#### SMCMUA Board Members

- · Mary Dougherty, Chairman
- William Conradi, Vice Chairman
- · Edward Taratko, Secretary
- · Dennis Baldassari, Member
- · Robert Carroll, Member
- · Saverio Iannaccone, Member
- · Donald Kissil, Member
- · Adolf Schimpf, Member
- · Laura Cummings, P.E., Executive Director/Chief Engineer
- · Janice Congleton, Chief Financial Officer/Treasurer
- · Paul Kozakiewicz, Superintendent
- · Sidney Weiss, General Counsel

#### **Contact Information**

SMCMUA Headquarters 19 Saddle Road Cedar Knolls, NJ 07927 www.smcmua.org Public Water System ID: NJ1424001

Customer Service: 973-326-6880 E-Mail: customerservice@smcmua.org

#### 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.

The Southeast Morris County Municipal Utilities Authority 19 Saddle Road Cedar Knolls, NJ 07927

# 2012 Annual Drinking WATER QUALITY REPORT

The Southeast Morris County Municipal Utilities Authority (SMCMUA) is pleased to present its Annual Drinking Water Quality Report, covering the period from January 1, 2012 to December 31, 2012.

# A MESSAGE FROM BOARD CHAIRMAN MARY E. DOUGHERTY

SMCMUA is pleased to share this 2012 Annual *Drinking Water Quality Report* with you, our consumer, in accordance with the Federal and State Safe Drinking Water Act. This information is being made available so that you can learn more about the finished water delivered to your tap. The water quality data in Tables 1 and 2 of this report provide an overview of those contaminants that were detected and the associated compliance in accordance with both State and Federal drinking water regulations for the calendar year of 2012. The water quality data is essentially the nutritional label for the drinking water that you consume. SMCMUA is in compliance with all primary contaminant requirements. As described in this report, the finished water did exceed the New Jersey Recommended Upper Limit of 50 ppm for sodium.

Special recognition and thanks go to our staff and to all of the local and State community responders for their work in response and recovery efforts that enabled us to stay in operation during, and in the aftermath, of the extreme weather events associated with Hurricane Sandy.

The Members of the Board would also like to recognize the contributions made by William (Bill) Hutchinson, P.E., who retired as Executive Director of SMCMUA on January 31, 2013. Bill's strategic management of the Authority over the past ten years has positioned us for a sustainable future. The Members of the Board welcome Laura Cummings, P.E., as the incoming Executive Director.

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.

Sincerely,

Mary Warehart

Mary E. Dougherty, Board Chairman

# 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 www.passaicriver.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)	www.water.epa.gov Lead: www.water.epa.gov/drink/info/lead/index.cfm Sodium: www.water.epa.gov/scitech/drinkingwater/ dws/ccl/sodium.cfm Water Conservation: www.epa.gov/watersense	Safe Drinking Water Hotline: 800-426-4791
New Jersey Department of Environmental Protection (NJDEP)	www.nj.gov/dep/watersupply Sourcewater Protection Program (SWAP): www.state.nj.us/dep/swap	Bureau of Safe Drinking Water 609-292-5550
American Water Works Association (AWWA)	www.njawwa.org www.drinktap.org	New Jersey AWWA 866-436-1120

# 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 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, EPA 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 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 at 800-426-4791.

#### 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. 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 **www.epa.gov/drink/info/lead/index.cfm**.

## 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). The Authority provides water to approximately 68,000 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 Pott's Reservoir and from groundwater sources originating from the glacial sand and gravel aquifer and the Brunswick aquifer. Clyde Pott's 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 use air strippers for the removal of volatile organic contaminants and two wells use greensand filtration for the removal of manganese.

SMCMUA purchases finished water through interconnections with the Morris County Municipal Utilities Authority (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 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 and primary and secondary chlorine disinfection.

# 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 Pott's 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.
- <u>Nutrients</u>: Compounds, minerals and elements that aid growth, that are both naturally occurring and man-made. Examples include nitrogen and phosphorus.
- <u>Volatile Organic Compounds</u>: Man-made chemicals used as solvents, degreasers, and gasoline components. Examples include benzene, methyl tertiary butyl ether (MTBE), and vinyl chloride.
- <u>Pesticides</u>: 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.
- <u>Radon</u>: 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.
- <u>Disinfection Byproduct Precursors</u>: 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 the table below.

Sources	Pathogens Nutrien		lutrient	ts Pesticides			Volatile Organic Compounds		Inorganics			Radio-nuclides		Radon			Disinfection Byproduct Precursors							
	Н	М	L	Н	М	L	Н	М	L	Н	М	L	Н	М	L	Н	М	L	Н	М	L	Н	М	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

*Cryptosporidium* is a microbial pathogen found in surface water throughout the United States. Although filtration removes *Cryptosporidium*, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water. Current test methods do not allow us to determine if the organisms are viable or capable of causing disease. Ingestion of *Cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may spread through means other than drinking water.

SMCMUA completed a 2-year source water monitoring program for the Clyde Pott's Reservoir in accordance with the requirements of EPA's Long Term 2 Enhanced Surface Water Treatment Rule. PVWC also collected data on the surface water sources treated at the LFWTP. Results of testing for both systems resulted in no additional treatment requirements.

# TABLE 1TABLE OF DETECTED CONTAMINANTS – 2012

Control Contro Contro Contro						Purchasod	Nator Results					
InterfaceInterfaceInterfaceNumber of SectorSet and Sectorubulky (NTU) $\frac{W}{W}$ NA $\frac{W}{W}$	PRIMARY CONTAMINANTS		MCLG	MCL	PWS ID	PVWC PWS ID NJ1605002 NJDWSC	MCMUA PWS ID	TYPICAL SOURCE				
variable p(NL)VesNATime ( $0.013 + 0.013$ )( $0.013 + 0.027$ )NASolutionvalue ( $0.013 + 0.013$ )NATime ( $0.013 + 0.013$ ) $0.013 + 0.027$ NASolutionvalue ( $0.013 + 0.013$ )NA $0.013 + 0.027$ NANature ( $0.013 + 0.013$ )Nature ( $0.013 + 0.013$ )value ( $0.013 + 0$					Highest							
number callYeeNAInterface of a PC processed of a PC 	Turbidity (NITII)	Yes	NA	TT = 1	(0.01 - 0.16)	(0.01 - 0.27)	NA	Soil rupoff				
cale Organic Carbon (%)YesNATT + % remodeNA( $\frac{Ra}{R} \rightarrow 0.0000000000000000000000000000000000$		Yes	NA	samples <0.3 NTU		2012	NA					
Temperature (ppt)   Yes   70   70   13 (higher first) (2012   10 (2012   No   2012 (2012	Total Organic Carbon (%)	Yes	NA	TT = % removal	NA	(25 - 45% required) (Range 32 - 75%)	NA	Naturally present in the environment.				
http://t.bip/.Eleving.bothYesYo	CONTAMINANTS	•				•						
centric (pab)YesNA52012 20122012 2012(ND- 600) 2010(pbc) discusting, using discusting, consist, wind method in a field of the piece and discusting, consist, wind method in a field of th	Methyl t-Butyl Ether (ppb)	Yes	70	70	(ND - 4.5)							
victurion (gbp)Yes662012(10)2212(10)restricting from procedum instructions, balancesalum (ppm)Yes22 $0$ $0.202$ $0.201$ $0.202$ $0.201$	Arsenic (ppb)	Yes	NA	5			(ND - 0.6)	orchards; runoff from glass and electronics				
tation (ppn)   Yes   2   2   2   0.0025 - 0.000   0.0.005   Erasion of natural deposits.     Unrenam (pph)   Yes   100   100   ND   (ND, 170)   10.1 - 0.0.0   Deckarge from deal and pulp mills; antesion of natural deposits.     Unrenam (pph)   Yes   4   4   (ND, 10)   0.01 10   0.01	Antimony (ppb)	Yes	6	6	2012	(ND - 2.21) 2012						
Drammum (ppb)   Yes   100   100   2012   (N2 - 0.7)   (N2	Barium (ppm)	Yes	2	2	(0.022 - 0.1)	(0.0063 - 0.026) 2012	(0 - 0.5) 2011	Erosion of natural deposits.				
buckde (ppm)Yes44(Pb - 0.1) 2012(Pb - 0.1) 2012(Pb - 0.1) 2011(Pb - 0.1) 2	Chromium (ppb)	Yes	100	100	2012	(ND - 0.78) 2012	(0.8 - 1.6) 2011					
lickle (pph)NANANA2012 2012(ND - 3.83) 2012(ND - 0.7) 2012Erasion of natural deposits.istrate (ppm)Yes1010 $\frac{3.02}{20.21}$ (ND - 3.21) 2012(ND - 3.21) 2012(ND - 3.21) 2012(ND - 3.21) 	Fluoride (ppm)	Yes	4	4	(ND - 0.1)	(ND - 0.12) 2012	(0.07 - 0.2) 2011	Erosion of natural deposits.				
Interface (ppm)   Yes   10   10   (N0 - 3.2) 2012   (N0 - 3.2) 2011	Nickel (ppb)	NA	NA	NA	2012	(ND - 3.83) 2012	(ND - 0.7) 2011	Erosion of natural deposits.				
Name   Yes   1   1   1   (ND - 0.03)   Number of the specific	Nitrate (ppm)	Yes	10	10	(ND - 3.2) 2012	(ND - 3.21)	(0.6 - 3.5)					
idelation (ppb)Yes5050 $\frac{2012}{2012}$ (ND-0.7) 2012(ND-0.8) 2011Enclion of natural deposits.what Emitters (pCuL)Yes015 $\frac{8.7}{2011}$ · $\frac{3.6}{2011}$ (ND-0.8) 2011Enclion of natural deposits.combined Radium 226 & 228Yes05 $\frac{10}{10}$ $\frac{10}{2011}$ · $\frac{10}{2011}$ ·Enclion of natural deposits.combined Radium 226 & 228Yes05 $\frac{10}{10}$ $\frac{10}{2011}$ ··Enclion of natural deposits.combined Radium 226 & 228Yes05 $\frac{10}{10}$ $\frac{10}{2011}$ ···Enclion of natural deposits.EECONDARY CONTAMINANTRulL AchievedRulL AchievedRulL PWS ID SIMI422001PWS ID PWS ID PWS ID NURGSCO2 PWS ID NURGSCO2 PWS ID NURGSCO2 NURGSCO2 NURGSCO2PWS ID PWS ID NURGSCO2 NURGSCO2TYPICAL SOURCEEECONDARY CONTAMINANT Compliance AchievedMCLG S MCLMCL S MCLMCL S MCLDISTRIBUTION SYSTEM SAMPLE RESULTSTYPICAL SOURCEVIELOUGIDE Action Positive S amples are positive of all Thalomethanes (TTHM)YesNA6028 Highest RAA (20 - 29)Naturally present in the environment.Rule Action Size Action Positive of all Thalomethanes (TTHM)YesNA8046 Highest RAA (40 - 29)Naturally present in the environment.Rule Action Size Action Action Size Action Action Action Action Action Action Action Action Ac	Nitrite (ppm)	Yes	1	1	(ND - 0.03)	0.03) ND ND 2 2012 2012						
Upbna Emitters (pC/L)   Yes   0   15   (ND - 8.7) 2011   -   (ND - 3.6) 2011   Erosion of natural deposits.     Combined Radium 226 & 228 (CrU, U   Yes   0   5   (ND - 1.4) (2011   -   -   ROUL 2011   Erosion of natural deposits.     BECONDARY CONTAMINANTS   RUL Achieved   RUL Achieved   RUL Compliance   RUL Achieved   RUL Compliance   RUL Achieved   RUL Achieved   RUL Compliance   RUL PVS ID N11630002   MCMUA PVS ID N1432001   MCMUA PVS ID N1432001   TYPICAL SOURCE     Stadum (ppm)   No   50    91 Highest RAA (15 - 94) 2012   116 (54 - 116) (54 -	Selenium (ppb)	Yes	50	50	ND   (ND - 0.67)   (ND - 0.8)     2012   2012   2011		Erosion of natural deposits.					
Onder Radium 226 & 228   Yes   0   5   (ND - 1.4) 201   -   -   Erosion of natural deposits.     EECONDARY CONTAMINANTS   RUL Achieved   RUL Achieved   RUL   SMCMUA PVK ID N1422001   PWS ID N1422001   MCMUA PVK ID N1422001  <	Alpha Emitters (pCi/L)	Yes	0	15	(ND - 8.7) - (ND - 3.6) 2011 2011		Erosion of natural deposits.					
SECONDARY CONTAMINANTS   RUL Achieved   RUL RUL   RUL N11424001   NVI 10 N11424001   NVI 10 NVI 10 N11424001   NVI 10 NVI 10 10 10 10 10 10 10 10 10 10 10 10 10 1	Combined Radium 226 & 228 (pCi/L)	Yes	0	5	(ND - 1.4)	1.4) 11 -		Erosion of natural deposits.				
isodium (ppm)NoS0S0(15 - 91, 2012)(54 - 116) 2012(6 - 53) 2011Erosion of natural deposits; leaching; runoffRIMARY CONTAMINANTSCompliance AchievedMCLGMCLGDISTRIBUTION SYSTEM SAMPLE RESULTSTYPICAL SOURCEIROBIC LOGICAL CONTAMINANTSAchievedS% of monthly samples are positive1.0% (1 out of 107 samples where Total Collform positive)Naturally present in the environment.ISINFECTION BYPRODUCTS - STAGE IMCLRAARAARAA (Range of Results)By-product of drinking water disinfection.Istage are positiveNA6028 Highest RAA (20 - 29)By-product of drinking water disinfection.oftal Tinhalomethanes (TTHM)YesNA8046 Highest RAA (41 - 43)By-product of drinking water disinfection.stage 1 ThA5 and TTHM compliance =LRAARange of ResultsBy-product of drinking water disinfection.stage 1 ThA5 and TTHM compliance =LRAANA*(ND - 43)By-product of drinking water disinfection.stage 1 HA5 and TTHM compliance is based on the locational running an unal average (LRAA) calculated at each monitoring location. The LRAA for Stage 2 HA65 and TTHMs in ort included in this report ince the Stage 2 quarterly monitoring base in the 2/14 quarter d 2012 so there were only three quarters of results of 2012 and the LRAA calculation is based on four completed quarters of results of 2012 and the LRAA calculation is based on the coational running annual average (LRAA) calculated at each monitoring location. The LRAA for Stage 2 HA65 an	SECONDARY CONTAMINANTS		RUL		PWS ID NJ1605002 PWS ID NJDWSC NI 43001		TYPICAL SOURCE					
InterCollCodiscan   Contraction   Metco   Metco   Metco   Highest Monthly Result   InterColl Source     total Collform Bacteria (%)   Yes   0   5% of monthly samples are positive   1.0% (1 out of 107 samples where Total Collform positive)   Naturally present in the environment.     ISINFECTION BYPRODUCTS - STAGE I   MA   60   28 Highest RAA (20 - 29)   By-product of drinking water disinfection.     Islage 1 HAAS and TTHM compliance ended and is superseded by Stage 2 HAAS and TTHM monitoring as of April 1, 2012.   By-product of drinking water disinfection.     Islage 1 HAAS and TTHM compliance ended and is superseded by Stage 2 HAAS and TTHM monitoring as of April 1, 2012.   By-product of drinking water disinfection.     Islage 2 HAAS and TTHM compliance ended and is superseded by Stage 2 HAAS and TTHM monitoring as of April 1, 2012.   By-product of drinking water disinfection.     Islage 2 HAAS and TTHM compliance is based on the locational running annual average (LRAA) calculated at each monitoring location. The LRAA is and TTHM set is not included in this report ince the Stage 2 quarterly monitoring began in the 2nd quarter of 2012 so there were only three quarters of results for 2012 and the LRAA calculation is based on four completed quarters of results.     Stage 2 HAAS and TTHM water containing trihalomethanes in exceeded I Mix Result of 2012 so there were only three quarters of results for 2012 and the LRAA calculation is based on four completed quarters of results.	Sodium (ppm)	No	50		(15 - 94) 2012	(54-116) 2012	Erosion of natural deposits; leaching; runoff					
Total Coliform Bacteria (%)   Yes   0   \$% of monthly samples are positive   1.0% (1 out of 107 samples where Total Coliform positive)   Naturally present in the environment.     NSINFECTION BYPRODUCTS - STAGE I   M   RAA   By-product of drinking water disinfection.   <			MCLG	MCL	DISTRIE			TYPICAL SOURCE				
NSINFECTION BYPRODUCTS - STAGE I   RAA   Rade   Q2 - 29)   By-product of drinking water disinfection.     oftal Trihalomethanes (TTHM)   Yes   NA   80   46 Highest RAA (41 - 43)   By-product of drinking water disinfection.     Stage 1 HAA5 and TTHM compliance ended and is superseded by Stage 2 HAA5 and TTHM monitoring as of April 1, 2012.   By-product of drinking water disinfection.   Stage 2 HAA5 and TTHM compliance is based on the locational running annual average (LRAA) calculated at each monitoring location. The LRAA for Stage 2 HAA5 and TTHM s is not included in this report ince the Stage 2 quartery monitoring began in the 2nd quarter of 2012 so there were only three quarters of results for 2012 and the LRAA calculation is based on four completed quarters of results.   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 ma	Total Coliform Bacteria (%)	Yes	0		1.0% (1 out of	107 samples where Tota	I Coliform positive)	Naturally present in the environment.				
Otal Trihalomethanes (TTHM) Yes NA 80 46 Highest RAA (41 - 43) By-product of drinking water disinfection.   stage 1 HAA5 and TTHM compliance ended and is superseded by Stage 2 HAA5 and TTHM monitoring as of April 1, 2012. ISINFECTION BYPRODUCTS - STAGE II LRAA Range of Results   talaoacetic Acids (HAA5) (ppb) NA* NA NA* (ND - 43) By-product of drinking water disinfection.   oftal Trihalomethanes (TTHM) NA* NA NA* (ND - 43) By-product of drinking water disinfection.   oftal Trihalomethanes (TTHM) NA* NA NA* (ND - 43) By-product of drinking water disinfection.   Stage 2 HAA5 and TTHM compliance is based on the locational running annual average (LRAA) calculated at each monitoring location. The LRAA for Stage 2 HAA5 and TTHMs is not included in this report ince the Stage 2 quartery monitoring began in the 2nd quarter of 2012 so there were only three quarters of results for 2012 and the LRAA calculation is based on four completed quarters of results. 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 etiting cancer. SISINFECTANTS MRDLG MRDL Highest RAA and Range of Results Mater additive used to control microbes.   EAD AND COPPER MCLG Action Level 90th Percentile <t< td=""><td>DISINFECTION BYPRODUCTS - STAGE I</td><td></td><td></td><td></td><td></td><td>RAA (Range of Results</td><td>3)</td><td></td></t<>	DISINFECTION BYPRODUCTS - STAGE I					RAA (Range of Results	3)					
Total Trihalomethanes (TTHM)   Yes   NA   80   46 Highest RAA (41 - 43)   By-product of drinking water disinfection.     stage 1 HAA5 and TTHM compliance ended and is superseded by Stage 2 HAA5 and TTHM monitoring as of April 1, 2012.   ISINFECTION BYPRODUCTS - STAGE II   Image: Complex Comple	Haloacetic Acids (HAA5) (ppb)	Yes	NA	60		28 Highest RAA (20 - 2	By-product of drinking water disinfection.					
ppp) Control Production   Stage 1 HAA5 and TTHM compliance ended and is superseded by Stage 2 HAA5 and TTHM monitoring as of April 1, 2012.   NSINFECTION BYPRODUCTS - STAGE II LRAA Range of Results   taloacetic Acids (HAA5) (ppb) NA* NA NA* (ND - 43)   taloacetic Acids (HAA5) (ppb) NA* NA NA* (ND - 43) By-product of drinking water disinfection.   total Trihalomethanes (TTHM) NA* NA NA* (31 - 82) By-product of drinking water disinfection.   Stage 2 HAA5 and TTHM compliance is based on the locational running annual average (LRAA) calculated at each monitoring location. The LRAA for Stage 2 HAA5s and TTHMs is not included in this report ince the Stage 2 quarterly monitoring began in the 2nd quarter of 2012 so there were only three quarters of results for 2012 and the LRAA calculation is based on four completed quarters of results.   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 teting cancer.   NISINFECTANTS MRDLG MRDL Highest RAA and Range of Results Mater additive used to control microbes.   EAD AND COPPER MCLG Action Level 90th Percentile Corrosion of household plumbing systems.   copper (ppm) Yes 1.3	Total Trihalomethanes (TTHM)	Yes	NA	80		46 Highest RAA (41 - 4						
Image: Name LRAA Range of Results   MisiNFECTION BYPRODUCTS - STAGE II LRAA Range of Results   taloacetic Acids (HAA5) (ppb) NA* NA NA* (ND - 43) By-product of drinking water disinfection.   otal Trihalomethanes (TTHM) NA* NA NA* (31 - 82) By-product of drinking water disinfection.   Stage 2 HAA5 and TTHM compliance is based on the locational running annual average (LRAA) calculated at each monitoring location. The LRAA for Stage 2 HAA5s and TTHMs is not included in this report ince the Stage 2 quartery monitoring began in the 2nd quarter of 2012 so there were only three quarters of results for 2012 and the LRAA calculation is based on four completed quarters of results.   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 reting cancer.   DISINFECTANTS MRDLG MRDL Highest RAA and Range of Results   Chlorine (ppm) Yes 4 0.65 Highest RAA (ND - 2.20) Water additive used to control microbes.   EAD AND COPPER MCLG Action Level 90th Percentile Corrosion of household plumbing systems.   copper (ppm) Yes 1.3 1.3 0.5 (3 out of 30 samples exceeded AL) Corrosion of household plumbing systems.	(ppb) Stage 1 HAA5 and TTHM compliance				HM monitoring as of A							
Ordal Trihalomethanes (TTHM) NA* NA NA* (31 - 82) By-product of drinking water disinfection.   Stage 2 HAA5 and TTHM compliance is based on the locational running annual average (LRAA) calculated at each monitoring location. The LRAA for Stage 2 HAA5s and TTHMs is not included in this report ince the Stage 2 quarterly monitoring began in the 2nd quarter of 2012 so there were only three quarters of results for 2012 and the LRAA calculation is based on four completed quarters of results.   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 etting cancer.   DISINFECTANTS MRDLG MRDL Highest RAA and Range of Results   Chorine (ppm) Yes 4 0.65 Highest RAA (ND - 2.20) Water additive used to control microbes.   EAD AND COPPER MCLG Action Level 90th Percentile Corrosion of household plumbing systems.   copper (ppm) Yes 1.3 1.3 0.5 (3 out of 30 samples exceeded AL) Corrosion of household plumbing systems.   ead (oph) Yes 0 15 5 (3 out of 30 samples exceeded AL) Corrosion of household plumbing systems.	DISINFECTION BYPRODUCTS - STAGE II											
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Stage 2 HAA5 and TTHM compliance is based on the locational running annual average (LRAA) calculated at each monitoring location. The LRAA for Stage 2 HAA5s and TTHMs is not included in this report ince the Stage 2 quarterly monitoring began in the 2nd quarter of 2012 so there were only three quarters of results for 2012 and the LRAA calculation is based on four completed quarters of results.   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 eting cancer.   DISINFECTANTS MRDLG MRDL Highest RAA and Range of Results   Chlorine (ppm) Yes 4 0.65 Highest RAA (ND - 2.20) Water additive used to control microbes.   EAD AND COPPER MCLG Action Level 90th Percentile Corrosion of household plumbing systems.   copper (ppm) Yes 1.3 1.3 0.5 (3 out of 30 samples exceeded AL) Corrosion of household plumbing systems.	Total Trihalomethanes (TTHM)	NA*	NA	NA*		(31 - 82)	By-product of drinking water disinfection.					
MRDLG   MRDLG   MRDL   Highest RAA and Range of Results     Chlorine (ppm)   Yes   4   4   0.65 Highest RAA (ND - 2.20)   Water additive used to control microbes.     EAD AND COPPER   MCLG   Action Level   90th Percentile      Copper (ppm)   Yes   1.3   1.3   0.5 (3 out of 30 samples exceeded AL) 2011   Corrosion of household plumbing systems.     ead (nob)   Yes   0   15   5 (3 out of 30 samples exceeded AL)   Corrosion of household plumbing systems.	* Stage 2 HAA5 and TTHM compliance since the Stage 2 quarterly monitoring Some people who drink water containi	began in the	2nd quarter	of 2012 so there were onl	y three quarters of res	ults for 2012 and the LRA	A calculation is based on	four completed quarters of results.				
Chlorine (ppm) Yes 4 4 0.65 Highest RAA (ND - 2.20) Water additive used to control microbes.   EAD AND COPPER MCLG Action Level 90th Percentile Option   Copper (ppm) Yes 1.3 1.3 0.5 (3 out of 30 samples exceeded AL) Corrosion of household plumbing systems.   ead (oph) Yes 0 15 5 (3 out of 30 samples exceeded AL) Corrosion of household plumbing systems.	DISINFECTANTS		MRDLG	MRDL	Hia	hest RAA and Range of F	Results					
Copper (ppm)   Yes   1.3   1.3   0.5 (3 out of 30 samples exceeded AL) 2011   Corrosion of household plumbing systems.     ead (nob)   Yes   0   15   5 (3 out of 30 samples exceeded AL)   Corrosion of household plumbing systems.	Chlorine (ppm)	Yes										
ead (opb) Ves 0 15 5 (3 out of 30 samples exceeded AL) Corrosion of household plumbing systems.	LEAD AND COPPER		MCLG	Action Level								
	Copper (ppm)	Yes	1.3	1.3	·	2011	Corrosion of household plumbing systems.					
	Lead (ppb)	Yes	0	15	5 (3	Corrosion of household plumbing systems.						

#### 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. The measured annual average was 91 ppm. The highest concentrations of sodium are attributed to SMCMUA's Littleton and Morris Plains Wells and to the water purchased from Passaic Valley Water Commission (PVWC). 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. Persons on sodium restricted diets should seek advice about drinking water from their health care providers. There is nothing you need to do at this time. Sodium is naturally present in this source water and cannot be removed by the water treatment processes. This is not an emergency. If it had been, you would have been notified immediately.

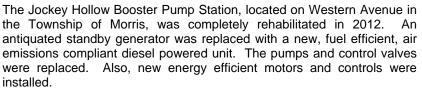
#### TABLE 2

#### SECONDARY CONTAMINANTS - 2012 DATA

Contaminant	New Jersey Recommended Upper Limit (RUL)	SMCI PWSID N.		NJDWSC-Wanaque WTP PWSID NJ1613001 PVWC-Little Falls WTP PWSID NJ1605002			
		Range of Results	RUL Achieved	Range of Results	RUL Achieved		
A.B.S./L.A.S. (Foaming Agents), ppm	0.5	ND	Yes	ND – 0.11	Yes		
Alkalinity, ppm	NA	21.1 – 224	NA	23.4 - 82	NA		
Aluminum, ppb	200	ND – 11	Yes	13 – 70	Yes		
Chloride, ppm	250	28 – 250	Yes	66 – 123	Yes		
Color, CU	10	ND	Yes	ND – 3	Yes		
Corrosivity	Non-Corrosive	Corrosive	No	Non-Corrosive	Yes		
Hardness (as CaCO <sub>3</sub> ), ppm	250	34 – 420	No	39.7 – 174	Yes		
Hardness (as CaCO <sub>3</sub> ), grains/gallon	14.6	2 – 25	No	2.32 – 10.2	Yes		
Iron, ppb	300	ND	Yes	ND – 228	Yes		
Manganese, ppb	50	ND – 5.4	Yes	2.3 - 13	Yes		
Odor, TON	3	ND – 4	No	1 – 5	No		
рН	6.5 to 8.5	6.2 – 7.9	Yes	8.0 - 8.3	Yes		
Sodium, ppm	50	15 – 94	No	54 – 116	No		
Sulfate, ppm	250	5.3 – 90	Yes	6.2 – 91	Yes		
Total Dissolved Solids, ppm	500	280 – 710	No	137 – 459	Yes		
Zinc, ppb	5,000	ND – 270	Yes	3 – 25	Yes		

#### SYSTEM IMPROVEMENTS





SMCMUA replaced 10,450 linear feet of water mains in 2012.

#### **UNREGULATED CONTAMINANTS**

**EPA Unregulated Contaminant Monitoring Rule (UCMR)**: EPA has required certain public water systems to collect data for contaminants that are not regulated. UCMR-2 monitoring was completed during 2009 and consisted of 10 unregulated contaminants including explosives and flame retardants. None of these contaminants were detected in SMCMUA sample tests. SMCMUA will begin monitoring for additional contaminants in 2015 as required under UCMR-3. Additional information on unregulated contaminants can be found at http://www.epa.gov/safewater/ucmr/index.html.

Perfluorinated Compounds (PFCs): NJDEP conducted a study to determine the occurrence of PFCs in surface and ground waters in 2009 and 2010. Perfluoroctanoic acid (PFOA), the most commonly detected PFC, was not detected in SMCMUA sourcewaters but was detected at the effluent of PVWC's LFWTP at a value 0.013 ppb. NJDEP's Drinking Water Quality Institute issued a recommended, non-enforceable, preliminary health-based guidance level of 0.04 ppb for PFOA. Perfluoro-n-nonanoic acid was detected in SMCMUA's Wing Well sourcewater at a measured value of 80 ppb and perfluoroctanoic sulfonate was detected in the effluent of PVWC's LFWTP at a value of 0.012 ppb. Additional information on PFCs can be found at: http://www.nj.gov/dep/watersupply/ dwc\_quality\_pfoa.html.

**Radon**: Radon is a naturally occurring radioactive gas found throughout the United States. Radon can move up through the ground and into a home through the cracks in the foundation. Radon can also get into indoor air when released from tap water while showering, washing dishes, and performing other household activities. 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. Sample tests from each source of water during 2009 showed radon levels from non-detect to 1,610 pCi/L. Radon in the air is inexpensive to test and easy to correct. For additional information, call the EPA's Radon Hotline at 1-800-SOS-RADON.

#### DEFINITIONS OF TERMS AND ACRONYMS

<u>AL</u>: 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

**EPA**: 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.

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.

<u>Microbial Contaminants/Pathogens</u>: 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

Organic Contaminants/Volatile Organic Compounds: Compounds, including synthetic and volatile organic chemicals, which are byproducts 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.

<u>Pesticides/Herbicides</u>: 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

**PWS ID**: Public Water System Identification

**PVWC**: Passaic Valley Water Commission

RAA: Running annual average.

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

TON: threshold odor number

**<u>T</u>**: Treatment Technique; a required process intended to reduce the level of a contaminant in drinking water.

<u>Turbidity</u>: 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 easy, convenient ways to make a payment for your bill. NOTE: If you have an urgent shutoff notice, please pay online, by phone or in person.

#### Pay Online – No SMCMUA Fee

# Automatic Payment – No SMCMUA Fee



Have your bill deducted from your bank or financial institution account automatically. Call (973) 326-6880 to obtain a Payment Authorization Form.

Visit our website to make a payment with

Visa, MasterCard or Debit Card from your

mail account and a copy of your bill.

own home! All you need to start is a valid e-

#### Pay in Person or at our 24/7 Drop Box



To make a payment in person, visit us at SMCMUA Headquarters Monday through Friday, 8:30 a.m. to 4:30 p.m. We are closed weekends and holidays. Or use our 24/7 Drop Box.

#### Pay by Phone - No SMCMUA Fee



Call (973) 326-6880 and you can make a payment over the phone with Visa, MasterCard or Debit Card.

# WaterSense An EPA Partnership Program



Use Water Efficient Products

Save water and protect the environment by choosing WaterSense labeled products in your home, yard, and business and taking simple steps to save water each day. Water Sense labeled products are 20 percent more water efficient than average products in that category.

# Automatic Meter Reading **Equipment Installation** Make Your Appointment Today!

Contact SMCMUA's Customer Service Department to setup an appointment to have a new meter with automatic meter reading equipment installed in your residence "free of charge".



Fix a Leak

- Leaks can account for, on average, 11,000 gallons of water wasted in the home every year, which is enough to fill a backyard swimming pool.
- Common types of leaks found in the home include leaking toilet flappers, dripping faucets, and other leaking valves. All are easily correctable.



Check your water meter before and after a two-hour period when no water is being used. If the meter does not read exactly the same, you probably have a leak.

For more information visit the EPA Water Sense website at www.epa.gov/watersense.