents the lowest and highest chlorine residual entering the distribution system from our surface water treatment plant

[2] 100% of the turbidity readings were below the treatment technique requirement of 0.3 NTU. Turbidity is a measure of the cloudiness of the water. We monitor turbidity because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

[3] Data represents the lowest removal of Total Organic Carbon (TOC).

Table Definitions

90th Percentile Value: Of the samples taken, 90% of the values of the results were below the level indicated in the table.

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

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

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

NA: not applicable

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

ND (Not Detected): Laboratory analysis indicates that the constituent is not present

ppb (parts per billion): Corresponds to one part substance in one billion parts of water.

ppm (parts per million): Corresponds to one part substance in one million parts of water.

pCi/L (Picocuries per Liter): A measure of the radioactivity in water.

RUL: Recommended Upper Limit

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

Unregulated Contaminants Monitoring Rule

The Pennsgrove System participated in the third phase of the Unregulated Contaminant Monitoring Rule 2 (UCMR3) in 2015. Unregulated contaminants are those for which the EPA has not established drinking water standards. Monitoring assists the EPA in determining the occurrence of these compounds and whether or not regulation is warranted. **The system did not detect any of the contaminants for which monitoring was conducted (Lists 1 & 2).** Pennsgrove System participated in the third phase of the Unregulated Contaminant Monitoring Rule (UCMR3) in 2015.

For general information on UCMR3, visit http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr3 or contact EPA's Safe Drinking Water Hotline at 1-800-426-4791.

Unregulated Contaminants Monitoring* (UCMR3) (2015)

Parameter	Units	Highest Locational Average	Highest Level Detected	Range Detected	Typical Source
Chlorate	ppb	315	380	250 to 380	Agricultural defoliant or desiccant; disinfection byproduct; and used in production of chlor
Chromium (VI)	ppb	0.28	0.5	0.06 to 0.5	Naturally-occuring element; used in making steel and other alloys; chromium -3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Strontium	ppb	315	332	298 to 332	Naturally-ocurring element; historically comercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions

Perfluorinated Compounds

Parameter	Units pptr = parts per trillion	Provisional Health Advisory Limit	Highest Locational Average	Range Detected	Typical Source
Perfluorooctanoic Acid (PFOA)	pptr	40	1.5	ND to 18	Perfluorinated aliphatic carboxylic acid; used for its emulsifier and surfactant properties in or as fluoropolymers (such as Teflon), fire - fighting foams, cleaners, cosmetics, greases and lubricants, paints, polishes, adhesives and photographic films
Perfluoroheptanoic Acid (PFHpA)	pptr	n/a	0.8	ND to 10	Manmade chemical; used in products to make them stain, grease, heat and water resistant
Perfluorohexanoic Acid (PFHxA)	pptr	n/a	1.6	ND to 19	Manmade chemical; used in products to make them stain, grease, heat and water resistant
Perfluoropentanoic Acid (PFPA)	pptr	n/a	3.4	ND to 25	Manmade chemical; used in products to make them stain, grease, heat and water resistant

Cryptosporidium

Cryptosporidium is a protozoan found in surface water throughout the U.S. Although filtration removes *Cryptosporidium*, the most commonly used filtration methods cannot guarantee 100 percent removal. 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, people with severely weakened immune systems have a risk of developing a life threatening illness. We encourage such people to consult their doctors regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease. It can also be spread through means other than drinking water.

The U.S. EPA issued a rule in January 2006 that requires systems with higher *Cryptosporidium* levels in their source water to provide additional treatment. To comply with this rule, New Jersey American Water once again began conducting 24 consecutive months of monitoring for *Cryptosporidium* in our raw water sources in 2015. We detected the organism in the Delaware River during this testing. **This sample was collected from the source before the water was processed through our treatment plant.** We will continue monitoring in 2016. At this time based on the results of our *Cryptosporidium* monitoring in 2015, there is no indication that additional treatment will be required by the U.S. EPA regulation. For additional information regarding cryptosporidiosis and how it may impact those with weakened immune systems, please contact your personal health care provider.

Partnership for Safe Water

The Delaware River Regional Water Treatment Plant participates in the Partnership for Safe Water, receiving the Director's Award recognition every year since 2010. In 2015, Delaware System facilities were awarded the prestigious "Fifteen-Year Director's Award" under the Partnership for Safe Water program administered by the U.S. EPA, New Jersey Department of Environmental Protection, and other water related organizations. The award honors water utilities for achieving operational excellence, by voluntarily optimizing their treatment facility operations and adopting more stringent performance goals than those required by federal and state drinking water standards. We are proud to report that we continue to maintain those quality standards.

Lead in Drinking Water

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. New Jersey 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.

What is Radon?

Radon is a radioactive gas that occurs naturally in some groundwater. It may pose a health risk when the gas is released from water into air, as occurs while showering, washing dishes and performing other household activities. Radon can move up through the ground and into a home through cracks in the foundation. Compared to radon entering the home through soil, radon entering through tap water is, in most cases, a small source of radon in indoor air. Inhalation of radon gas has been linked to lung cancer, however the effects of radon ingested in drinking water are not yet clear. If you are concerned about radon in your home, tests are available to determine the total exposure level. The EPA is developing regulations to reduce radon in drinking water. Radon in the air is inexpensive to test and easy to correct. For additional information call EPA's Radon Hotline at 1-800-SOS-RADON.