



2016 Annual Drinking WATER QUALITY REPORT

THE SOUTHEAST MORRIS COUNTY MUNICIPAL UTILITIES AUTHORITY
19 SADDLE ROAD
CEDAR KNOLLS, NJ 07927

PUBLIC WATER SYSTEM ID NJ 1424001

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A MESSAGE FROM THE CHAIRMAN OF THE BOARD

SMCMUA is pleased to share this 2016 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 2016. The report includes data for regulated contaminants, secondary (aesthetic) parameters and unregulated contaminants. 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 deicing 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 at 973-326-6880 or by email at customerservice@smcmua.org.

Sincerely,
Donald Kissil
Board Chairman

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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 traducir para usted.

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 67,000 residents, delivering approximately 8.7 MGD on an average daily basis and in excess of 15.0 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 and chlorine disinfection. All of the groundwater sources receive chlorine disinfection, two of the 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 the MCMUA and 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 and chlorine secondary disinfection. The Wanaque Water Treatment Plant treats Wanaque Reservoir water using a treatment process consisting of coagulation, sedimentation, anthracite/sand filtration and primary and secondary chlorine disinfection.

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 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.

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 Hotline (800-426-4791).

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 2016 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
<i>Cryptosporidium</i> , oocysts/L	ND - 0.273	ND - 0.857	Microbial pathogens found in surface waters throughout the United States.
<i>Giardia</i> , cysts/L	ND – 1.6	ND – 1.143	
<i>E. coli</i> , MPN /100 mL	ND – 26.5	12.0 – >2419.6	

TABLE 3

2016 DETECTED 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, is more than one year old.

PRIMARY CONTAMINANTS	Compliance Achieved	MCLG	MCL	SMCMUA PWS ID NJ1424001	Purchased Water Results		TYPICAL SOURCE
					PWSC 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	0.23 (0.02 - 0.23) 2016	0.38 (0.03 - 0.38) 2016	N/A	Soil runoff.
	Yes	NA	TT = percentage of samples <0.3 NTU (min 95% required)	100% 2016	99.7% 2016	N/A	
Total Organic Carbon (%)	Yes	NA	TT = % removal	N/A	(35 - 50% required) (Range 51 - 100%) 2016	N/A	Naturally present in the environment.
CONTAMINANTS				Highest Result, Range and Year of Results			
Methyl t-Butyl Ether (ppb)	Yes	70	70	5.5 Highest RAA (ND - 5.9) 2016	0.2 (ND - 0.2) 2016	ND 2016	Leaking underground gasoline and fuel oil tanks, gasoline and fuel spills
Arsenic (ppb)	Yes	NA	5	1.1 (ND - 1.1) 2016	ND 2016	0.5 (ND - 0.5) 2014	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Antimony (ppb)	Yes	6	6	ND 2016	ND 2016	ND 2014	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder.
Barium (ppm)	Yes	2	2	0.14 (0.011 - 0.14) 2016	0.024 (0.014 - 0.024) 2016	0.8 (ND - 0.8) 2014	Erosion of natural deposits.
Chromium (ppb)	Yes	100	100	1.2 (ND - 1.2) 2016	0.60 (ND - 0.60) 2016	1.6 (ND - 1.4) 2014	Discharge from steel and pulp mills; erosion of natural deposits.
Fluoride (ppm)	Yes	4	4	ND 2016	2.75 (ND - 2.75) 2016	0.2 (0.06 - 0.2) 2014	Erosion of natural deposits.
Nickel (ppb)	NA	NA	NA	ND 2016	2.75 (ND - 2.75) 2016	1.9 (ND - 1.9) 2014	Erosion of natural deposits.
Nitrate ¹ (ppm)	Yes	10	10	3.3 (ND - 3.3) 2016	4.05 (0.284 - 4.05) 2016	2.8 (0.7 - 2.8) 2016	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Nitrite (ppm)	Yes	1	1	ND 2016	ND 2012 - 2014	ND 2008 - 2011	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium (ppb)	Yes	50	50	ND 2016	0.74 (ND - 0.74) 2016	0.9 (ND - 0.9) 2014	Erosion of natural deposits.
Alpha Emitters (pCi/L)	Yes	0	15	8.7 (ND - 8.7) 2011 - 2014	ND 2014	4.4 Highest Average (ND - 4.4) 2016	Erosion of natural deposits.
Combined Radium 226 & 228 (pCi/L)	Yes	0	5	1.37 (ND - 1.37) 2011 - 2014	ND 2014	ND 2016	Erosion of natural deposits.

TABLE 4

2016 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	0.0% (no samples were 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	39.7 (4.4 - 51.1)		By-product of drinking water disinfection.
Total Trihalomethanes (TTHM) (ppb)	Yes	NA	80	71.2 (30.8 - 82.2)		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.						
DISINFECTANTS		MRDLG	MRDL	Highest RAA and Range of Results		
Chlorine (ppm)	Yes	4	4	1.62 Highest RAA (0.00 - 2.72)		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 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. SMCMUA will conduct lead and copper sampling during 2017 in accordance with USEPA requirements where two (2) rounds of testing will be conducted during the course of the year.

- 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
2014 LEAD AND COPPER MONITORING RESULTS**

Contaminant	Compliance Achieved	MCLG	Action Level	90th Percentile	Typical Source
Copper (ppm)	Yes	1.3	1.3	0.5 (none of the 30 samples exceeded the AL) 2014	Corrosion of household plumbing systems.
Lead (ppb)	Yes	0	15	5.4 (1 out of 30 samples exceeded the AL) 2014	Corrosion of household plumbing systems.

**TABLE 6
2016 SECONDARY CONTAMINANTS
(AESTHETIC, NON-ENFORCEABLE, STANDARDS)**

Contaminant	N.J. Recommended Upper Limit (RUL)	SMCMUA PWSID NJ1424001 2016 Data		PVWC-Little Falls WTP PWSID NJ1605002 NJDWSC-Wanaque WTP PWSID NJ1613001		MCMUA PWSID NJ1432001 2011-2014 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 - 0.129	Yes	ND	Yes
Alkalinity, ppm	NA	22 - 218	NA	44 - 77	NA	19.5 - 108.5	NA
Aluminum, ppb	200	ND - 2.4	Yes	15 - 45	Yes	0.76 - 15.9	Yes
Chloride, ppm	250	42 - 310	No	77 - 146	Yes	5.7 - 122.8	Yes
Color, CU	10	ND	Yes	ND - 2.0	Yes	ND	Yes
Corrosivity	Non-Corrosive	Corrosive*	No	Corrosive	No	Corrosive*	No
Hardness (as CaCO ₃), ppm	250	42 - 430	No	72 - 160	Yes	58 - 136	Yes
Hardness (as CaCO ₃), grains/gallon	14.6	2.5 - 25.1	No	4.0 - 9.0	Yes	3.4 - 8.0	Yes
Iron, ppb	300	ND	Yes	ND - 6.0	Yes	ND	Yes
Manganese, ppb	50	ND	Yes	2.0 - 5.0	Yes	ND - 2.34	Yes
Odor, TON	3	ND - 8	No	ND - 16	No	ND - 2	Yes
pH	6.5 to 8.5	6.3 - 8.3	No	7.52 - 8.33	Yes	5.5 - 8.0	No
Sodium ¹ , ppm	50	19 - 110	No	42 - 130	No	5.9 - 63.3	No
Sulfate, ppm	250	ND - 72	Yes	10 - 90	Yes	ND - 12.6	Yes
Total Dissolved Solids, ppm	500	120 - 540	No	186 - 492	Yes	87 - 309.5	Yes
Zinc, ppb	5,000	ND - 180	Yes	2.0 - 8.0	Yes	0.64 - 11.4	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 19.0 and 110.0 ppm. The highest concentrations of sodium in 2016 are attributed to SMCMUA's Morris Plains Well, 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. Data collected as part of the third Unregulated Contaminant Monitoring Rule (UCMR 3) is provided in Table 7, where these samples were collected after treatment at the point-of-entry to the distribution system. Monitoring for UCMR4 will be implemented in 2018.

TABLE 7 UNREGULATED CONTAMINANTS

UNREGULATED CONTAMINANTS	Purchased Water Results			TYPICAL SOURCE
	SMCMUA PWS ID NJ1424001 2016	PVWC PWS ID NJ1605002 NJDWSC PWS ID NJ1613001 2016	MCMUA PWS ID NJ1432001 2016	
	Highest Result, Range			
equilin (ppb)	ND 2015	ND 2013 - 2014	ND 2015	It is an estrogenic hormone and is used in pharmaceuticals.
estradiol (ppb)	ND 2015	ND 2013 - 2014	ND 2015	It is an estrogenic hormone and is used in pharmaceuticals.
estriol (ppb)	ND 2015	ND 2013 - 2014	ND 2015	It is an estrogenic hormone and is used in veterinary pharmaceuticals.
estrone (ppb)	ND 2015	ND 2013 - 2014	ND 2015	It is an estrogenic hormone and is used in veterinary and human pharmaceuticals.
ethynylestradiol (ppb)	ND 2015	ND 2013 - 2014	ND 2015	It is an estrogenic hormone and is used in veterinary and human pharmaceuticals.
androstenedione (ppb)	ND 2015	ND 2013 - 2014	ND 2015	It is an endogenous androgen steroid hormone and intermediate in the biosynthesis of testosterone.
testosterone (ppb)	ND 2015	ND - 0.00097 2013 - 2014	ND 2015	Androgenic steroid naturally produced in the human body; and used in pharmaceuticals.
chromium (total) (ppb)	ND - 1.2 2016	ND - 0.6 2016	ND - 1.2 2015	Naturally-occurring element; used in making steel and other alloys; used for chrome plating, dyes and pigments, leather tanning and wood preservation.
cobalt (ppb)	ND 2015	ND 2013 - 2014	ND 2015	It is a naturally-occurring element and was formerly used as cobalt chloride in medicines and as a germicide.
molybdenum (ppb)	ND - 1.7 2015	ND 2013 - 2014	ND 2015	It is a naturally-occurring element and is commonly used as molybdenum trioxide as a chemical reagent.
strontium (ppb)	71 - 440 2015	40 - 150 2013 - 2014	29 - 53 2015	It is naturally-occurring element and is used as strontium carbonate in pyrotechnics, in steel production, as a catalyst and as a lead scavenger.
vanadium (ppb)	ND - 1.8 2015	ND - 0.31 2013 - 2014	ND - 1.4 2015	It is a naturally-occurring element and is commonly used as vanadium pentoxide in the production of other substances and as a catalyst.
1,1-dichloroethane (ppb)	ND 2016	ND 2016	ND 2016	It is an industrial chemical used as a solvent.
1,2,3-trichloropropane (ppb)	ND 2016	ND 2013 - 2014	ND 2015	It is an industrial chemical used in paint manufacture.
1,3-butadiene (ppb)	ND 2015	ND 2013 - 2014	ND 2015	It is an industrial chemical used in rubber production.
bromochloromethane (ppb)	ND 2016	ND 2013 - 2014	ND 2015	Used as a fire-extinguishing fluid, an explosive suppressant, and as a solvent in the manufacturing of pesticides.
bromomethane (ppb)	ND 2016	ND 2013 - 2014	ND 2015	Halogenated alkane; occurs as a gas, and used as a fumigant on soil before planting, on crops after harvest, on vehicles and buildings and for other specialized purposes.
chlorodifluoromethane (ppb)	ND - 5.3 2015	ND 2013 - 2014	ND 2015	Chlorofluorocarbon; occurs as a gas, and used as a refrigerant, as a low-temperature solvent, and in fluorocarbon resins, especially tetrafluoroethylene polymers.
chloromethane (ppb)	ND 2016	ND - 0.55 2016	0.06 - 0.12 2016	It is used as a foaming agent and in the production of other substances.
chromium-6 (ppb)	ND - 0.72 2015	ND 2013 - 2014	0.29 - 0.67 2015	Naturally-occurring element; used in making steel and other alloys; used for chrome plating, dyes and pigments, leather tanning and wood preservation.
1,4-dioxane (ppb)	ND - 0.68 2016	0.18 - 0.19 2016	ND 2015	It is used as a solvent or solvent stabilizer in the manufacture and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos.
Perfluorobutanesulfonic acid (PFBS)	ND - 3.2 (ppt) 2016	3.2 - 4.4 (ppt) 2016	ND (ppb) 2015	Manmade chemical; used in products to make them stain, grease, heat and water resistant.
Perfluorheptanoic acid (PFHpA)	ND - 2.4 (ppt) 2016	3.2 - 4.9 (ppt) 2016	ND (ppb) 2015	Manmade chemical; used in products to make them stain, grease, heat and water resistant.
Perfluorohexanesulfonic acid (PFHxS)	ND - 7.9 (ppt) 2016	3.8 - 6.8 (ppt) 2016	ND (ppb) 2015	Manmade chemical; used in products to make them stain, grease, heat and water resistant.
Perfluorononanoic acid (PFNA)	ND (ppt) 2016	ND - 4.3 (ppt) 2016	ND (ppb) 2015	Manmade chemical; used in products to make them stain, grease, heat and water resistant.
Perfluorooctanoic acid (PFOA)	ND - 12.0 (ppt) 2016	9.9 - 14.0 (ppt) 2016	ND (ppb) 2015	PFOA is used in the manufacture of fluoropolymers, substances which provide non-stick surfaces on cookware and waterproof, breathable membranes for clothing
Perfluorooctane sulfonate (PFOS)	ND - 7.6 (ppt) 2016	7.7 - 15.0 (ppt) 2016	ND (ppb) 2015	PFOS was used in fire fighting foams and various surfactant uses; few of which are still ongoing because no alternatives are available.
chlorate (ppb)	26 - 180 2015	ND - 495 2016	ND - 120 2015	Chlorate compounds are used in agriculture as defoliant or desiccants and may occur in drinking water related to use of disinfectants such as chlorine dioxide.

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.
- CU:** Color unit
- CDC:** Centers for Disease Control
- USEPA:** United States Environmental Protection Agency
- 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.
- Organic Contaminants/Volatile Organic Compounds:** Compounds, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems. Man-made chemicals used as solvents, degreasers, and gasoline components. Examples include benzene, methyl tertiary butyl ether (MTBE), and vinyl chloride.
- Pesticides/Herbicides:** Man-made chemicals used to control pests, weeds and fungus, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses and may be present in source water. Common sources include land application and manufacturing centers of pesticides. Examples include herbicides such as atrazine, and insecticides such as chlordane.
- 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.

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 our website to make a payment with your debit or credit card, or via eCheck. Sign up for billing notifications and online bill viewing. All you need to setup an account is an email address and a copy of your bill.

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.

Automatic Payment



Have your payment automatically deducted from your bank account. Call our Customer Service Department or visit SMCMUA headquarters to obtain a Direct Payment Enrollment Form. The form can also be found on our website under Customer Service.

Pay by Phone



Call our Customer Service Department between 8:30 AM and 4:30 PM, Monday through Friday, for assistance in making a payment using your debit card, credit card or eCheck account information.

Pay in Person



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

PUBLIC INVOLVEMENT OPPORTUNITIES

Board Meetings: Contact our Customer Service Department 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.wrwap.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 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 automatic meter reading equipment, make your appointment today!



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