2018 Annual Drinking WATER QUALITY REPORT

PUBLIC WATER SYSTEM ID NJ 1424001 SPRING/SUMMER 2019

Information About Your Drinking Water

- 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 importante sobre su agua potable. Si no lo entiende, por favor alguien tiene que traducer para usted.

A MESSAGE FROM THE CHAIRMAN OF THE BOARD

SMCMUA is pleased to share this 2018 Annual Drinking Water Quality Report with you, our consumer, in accordance with the Federal and State Safe Drinking Water Acts. This information is being made available so that you can learn more about the finished water delivered to your tap. *We ask our consumers to be attentive to the messages contained in this report regarding vulnerable populations and persons on sodium restricted diets; these persons should seek advice about drinking water from their health care provider.*

This report provides a summary of water quality data collected for the raw and finished (treated) water sources introduced into our service area, including surface and groundwater supplies owned by SMCMUA, and supplies purchased from Passaic Valley Water Commission (PVWC) and Morris County Municipal Utilities Authority (MCMUA). SMCMUA was in compliance with all primary, enforceable standards for 2018. The report includes data for regulated contaminants, secondary (aesthetic) parameters and unregulated contaminants.

SMCMUA exceeded the maximum contaminant level for total trihalomethanes in 2018. The exceedance has been corrected as explained in this report.

Several sources of supply exceeded the Recommended Upper Limit (RUL) for sodium. High sodium, chloride and total dissolved solids values are attributed to the use of sodium chloride for de-icing of roads.

As our consumers and our customers, we encourage you to review this report. If you have any questions, please contact our Customer Service Department.

Sincerely,

Dennis Baldassari
Board Chairman

SMCMUA Board Members

- Dennis Baldassari, Chairman
- Saverio Iannaccone, Vice Chairman
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- Drew Saskowitz
  Water Quality Superintendent
- Sidney Weiss
  General Counsel

Contact Information

SMCMUA Headquarters
19 Saddle Road
Cedar Knolls, NJ 07927

www.smcmua.org

Customer Service: 973-326-6880
M-F: 8:30 a.m. to 4:30 p.m.
Excluding weekends and holidays

24/7 Emergency: 973-867-1758

E-Mail: customerservice@smcmua.org

VULNERABLE POPULATIONS

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 of infections. These people should seek advice about drinking water from their health care providers. USEPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Information Hotline (800-426-4791).

SOUTHEAST MORRIS COUNTY MUNICIPAL UTILITIES AUTHORITY (SMCMUA) WATER SYSTEM DESCRIPTION

SMCMUA, a public entity created pursuant to N.J.S.A. 40:14B-1 et seq., provides potable water and water services to customers within its creating municipalities or District (the Town of Morristown, the Township of Morris, the Township of Hanover, and Borough of Morris Plains) as well as to certain customers and municipalities outside its District including the Townships of Chatham, Mendham, Harding, Randolph and Parsippany-Troy Hills, and the Borough of Florham Park. It also supplies water at wholesale rates to the Morris County Municipal Utilities Authority (MCMUA) and to the Borough of Wharton. The Authority provides water to approximately 65,000 residents, delivering approximately 8.3 MGD on an average daily basis and in excess of 12.4 MGD during peak demand periods.

SMCMUA treats and distributes surface water from the Clyde Potts Reservoir and from groundwater sources originating from the glacial sand and gravel aquifer and the Brunswick aquifer. Clyde Potts Reservoir water is treated using membrane filtration, granular activated carbon adsorption, corrosion control treatment (CCT) and chlorine disinfection. All of the groundwater sources receive chlorine disinfection, two wells are treated for the removal of volatile organic contaminants and two wells are treated for the removal of manganese.

SMCMUA purchases finished water through interconnections with MCMUA and Passaic Valley Water Commission (PVWC). Finished water from MCMUA originates from groundwater sources. Finished water purchased from PVWC is a blend of water obtained from PVWC's Little Falls Water Treatment Plant (LFWTP) and/or from the North Jersey District Water Supply Commission's (NJDWSC's) Wanaque Water Treatment Plant. The LFWTP treats mostly Passaic and Pompton River waters using a treatment process consisting of coagulation, sedimentation, ozone primary disinfection, granular activated carbon/sand filtration, chlorine secondary disinfection and CCT. The Wanaque Water Treatment Plant treats Wanaque Reservoir water using a treatment process consisting of coagulation, sedimentation, anthracite/sand filtration, primary and secondary chlorine disinfection, and CCT.

SOURCES OF CONTAMINANTS IN TAP AND BOTTLED WATER

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 USEPA's Safe Drinking Water Information Hotline at 800-426-4791.

The sources of drinking water (both tap water 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 activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater 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 byproducts of industrial processes and petroleum production, and that can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

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

SOURCE WATER ASSESSMENT PROGRAM (SWAP)

The purpose of NJDEP's SWAP is to provide for the protection and benefit of public water systems and to increase public awareness and involvement in protecting the sources of public drinking water; information is available through www.state.nj.us/dep/swap. The SWAP Plan identified susceptibility ratings for eight contaminant categories identified below for each source for the system. Each contaminant group was assigned a susceptibility rating of L-low, M-medium and H-high. If a drinking water source's susceptibility rate is high, it does not necessarily mean the drinking water is contaminated. The rating reflects the potential for contamination of source water, not the existence of contamination. SMCMUA has identified the watershed and wellhead protection areas for the Clyde Potts Reservoir and for the ground water sources owned by SMCMUA.

The contaminant categories include:

- 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 609-984-5425.
- Disinfection Byproduct Precursors: A common source is naturally occurring organic matter in surface water. Disinfection byproducts are formed when the disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (for example leaves) present in surface water.

The susceptibility ratings for all of the source waters treated and distributed to SMCMUA's service area are included in Table 1 below.

TABLE 1
SOURCE WATER SUSCEPTIBILITY RATINGS

Sources	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radio-nuclides			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
SMCMUA																								
Wells – 11		10	1	10	1			2	9	11			5	6		2	9		11			6	5	
Surface water intakes – 1	1				1				1		1		1					1			1	1		
MCMUA																								
Wells – 8		8		4	2	2		2	6	2		6		1	7	1	6	1	2	6		5	3	
PVWC's LFWTP																								
Surface water intakes – 4	4			4				1	3		4		4					4			4	4		
NJDWSC's Wanaque WTP																								
Surface water intakes – 5	5			5				2	3		5		5					5			5	5		

CRYPTOSPORIDIUM

The USEPA required surface water systems to monitor for *Cryptosporidium* and *E. coli* in the source waters, before treatment. A second round of monitoring was completed in 2017 that required monthly sampling of the source water for a total of 24 consecutive months where the results were utilized to identify the need to install additional treatment. This monitoring requirement applied to SMCMUA's Clyde Potts Water Treatment Plant (WTP), PVWC's Little Falls WTP (LFWTP) and NJDWSC's Wanaque WTP. SMCMUA purchases water from PVWC that may consist of finished water from the LFWTP, Wanaque WTP or a blend of the two. Table 2 below summarizes the data collected to date for this program, including *Giardia* results collected for informational purposes. The results of this study demonstrated that no additional treatment was required for *Cryptosporidium* for SMCMUA, PVWC or the Wanaque WTPs.

TABLE 2
SURFACE SOURCE WATER MICROBIAL CONTAMINANTS

CONTAMINANT	SMCMUA PWS ID NJ1424001	PVWC PWS ID NJ1605002 NJDWSC PWS ID NJ1613001	TYPICAL SOURCE
Cryptosporidium, oocysts/L	ND - 0.273	ND - 0.878	Microbial pathogens found in surface waters throughout the United States.
Giardia, cysts/L	ND - 1.6	ND - 2.047	
E. coli, MPN /100 mL	ND - 26.5	9.6 – >2419.6	

TABLE 3
2018 DETECTED REGULATED CONTAMINANTS COLLECTED FROM WATER OBTAINED AFTER TREATMENT AT THE POINTS OF ENTRY TO THE DISTRIBUTION SYSTEM

The State of New Jersey allows the Authority to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of this data, though representative, are more than one year old.

PRIMARY CONTAMINANTS	Compliance Achieved	MCLG	MCL	SMCMUA PWS ID NJ1424001	Purchased Water Results		TYPICAL SOURCE
					PVWC PWS ID NJ1605002 NJDWSC PWS ID NJ1613001	MCMUA PWS ID NJ1432001	
TURBIDITY AND TOTAL ORGANIC CARBON				Highest Result, Range and Year of Results			
Turbidity (NTU)	Yes	NA	TT = 1	0.30 (0.01 - 0.30) 2018	0.41 (0.06 average) 2018	N/A	Soil runoff.
	Yes	NA	TT = percentage of samples <0.3 NTU (min 95% required)	100% 2018	99.9% 2018	N/A	
Total Organic Carbon (%)	Yes	NA	TT = % removal	N/A	(35 - 50% required) (Range 49 - 80%) 2018	N/A	Naturally present in the environment.
CONTAMINANTS				Highest Result, Range and Year of Results			
Methyl t-Butyl Ether (ppb)	Yes	70	70	4.6 RAA (ND - 6.9) 2018	ND 2018	ND 2018	Leaking underground gasoline and fuel oil tanks, gasoline and fuel spills
Arsenic (ppb)	Yes	NA	5	1.3 (ND – 1.3) 2018	ND 2018	0.5 (ND - 0.5) 2017	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Antimony (ppb)	Yes	6	6	ND 2018	ND 2018	ND 2017	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder.
Barium (ppm)	Yes	2	2	0.114 (0.0379 - 0.114) 2018	(0.0145 - Less than 0.10) 2018	0.5 (ND - 0.5) 2017	Erosion of natural deposits.
Chromium (ppb)	Yes	100	100	ND 2018	ND 2018	1.1 (ND - 1.1) 2017	Discharge from steel and pulp mills; erosion of natural deposits.
Fluoride (ppm)	Yes	4	4	ND 2018	0.080 (ND - 0.080) 2018	0.2 (0.05 - 0.2) 2017	Erosion of natural deposits.
Nickel (ppb)	NA	NA	NA	2.3 (ND - 2.3) 2018	2.39 (ND - 3.29) 2018	1.6 (ND - 1.6) 2017	Erosion of natural deposits.
Nitrate (ppm)	Yes	10	10	4.7 (0.056 - 4.7) 2018	3.26 (ND - 3.26) 2018	3.1 (0.8 - 3.1) 2018	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Nitrite (ppm)	Yes	1	1	ND 2018	-	-	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium (ppb)	Yes	50	50	ND 2018	Less than 2 2018	0.9 (ND - 0.9) 2017	Erosion of natural deposits.
Alpha Emitters (pCi/L)	Yes	0	15	3.16 (ND - 3.16) 2017	-	4.4 Highest Average (ND - 4.4) 2016 - 2017	Erosion of natural deposits.
Combined Radium 226 & 228 (pCi/L)	Yes	0	5	1.1 (ND - 1.1) 2017	-	ND 2017	Erosion of natural deposits.

TABLE 4
2018 DETECTED CONTAMINANTS COLLECTED FROM WATER WITHIN SMCMUA'S SERVICE AREA

PRIMARY CONTAMINANTS	Compliance Achieved	MCLG	MCL	DISTRIBUTION SYSTEM SAMPLE RESULTS	TYPICAL SOURCE
MICROBIOLOGICAL CONTAMINANTS				Highest Monthly Result	
Total Coliform Bacteria (%)	Yes	0	5% of monthly samples are positive	1.0% (one sample was Total Coliform positive)	Naturally present in the environment.
DISINFECTION BYPRODUCTS - STAGE II			LRAA OEL	Highest LRAA and Range of Results	
Haloacetic Acids (HAA5) (ppb)	Yes	NA	60	51.2 (3.1 – 56.4)	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM) (ppb)	No *	NA	80	86.4 (32.4 – 110.0)	By-product of drinking water disinfection.
*Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys or central nervous systems and may have an increased risk of getting cancer. See page 9 for more information.					
DISINFECTANTS		MRDLG	MRDL	Highest RAA and Range of Results	
Chlorine (ppm)	Yes	4	4	1.68 Highest RAA (0.00 - 2.90)	Water additive used to control microbes.

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. SMCMUA 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. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Information Hotline at 800-426-4791 or at http://www.epa.gov/safewater/lead.

If you are concerned about lead in your water, you may wish to have your water tested, if so, please contact SMCMUA's Customer Service Division to schedule a water test. Samples collected during 2017 standard monitoring confirmed that lead and copper results were below their respective action levels at the 90th percentile and therefore SMCMUA conducted reduced lead and copper sampling during 2018 in accordance with USEPA and NJDEP requirements. The results are summarized in Table 5.

- Visit http://smcmua.org/Lead.htm to obtain information on how to identify lead-free certification marks for drinking water system and plumbing materials.

- EPA and NJDEP Consumer and School/Childcare Information on Lead is available at http://www.nj.gov/dep/watersupply/dwc-lead.html

TABLE 5
2018 LEAD AND COPPER MONITORING RESULTS

Contaminant	Compliance Achieved	MCLG	Action Level	90th Percentile	Typical Source
Copper (ppm)	Yes	1.3	1.3	1.02 (1 of the 30 samples exceeded the AL) 2018	Corrosion of household plumbing systems.
Lead (ppb)	Yes	0	15	3.80 (1 out of 30 samples exceeded the AL) 2018	Corrosion of household plumbing systems.

TABLE 6
2018 SECONDARY CONTAMINANTS
(AESTHETIC, NON-ENFORCEABLE, STANDARDS)

Contaminant	N.J. Recommended Upper Limit (RUL)	SMCMUA PWSID NJ1424001 2018 Data		PVWC-Little Falls WTP PWSID NJ1605002 NJDWSC-Wanaque WTP PWSID NJ1613001		MCMUA PWSID NJ1432001 2017 Data	
		Range of Results	RUL Achieved	Range of Results	RUL Achieved	Range of Results	RUL Achieved
A.B.S./L.A.S., ppm	0.5	ND	Yes	ND - 0.15	Yes	ND - 0.08	Yes
Alkalinity, ppm	NA	17.2 - 231	NA	38 - 70	NA	24 - 122	NA
Aluminum, ppb	200	ND	Yes	ND - 60	Yes	1.10 - 4.53	Yes
Chloride, ppm	250	49.4 - 295	No	65 - 194	Yes	8.39 - 94.26	Yes
Color, CU	10	ND - 5	Yes	ND - 2	Yes	ND	Yes
Corrosivity	Non-Corrosive	Corrosive	No	Non-Corrosive	Yes	Corrosive	No
Hardness (as $CaCO_3$), ppm	250	41.8 - 396	No	52 - 160	Yes	56 - 152	Yes
Hardness (as $CaCO_3$), grains/gallon	14.6	2.4 – 23.1	No	3.0 - 9.0	Yes	3.3 - 8.9	Yes
Iron, ppb	300	ND - 223	Yes	Less than 100	Yes	ND	Yes
Manganese, ppb	50	ND – 40.4	Yes	Less than 50	Yes	ND - 1.33	Yes
Odor, TON	3	ND	Yes	ND - 10	No	ND - 35	No
pH	6.5 to 8.5	6.1 – 8.3	No	7.7 - 8.4	Yes	5.5 - 8.0	No
Sodium[1], ppm	50	19.1 - 119	No	40 - 162	No	6 - 55	No
Sulfate, ppm	250	5.5 - 79	Yes	8 - 68	Yes	ND - 15.4	Yes
Total Dissolved Solids, ppm	500	150 - 961	No	177 - 498	Yes	79.5 - 242.5	Yes
Zinc, ppb	5,000	ND – 248	Yes	Less than 50	Yes	0.58 - 21.8	Yes

[1] IMPORTANT NOTICE ABOUT YOUR DRINKING WATER: SODIUM RECOMMENDED UPPER LIMIT EXCEEDED. Persons on sodium restricted diets may be concerned about the sodium levels in the finished water above the New Jersey Recommended Upper Limit (RUL) of 50 ppm. Sodium was detected in the distribution system at levels ranging between 19.1 and 119.0 ppm. The highest concentrations of sodium in 2018 are attributed to SMCMUA's Littleton Well and to the water purchased from PVWC. Sodium is naturally present in the source water and its presence may also be the result of the use of road salt for de-icing roadways. 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, persons on sodium restricted diets should seek advice about drinking water from their health care providers.

UNREGULATED CONTAMINANTS

The 1996 Safe Drinking Water Act (SDWA) amendments require that once every five years EPA issue a new list of no more than 30 unregulated contaminants to be monitored by public water systems. SMCMUA completed monitoring for UCMR4 in 2018. Data collected are provided in Table 7, where these samples were collected after treatment at the point-of-entry to the distribution system.

TABLE 7
UCMR4 and other UNREGULATED CONTAMINANTS

UNREGULATED CONTAMINANTS	SMCMUA PWS ID NJ1424001	Purchased Water Results		TYPICAL SOURCE
		PVWC PWS ID NJ1605002 NJDWSC PWS ID NJ1613001	MCMUA PWS ID NJ1432001	
	Highest Result, Range			
1,1-dichloroethane (ppb)	ND - 0.69 2018	ND 2018	ND 2018	It is an industrial chemical used as a solvent.
1,4-dioxane (ppb)	ND - 0.71 2018	ND 2018	ND 2014	It is used as a solvent or solvent stabilizer in the manufacture and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos.
chlorate (ppb)	26 - 180 2015	102 - 475 2018	ND - 120 2014	Chlorate compounds are used in agriculture as defoliants or desiccants and may occur in drinking water related to use of disinfectants such as chlorine dioxide.
chromium (total) (ppb)	ND 2018	ND 2018	ND - 1.11 2017	Naturally-occurring element; used in making steel and other alloys; used for chrome plating, dyes and pigments, leather tanning and wood preservation.
Perfluorobutanesulfonic acid (PFBS) (ppt)	ND – 2.8 2018	2.0 – 5.1 2018	ND (ppb) 2014	Manmade chemical; used in products to make them stain, grease, heat and water resistant.
Perfluoroheptanoic acid (PFHpA) (ppt)	ND - 3.3 2018	2.1 - 4.9 2018	ND (ppb) 2014	Manmade chemical; used in products to make them stain, grease, heat and water resistant.
Perfluorohexanesulfonic acid (PFHxS) (ppt)	ND - 6.2 2018	2.5 - 5.3 2018	ND (ppb) 2014	Manmade chemical; used in products to make them stain, grease, heat and water resistant.
Perfluorononanoic acid (PFNA) (ppt)	ND 2018	ND – 2.1 2018	ND (ppb) 2014	Manmade chemical; used in products to make them stain, grease, heat and water resistant.
Perfluorooctanoic acid (PFOA) (ppt)	ND - 12.0 2018	7.2 - 16.0 2018	ND (ppb) 2014	PFOA is used in the manufacture of fluoropolymers, substances which provide non-stick surfaces on cookware and waterproof, breathable membranes for clothing
Perfluorohexanoic acid (PFHxA) (ppt)	ND – 5.1 2018	4.2 – 12.0 2018	-	Breakdown product of stain- and grease-proof coatings on food packaging and household products.
Perfluorooctane sulfonate (PFOS) (ppt)	ND - 4.8 2018	4.9 - 12.0 2018	ND (ppb) 2014	PFOS was used in firefighting foams and various surfactant uses; few of which are still ongoing because no alternatives are available.
UCMR4 CYANOTOXINS				
Anatoxin-a (ppb)	ND 2018	ND 2018	-	Toxins naturally produced and released by cyanobacteria ("blue-green algae").
Cylindrospermopsin (ppb)	ND 2018	ND 2018	-	Toxins naturally produced and released by cyanobacteria ("blue-green algae").
Microcystin -LA (ppb)	ND 2018	ND 2018	-	Toxins naturally produced and released by cyanobacteria ("blue-green algae").
Microcystin-LF (ppb)	ND 2018	ND 2018	-	Toxins naturally produced and released by cyanobacteria ("blue-green algae").
Microcystin-LR (ppb)	ND 2018	ND 2018	-	Toxins naturally produced and released by cyanobacteria ("blue-green algae").
Microcystin-LY (ppb)	ND 2018	ND 2018	-	Toxins naturally produced and released by cyanobacteria ("blue-green algae").
Microcystin-RR (ppb)	ND 2018	ND 2018	-	Toxins naturally produced and released by cyanobacteria ("blue-green algae").
Microcystin-YR (ppb)	ND 2018	ND 2018	-	Toxins naturally produced and released by cyanobacteria ("blue-green algae").
Nodularin (ppb)	ND 2018	ND 2018	-	Toxins naturally produced and released by cyanobacteria ("blue-green algae").
Total Microcystins & Nodularins (ppb)	ND 2018	ND 2018	-	Toxins naturally produced and released by cyanobacteria ("blue-green algae").
UCMR4 HALOACETIC ACIDS and INDICATORS				
Bromide (ppb)	20.3 - 23.9 2018	-	-	Naturally occurring inorganic matter that reacts with disinfectants to form disinfection by-products.

TABLE 7
UCMR4 and other UNREGULATED CONTAMINANTS (CONTINUED)

Total Organic Carbon (TOC) (ppm)	2.30 - 3.12 2018	-	-	Naturally occurring organic matter that reacts with disinfectants to form disinfection by-products.
Bromochloroacetic acid (ppb)	ND - 6.44 2018	-	-	By-product of drinking water disinfection.
Bromodichloroacetic acid (ppb)	ND - 6.80 2018	-	-	By-product of drinking water disinfection.
Chlorodibromoacetic acid (ppb)	ND - 2.87 2018	-	-	By-product of drinking water disinfection.
Dibromoacetic acid (ppb)	ND - 2.47 2018	-	-	By-product of drinking water disinfection.
Dichloroacetic acid (ppb)	0.684 - 20.1 2018	-	-	By-product of drinking water disinfection.
Monobromoacetic acid (ppb)	ND - 0.452 2018	-	-	By-product of drinking water disinfection.
Monochloroacetic acid (ppb)	ND 2018	-	-	By-product of drinking water disinfection.
Tribromoacetic acid (ppb)	ND 2018	-	-	By-product of drinking water disinfection.
Trichloroacetic acid (ppb)	ND - 37.9 2018	-	-	By-product of drinking water disinfection.
UCMR4 METALS				
Germanium (ppb)	ND 2018	-	-	Naturally-occurring element; commercially available in combination with other elements and minerals; a byproduct of zinc ore processing; used in infrared optics, fiber-optic systems, electronics and solar applications.
Manganese (ppb)	ND - 3.98 2018	-	-	Naturally-occurring element; commercially available in combination with other elements and minerals; used in steel production, fertilizer, batteries and fireworks; drinking water and wastewater treatment chemical; essential nutrient.
UCMR4 PESTICIDES				
alpha-Hexachlorocyclohexane (ppb)	ND 2018	-	-	Component of benzene hexachloride (BHC); formerly used as an insecticide.
Chlorpyrifos (ppb)	ND 2018	-	-	Organophosphate; used as an insecticide, acaricide and miticide.
Dimethipin (ppb)	ND 2018	-	-	Used as an herbicide and plant growth regulator.
Ethoprop (ppb)	ND 2018	-	-	Used as an insecticide.
Oxyfluorfen (ppb)	ND 2018	-	-	Used as an herbicide.
Profenofos (ppb)	ND 2018	-	-	Used as an insecticide and acaricide.
Tebuconazole (ppb)	ND 2018	-	-	Used as a fungicide.
Total Permethrin, cis & trans (ppb)	ND 2018	-	-	Used as an insecticide.
Tribufos (ppb)	ND 2018	-	-	Used as an insecticide and cotton defoliant.
UCMR4 SEMIVOLATILE CHEMICALS				
Butylated hydroxyanisole (ppb)	ND 2018	-	-	Used as a food additive (antioxidant).
o-Toluidine (ppb)	ND 2018	-	-	Used in the production of dyes, rubber, pharmaceuticals and pesticides.
Quinoline (ppb)	ND - 0.0550 2018	-	-	Used as a pharmaceutical (anti-malarial) and flavoring agent; produced as a chemical intermediate; component of coal.
UCMR4 ALCOHOLS				
1-Butanol (ppb)	ND 2018	-	-	Used as a solvent, food additive and in production of other chemicals.
2-Methoxyethanol (ppb)	ND 2018	-	-	Used in a number of consumer products, such as synthetic cosmetics, perfumes, fragrances, hair preparations and skin lotions.
2-Propen-1-ol (ppb)	ND 2018	-	-	Used in the production flavorings, perfumes and other chemicals.

DEFINITIONS OF TERMS AND ACRONYMS

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

CDC: Centers for Disease Control

CU: Color Unit

Inorganic Contaminants: Contaminants such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming. These contaminants may be present in source water.

LRAA: Locational Running Annual Average; the average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

MCL: Maximum Contaminant Level; the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

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

MCMUA: Morris County Municipal Utilities Authority

Microbial Contaminants/Pathogens: Disease-causing organisms such as bacteria and viruses, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife. Common sources are animal and human fecal wastes. These contaminants may be present in source water.

MRDL: Maximum Residual Disinfectant Level; the highest level of a 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 a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contamination.

NA: Not applicable.

ND: Not detected.

NJDWSC: North Jersey District Water Supply Commission

NTU: Nephelometric Turbidity Unit

OEL: Operational Evaluation Level; level of disinfection byproducts determined by calculating the average of the results at a location for the two previous quarters and two times the current quarter's results. If this value exceeds 60 ppb for HAA5s or 80 ppb for TTHMs, it initiates a comprehensive review of system operations and allows systems to take proactive steps to remain in compliance with the Stage 2 Disinfection Byproduct Rule MCLs.

ppb: parts per billion

ppm: parts per million

ppt: parts per trillion

PWS ID: Public Water System Identification

PVWC: Passaic Valley Water Commission

RAA: Running Annual Average

RUL: Recommended Upper Limit; the highest level of a constituent of drinking water that is recommended in order to protect aesthetic quality.

SMCMUA: The Southeast Morris County Municipal Utilities Authority

TON: Threshold Odor Number

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

Turbidity: Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

USEPA: United States Environmental Protection Agency

Take steps each day to save water and protect the environment by choosing WaterSense labeled products in your home, yard, and business. Learn more about WaterSense and how we can all get more by using less. https://www.epa.gov/watersense

TOTAL TRIHALOMETHANES (TTHM)

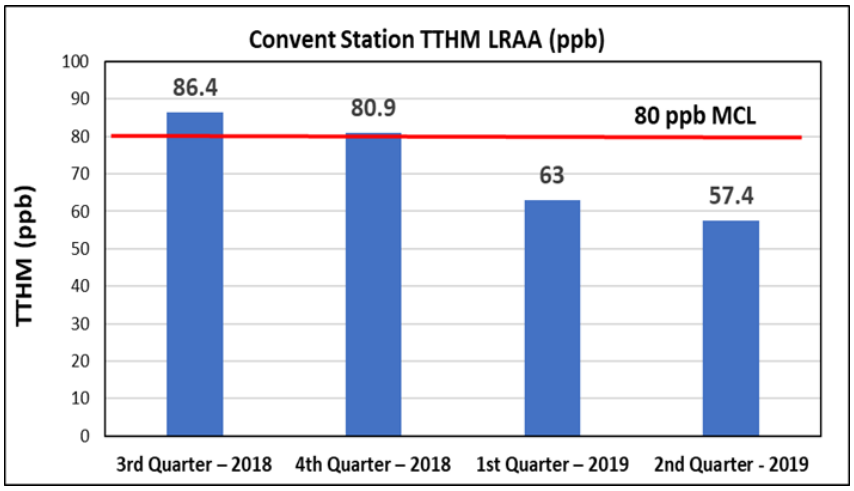
SMCMUA has regained compliance with the TTHM maximum contaminant level (MCL) as described in the following. Public notices providing details of this violation were previously mailed to all postal patrons in the SMCMUA's service area.

A total of eight (8) sites are sampled every quarter and compliance is determined by calculating the locational running annual average (LRAA) for each site. In order to achieve compliance, the LRAA for each site must be less than the 80 parts per billion (ppb) MCL for two consecutive quarters. In 2018, the LRAA exceeded the 80 ppb MCL at the Convent Station sample location which triggered the initial requirement to notify our customers. The MCL has not been exceeded at any of the other seven (7) sample locations.

The LRAA for the Convent Station sample location exceeded the MCL for the third and fourth quarter compliance periods of 2018, where the data is provided in Figure 1. The most recent results are also included in Figure 1 and demonstrate that the TTHM were below the MCL for two consecutive quarters, or for the 1st and 2nd Quarters of 2019. In accordance with the New Jersey Department of Environmental Protection (NJDEP), the SMCMUA is in full compliance with the TTHM MCL now that the LRAA results are below the MCL for two (2) consecutive quarters.

A review of the original data indicated that the TTHM exceedance was a result of high water age in the area and due to purchased water quality. To mitigate the TTHM exceedance, SMCMUA improved water age by instituting a flushing program and modified the delivered source of finished water to an Authority owned groundwater supply. Future efforts will include installation of a permanent automatic flushing device, consider elimination of the dead end at this location, and to work with the purchased water provider to optimize finished water quality.

Figure 1.



WAYS TO PAY YOUR BILL

SMCMUA has many convenient options to pay your bill. NOTE: If you have an urgent shutoff notice, please pay online, by phone or in person.

Pay Online

Visit www.smcmua.org and click "Pay Water Bill". From there, you can register your account on the new payment portal. Once registered, you will be able to pay your bill with a credit/debit card or Echeck, view your past bills, and sign up for Autopay and Paperless Billing. All you need to setup an account is an email address and your account number. *Convenience fees apply for credit or debit card payments.

Pay by Phone

Call 1-844-562-2135, 24 hours a day, 7 days a week for assistance (English and Spanish) with making a credit card, debit card, or Echeck payment. *Convenience fees may apply.

Pay by Mail

Mail payment to:

SMCMUA
PO Box 16036
Lewiston, ME 04243-9515

Please make sure your 12-digit account number is on your check.

Pay in Person

8:30 AM to 4:30 PM, Monday through Friday, at SMCMUA Headquarters, or use our convenient Drop Box located to the right of the front door 24/7. *Cash or check accepted only.

Register for Citizen Alerts for Water Emergencies

Visit our website at www.smcmua.org to register for emergency notifications under the "Register for Citizen Alerts" button on the homepage.

It is recommended that all household members, and any employees in a place of business, sign up for these alerts to receive these emergency notifications.

Update Your Contact Information

Please call Customer Service 973-326-6880 or email customerservice@smcmua.org to update your contact information.

SMCMUA utilizes this information to alert customers about possible disruptions in service, and other water related issues.

PUBLIC INVOLVEMENT OPPORTUNITIES

Board Meetings: Contact our Customer Service Division, or visit our website, for SMCMUA's public meeting schedule.

Protect and Preserve Local Water Resources: Contact the Passaic River Coalition to get involved at 973-532-9830 or http://passaicriver.org.

Whippany River Watershed Action Committee: Contact WRWAC at 973-615-8136 or http://www.wrwac.org.

PUBLIC EDUCATION AND RESOURCES

Information available to the public about drinking water can be found using the references provided below:

Agency	Website	Phone
United States Environmental Protection Agency (USEPA)	http://water.epa.gov	Safe Drinking Water Information Hotline: 800-426-4791
New Jersey Department of Environmental Protection (NJDEP)	www.nj.gov/dep/watersupply	Bureau of Safe Drinking Water: 609-292-5550
New Jersey American Water Works Association (NJAWWA)	www.njawwa.org www.drinktap.org	New Jersey AWWA: 866-436-1120

If you have received notification that you need new or replacement automatic meter reading equipment, make your appointment today!

Contact Customer Service at 973-326-6880 or customerservice@smcmua.org to setup an appointment to have new or replacement automatic meter reading equipment installed in your residence "free of charge".