



# 2018 Annual Water Quality Report



City of Camden  
PWS ID: NJ0408001



As the water operations and maintenance contractor for the City of Camden Division of Utilities, American Water Contract Services is proud to provide customers with high-quality, reliable water service. As you read this Annual Water Quality Report, you will see that the City of Camden Division of Utilities continues to supply water that meets or surpasses all state and federal water quality standards.

This service is an exceptional value when you consider the facilities and technology needed to draw water from the source and treat it, along with miles and miles of pipeline hidden below the ground to bring water to your tap. What's more, our plant operators, water quality experts, engineers and maintenance crews work around the clock to make sure that quality water is always there when you need it.

Because water is essential for public health, fire protection, economic development and overall quality of life, our employees are committed to ensuring that quality water keeps flowing not only today but well into the future. Delivering reliable, high-quality water service also requires significant investment to maintain and upgrade aging facilities. Working with the City of Camden to identify and analyze the system to help prioritize necessary improvement projects is key to efficiently maintaining critical infrastructure.

American Water's Contract Services Group provides water and wastewater management solutions for municipal and industrial clients. The Contract Services Group is part of American Water Enterprises, a market-based subsidiary of American Water. As a part of the nation's largest and most geographically diverse publicly traded U.S. water and wastewater utility company, American Water is uniquely qualified to operate and maintain this system.

The Camden Water System is operated through a partnership between American Water and the City of Camden. Through this partnership, which began on February 1, 2016, the City retains ownership of all the water facilities and sets the rates. American Water, as contract operator, provides the day-to-day management of the water system. These organizations work together to provide you with water that meets-and often surpasses-all the health and safety standards set by the United States Environmental Protection Agency (USEPA) and the New Jersey Department of Environmental Protection (NJDEP).

We regularly test the water to be sure that your water meets the safety standards. All the test results are on file with the NJDEP, the agency that monitors and regulates drinking water quality in our state.

The Water Quality Report is provided to customers on an annual basis. This report contains important information about your drinking water. Please read it carefully and feel free to contact us at 856-635-1496 or 100 S 17<sup>th</sup> Street, Camden, NJ 08105 if you have any questions about your water or your water service. You can also call the EPA Safe Drinking Water Hotline at 1-800-426-4791 with water related questions. If you have specific questions about your water as it relates to your personal health, we suggest that you contact your health care provider.

Sincerely,

*James E. Cowley Sr., P.E.*

Project Manager  
American Water Enterprises – Contract Services Group

## Share This Report

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly. Landlords, businesses, schools, hospitals and other groups are encouraged to post this notice in a public place.

Additional copies of this report are available by contacting our office at **856-635-1496**. 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.

## About American Water

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 6,700 dedicated professionals who provide regulated and market-based drinking water, wastewater and other related services to an estimated 15 million people in 47 states and Ontario, Canada. More information can be found by visiting [www.amwater.com](http://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](http://www.state.nj.us/dep)

### **US Environmental Protection Agency**

Safe Drinking Water Hotline: 1-800-426-4791

[www.epa.gov/safewater](http://www.epa.gov/safewater)

**American Water Works Association:** [www.awwa.org](http://www.awwa.org)

**Centers for Disease Control and Prevention:** [www.cdc.gov](http://www.cdc.gov)

## Public Participation

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

- Contacting the Director of Public Works
- Contacting the Division of Utilities directly with questions or to discuss issues at 856-635-1496.
- Attending Camden City Council meetings, which take place on the second Tuesday of each month

## Commitment to Quality

Once again the City of Camden and American Water Contract Services proudly present the Annual Water Quality Report, which details the results of water quality testing completed from January to December 2018. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect your drinking water sources. Included in this report are details about where your water comes from, what it contains, and how your water quality results compare to federal and state standards.

Our team is 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 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 the water sources. If you have questions, please call the Division of Utilities (operated by American Water Contract Services) at 856-635-1496 or you can stop at the office at:

**American Water Contract Services  
Camden Operations Center  
100 South 17<sup>th</sup> Street  
Camden, NJ 08105**

## 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 City of Camden 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. Source Water Assessment Reports and Summaries are available for public water systems at <http://www.nj.gov/dep/watersupply/swap/index.html>, or by contacting the NJDEP's Bureau of Safe Drinking Water at (609) 292-5550 or [watersupply@dep.nj.gov](mailto:watersupply@dep.nj.gov).

SOURCE WATER ASSESSMENT PROGRAM																									
Sources	Pathogens			Nutrients			Pesticides			VOC's			Inorganics			Radionuclides			Radon			DBP's			
	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	
Morris North Well Field (4)		4		2	2				4	3		1	4				4			2	2			4	
Morris South Well Field (10)		7	3		9	1			10	3		7	8	2			10			10				10	
Delair Well Field (3)		3			3				3	3			3				3			3				3	
Parkside Well Field (2)			2		2				2	2			2				2				2			2	

### Contaminant Categories

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 Source Water Assessment Program, radionuclides are more of a concern for groundwater 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 <a href="http://www.nj.gov/dep/rpp/radon/index.htm">http://www.nj.gov/dep/rpp/radon/index.htm</a> 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

City of Camden Division of Utilities owns a public community water system consisting of 19 wells that draw from the lower Potomac-Raritan-Magothy (PRM) Aquifer. The Division of Utilities also has three (3) emergency interconnections:

- New Jersey American Water Company
- Gloucester City Water Department
- Merchantville-Pennsauken Water Commission

None of these emergency interconnections were activated during 2018.

## What's in the Source Water before We Treat It?

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, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activities.

### Substances That May Be Present in Source Water Include:

Microbiological Contaminants:	Such as viruses and bacteria, this 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:	These 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 industrial processes and petroleum production, and may also come from gas stations, urban stormwater runoff, and septic systems.
Radioactive Contaminants:	These can be naturally occurring or may be the result of oil and gas production and mining activities.

## What Treatment Processes are used?

### Morris-Delair Water Treatment Plant

This plant has a treatment capacity of 18 million gallons per day (MGD) that predominately removes iron and manganese, volatile organic chemicals (VOCs), and other contaminants found in the raw well water. The treatment processes include aeration, pH adjustment, sedimentation, filtration, VOC removal, and chlorine disinfection. The finished water quality is in full compliance with federal and state standards under the "Safe Drinking Water Act" (SDWA). The Morris-Delair facility treats the primary sources of supply for the City.

### Parkside Water Treatment Plant

This plant has a capacity of 3 MGD that also removes iron and manganese, volatile organic chemicals (VOCs) and other contaminants found in the raw well water. The treatment processes at Parkside include aeration, pH adjustment, chemical oxidation, filtration, VOC removal and chlorine disinfection. The finished water quality is in full compliance with federal and state standards under the "Safe Drinking Water Act" (SDWA). The Parkside facility treats the supplemental sources of supply for the City.

## Do I Need to Take Special Precautions?

To ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (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 (1-800-426-4791).

## Water Quality Statement

The data presented in the Table of Detected Contaminants is the same data collected to comply with the EPA and the New Jersey Department of Environmental Protection (NJDEP) 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 and NJDEP 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, VOCs, and Synthetic Organic Chemicals.

The Division of Utilities has received monitoring waivers from the regulatory agencies for:

- Asbestos
- Synthetic Organic Chemicals

## Violations

Tier 1	Any time a situation occurs where there is the potential for human health to be immediately impacted, water suppliers have 24 hours to notify people who may drink the water about the situation.
Tier 2	Any time a water system provides water with levels of a contaminant that exceed EPA or state standards or that hasn't been treated properly, but that doesn't pose an immediate risk to human health, the water system must notify its customers as soon as possible, but within 30 days of the violation.
Tier 3	When water systems violate a drinking water standard that does not have a direct impact on human health (for example, failing to take a required sample on time) the water supplier has up to a year to provide a notice of this situation to its customers.

### Consumer Confidence Report (CCR) Rule, 40 CFR, Part 141, Subpart O - Tier 3

Public Water Systems (PWS) are required to distribute the Annual Consumer Confidence Report (CCR) to customers and State or local primacy agency for report covering January 1 – December 31 of previous calendar year by July 1<sup>st</sup> of each year.

- o While CCR was distributed to the customers of the City of Camden Division of Utilities prior to the July 1, 2018 deadline, however a copy was not provided to the NJDEP until August 2, 2018.

### Corrective Actions Taken

- o American Water Contract Services established a procedure to provide the CCR to NJDEP prior to the July 1<sup>st</sup> deadline each year.

## Significant Deficiencies

In May, 2016 (May 23<sup>rd</sup> to May 27<sup>th</sup>) the EPA and the NJDEP conducted a Sanitary Survey (a review of all files relating to drinking water testing and reporting for the period of 2013 -2015), as well as a physical inspection of the facilities of the Division of Utilities public water system (PWS – NJ0408001). All the deficiencies identified during the Sanitary Survey were corrected, and the matter was closed by both the EPA and NJDEP on October 30, 2018.

## How Do I Read the Table of Detected Contaminants?

- To read the table start with the **Contaminant**, and 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.
- Unless otherwise noted, the data presented in the tables in this report is from testing performed in the calendar year of this report.

## Definitions of Terms in Table

90th Percentile Value:	The results of 90% of the samples taken were below the level indicated in the table.
Action Level (AL):	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
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.
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 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.
Nephelometric Turbidity Units (NTU):	Measurement of the clarity, or turbidity, of the water.
Not Applicable (N/A):	Does not apply, or is not required.
Not Detected (ND):	Laboratory analysis indicates that the constituent is not present
Parts Per Billion (ppb):	Corresponds to one part substance in one billion parts of water.
Parts Per Million (ppm):	Corresponds to one part substance in one million parts of water.
Parts Per Trillion (ppt):	Corresponds to one part substance in one trillion parts of water.
Picocuries per Liter (pCi/L):	A measure of the radioactivity in water.
Recommended Upper Limit (RUL)	Regulatory agency recommended upper limit of a substance.
Treatment Technique (TT):	A required process intended to reduce the level of a contaminant in drinking water.
Waiver	Regulatory permission to reduce monitoring frequency because previous results have consistently been below the maximum contaminant level.



## 2018 Table of Detected Contaminants Regulated Compounds

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 contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Microbiological Contaminants						2018
<b>Revised Total Coliform Rule</b>						
Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. Coliforms indicate the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.						
Contaminant	MCLG	Compliant	MCL		Total Positive Samples	Typical Source
Total Coliform	0	YES	Level 1 Assessment Required if 5% of monthly samples are Positive		3	Naturally present in the environment
E. Coli	0	YES	E.Coli positive followed by any positive sample		1	Human or Animal Fecal Waste Note: All repeat samples (4) taken were negative for both E.Coli and Total Coliform

Disinfectant Residual							2018
Substance	Units	Compliant	MRDLG	MRDL	Highest Level Detected	Range Detected	Typical Source
Chlorine Residual	ppm	YES	4	4	2.00	0.8 - 2.00	Additive used to control microbes in drinking water

Disinfection Byproducts							2018
<b>Total Trihalomethanes – (Bromoform, Chlorodibromomethane, Chloroform, and Dichlorobromomethane)</b>							
Sample Locations	Units	Compliant	MCLG	MCL	Highest LRAA*	Range Detected	Typical Source
DBP2-1	ppb	YES	NA	80	27.60	8.00 - 49.00	By-product of drinking water disinfection
DBP2-2	ppb	YES	NA	80	24.98	11.90 - 24.70	By-product of drinking water disinfection
DBP2-3	ppb	YES	NA	80	40.43	26.10 - 54.00	By-product of drinking water disinfection
DBP2-4	ppb	YES	NA	80	49.28	39.00 - 68.00	By-product of drinking water disinfection
<b>Haloacetic Acids – (Bromoacetic, Dibromoacetic, Dichloroacetic, Monochloroacetic, and Trichloroacetic Acids)</b>							
Sample Locations	Units	Compliant	MCLG	MCL	Highest LRAA*	Range Detected	Typical Source
DBP2-1	ppb	YES	NA	60	11.13	3.20 - 15.00	By-product of drinking water disinfection
DBP2-2	ppb	YES	NA	60	9.43	6.90 - 11.00	By-product of drinking water disinfection
DBP2-3	ppb	YES	NA	60	10.68	6.90 - 13.00	By-product of drinking water disinfection
DBP2-4	ppb	YES	NA	60	14.95	8.90 - 19.00	By-product of drinking water disinfection

LRAA (Locational Running Annual Average)

Volatile Organic Compounds							2018
Contaminant	Units	Compliant	MCLG	MCL	Highest Level Detected	Range Detected	Typical Source/Health Effects
CIS-1,2-Dichloroethylene	ppb	YES	70	70	0.3	0.1 - 0.3	Discharge from industrial chemical factories
							Consuming water with high levels of cis-1,2-dichloroethylene over a long time can cause liver, kidney, and cardiovascular problems.
Methyl Tertiary Butyl Ether	ppm	YES	70	70	0.4	0.1 - 0.4	Leaking underground gasoline and fuel oil tanks, gasoline and fuel oil spills
							Consuming water with high levels of MTBE over a long time can cause kidney problems.
Trichloroethylene (TCE)	ppb	YES	1	1	0.5	0.3 - 0.5	Discharge from metal degreasing sites and other factories
							Consuming water with high levels of TCE over a long time can cause liver and kidney problems, and impair heart functions.

Inorganics							2018
Contaminant	Units	Compliant	MCLG	MCL	Highest Level Detected	Range Detected	Typical Source
Nitrate (as Nitrogen)	ppm	YES	10	10	2.5	0.21 – 2.5	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Inorganics							2017
Data presented is from the most recent sampling period in accordance with the regulation							
Contaminant	Units	Compliant	MCLG	MCL	Highest Level Detected	Range Detected	Typical Source
Arsenic	ppb	YES	0	10	0.4	ND - 0.4	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	ppm	YES	2	2	0.0344	0.0135 - 0.0344	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Cyanide	ppb	YES	200	200	0.035	ND - 0.035	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride	ppm	YES	2	4	0.80	0.26 - 0.80	Naturally occurring element
Mercury	ppb	YES	2	2	0.053	ND - 0.53	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland
Selenium	ppb	YES	50	50	4.5	1.8 - 4.5	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Total Thallium	ppb	YES	2	2	0.14	0.099 - 0.14	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories



Lead & Copper Monitoring							2018
32 first draw tap water samples taken by customers in their homes							
Lead & Copper	Units	Compliant	MCLG	Action Level	90 <sup>th</sup> Percentile	Homes Above Action Level	Typical Source
Copper	ppb	Yes	1,300	1,300	27.9	0	Corrosion of household plumbing systems
Lead	ppb	Yes	0	15	3.3	1	Corrosion of household plumbing systems

## Lead and Copper in Drinking Water

Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.

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. The City of Camden Division of Utilities 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>.

Radiological Contaminates							2017
Data presented is from the most recent sampling period in accordance with the regulation							
Contaminant	Units	Compliant	MCLG	MCL	Highest Level Detected	Range Detected	Typical Source
Alpha emitters	pCi/L	YES	0	15	3.55	ND - 3.55	Erosion of natural deposits
Combined Radium	pCi/L	YES	0	5	1.58	ND - 1.58	Erosion of natural deposits

## 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.

Physical Characteristics							2018
Contaminant	Units	Compliant	MCLG	Optimum Range	Highest Level Detected	Range Detected	Description
pH	S.U.	YES	N/A	6.5 – 8.5	9.09	7.63 - 9.09	A measurement of acidity, 7.0 being neutral

Secondary Contaminants (Non-Health Related)							2018
Contaminant	Units	Compliant	MCLG	RUL	Highest Level Detected	Range Detected	Typical Source
Iron	ppm	YES	N/A	0.30	ND	ND	Erosion of natural occurring deposits present in the environment.
Manganese	ppm	YES	N/A	0.05	0.0069	0.0045 - 0.0069	Erosion of natural occurring deposits present in the environment.

IRON: The recommended upper limit for iron is based on unpleasant taste of the water and staining of laundry. Iron is an essential nutrient, but some people who drink water with iron levels well above the recommended upper limit could develop deposits of iron in a number of organs of the body.

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.

## Additional Monitoring

Unregulated Compounds							2018
Contaminant	Units	Compliant	MCLG	MCL	Highest Level Detected	Range Detected	Typical Source
1,4-dioxane	ppb	N/A	N/A	N/A	3.10	0.33 - 3.10	Solvent or solvent stabilizer in manufacture and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos
Chromium-6	ppb	N/A	N/A	N/A	0.31	0.05 - 0.31	Naturally-occurring element; used in making steel and other alloys
PFHpA	ppt	N/A	N/A	N/A	7.3	ND - 7.3	Used in the production of Teflon, firefighting foams, cleaners, cosmetics, greases and lubricants, paints, polishes, adhesives and photographic films
PFHxA	ppt	N/A	N/A	N/A	12.1	6.7 - 12.1	Used in the production of Teflon, firefighting foams, cleaners, cosmetics, greases and lubricants, paints, polishes, adhesives and photographic films
PFHxS	ppt	N/A	N/A	N/A	0.19	ND - 7.71	Used in the production of Teflon, firefighting foams, cleaners, cosmetics, greases and lubricants, paints, polishes, adhesives and photographic films
PFNA	ppt	YES	13	13	7.6	< 5 - 7.6	Discharge from industrial chemical factories Consuming water with high levels of PFNA over a long time can cause liver; kidney; immune system problems, or reproductive system problems in males. For females, drinking water containing PFNA over a long time can cause developmental delays in a fetus and/or an infant.
PFOA	ppt	N/A	14	14*	14.2	8.4 - 14.2	Used in the production of Teflon, firefighting foams, cleaners, cosmetics, greases and lubricants, paints, polishes, adhesives and photographic films
PFOS	ppt	N/A	13	13*	15.9	5.6 - 15.9	Used in the production of Teflon, firefighting foams, cleaners, cosmetics, greases and lubricants, paints, polishes, adhesives and photographic films

\* Proposed MCL – Not effective until 2020

## Unregulated Contaminant Monitoring Rule 4

The City of Camden System Division of Utilities participated in the Unregulated Contaminant Monitoring Rule fourth phase (UCMR4) in 2018. Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA and the NJDEP in determining the occurrence of unregulated contaminants in drinking water and whether regulation is warranted.

For general information on UCMR4, visit <http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr4> or contact EPA's Safe Drinking Water Hotline at 1-800-426-4791.

For testing conducted within our service area, the following substances were found.

UCMR4 Compounds							2018
Contaminant	Units	Compliant	MCLG	MCL	Highest Level Detected	Range Detected	Typical Source
Manganese	ppb	N/A	N/A	N/A	1.6	ND - 1.6	Erosion of natural occurring deposits present in the environment.
Haloacetic Acids (HAA5)	ppb	N/A	N/A	N/A	13.98	ND - 13.98	By-product of drinking water disinfection
Haloacetic Acids (HAA6Br)	ppb	N/A	N/A	N/A	15.20	ND - 15.20	By-product of drinking water disinfection
Haloacetic Acids (HAA9)	ppb	N/A	N/A	N/A	24.98	ND - 24.98	By-product of drinking water disinfection