



WATER QUALITY REPORT

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

SPRING/SUMMER 2010
VOL. 16



PUBLIC WATER SUPPLY ID NJ 1424001

A Message from the Executive Director

Each year SMCMUA prepares a Water Quality Report to be distributed to every customer. This report provides important information concerning the quality and origin of your water supply. Most of the content and format of this report is mandated under the Federal and State Safe Drinking Water Acts.

This Report began as a Water Quality Newsletter in 1994 with information on water quality monitoring and Capital Improvements being implemented to improve the quality and reliability of the water supply. Then in 1996, the Safe Drinking Water Act Reauthorization required all water suppliers to issue a Consumer Confidence Report containing information on any regulated contaminant that was detected, in any concentration, after required sample testing.

For 2009, the quality of your drinking water was in compliance with all State and Federal Drinking Water Regulations. All primary drinking water standards were met as well as treatment technique, monitoring and reporting requirements.

The Safe Drinking Water Act requires testing for over 100 primary contaminants (those that have health concerns) and several secondary contaminants (those that have cosmetic or aesthetic concerns). Testing is also required for several unregulated contaminants with unknown health concerns. Additionally, SMCMUA performs pro-active quality control testing, not required by law, at all of the sources of supply and at customers' taps. This provides an extra level of protection as well as operational data to optimize water treatment.

As noted in this report, additional treatment measures are being installed at one of the SMCMUA well supplies after quality control testing showed traces of E.coli bacteria in the untreated raw water. All of the sources of supply are now being provided

with equipment that monitors disinfection levels on a continuous basis. Additionally, the SMCMUA Board has instituted a long term Capital Improvement Program which anticipates ongoing improvements in water treatment processes at various sources of supply to continually improve water quality and reliability.

If you have any questions or concerns, please contact us at the numbers listed on page 7 of this report.

William Hutchinson, P.E.
Executive Director/Chief Engineer



**Water Sampling at Clyde Potts Reservoir
in the Township of Mendham**

The Southeast Morris County Municipal Utilities Authority is a public community water system consisting of 9 groundwater sources, none under the influence of surface water, 1 surface water intake, 1 purchased ground water source, and 1 purchased surface water source. These sources are drawn from the following aquifers and surface water bodies: Clyde Potts Reservoir, glacial sand and gravel and the Brunswick aquifer. This system purchases water from the following water systems: Morris County MUA; NJAWC connection to Passaic Valley Water Commission and Wanaque Reservoir.

IMPORTANT NOTICE ABOUT YOUR DRINKING WATER

E. COLI BACTERIA FOUND IN ONE OF THE SMCMUA'S WELL WATER SOURCES

Routine quality control/quality assurance testing of The Southeast Morris County Municipal Utility Authority's (SMCMUA) source waters has detected the presence of E. coli bacteria in one of the SMCMUA's fifteen water sources during December 2009. These bacteria were detected in the untreated, raw water source. At no time was E. coli detected in the treated, potable water delivered to SMCMUA's customers. E. coli bacteria originate from human and animal fecal waste. These microbes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, and other symptoms. They may pose a special health risk for infants, young children, some of the elderly and people with severely compromised immune systems. As part of the EPA's Ground Water Rule, the SMCMUA is required to issue this notice to all of our consumers.

The SMCMUA maintains a comprehensive water testing program and tests its source and treated waters above and beyond state and federal requirements for E. coli and other contaminants. These bacteria were detected during routine voluntary monitoring.

There is nothing you need to do at this time. This is not an emergency. If it had been, you would have been notified immediately. The affected source, which accounts for 4% of the total supply, has been taken out of service. Plans are already being implemented to upgrade the existing treatment to insure that SMCMUA's consumers receive only the highest quality potable water. This source will not return to service until the treatment upgrades have been installed and approved by NJDEP's Bureau of Safe Drinking Water Implementation.

For more information, please contact Frank Marascia, Water Quality/Regulatory Specialist at (973) 326-7230 or fmarascia@smcmua.org. General guidelines on ways to lessen the risk of infection by microbes are available from the EPA Safe Drinking Water Hotline at 1-800-426-4791.

This notice is being sent to you by The Southeast Morris County Municipal Utilities Authority, State Water System I.D. No. NJ1424001.

Date Distributed: June 2010

Cryptosporidium

Cryptosporidium is a microbial pathogen found in surface water throughout the United States. Although Cryptosporidium can be removed through commonly used filtration methods, the US EPA issued a new rule in January 2006 that requires water systems with higher Cryptosporidium levels in their source water to provide additional treatment. The SMCMUA monitored for Cryptosporidium in its raw surface water during 2006-2008. Sample results do not show a need to provide additional treatment.

Source Water Assessment Program

The New Jersey Department of Environmental Protection (NJDEP) has prepared Source Water Assessment Reports and Summaries for all public water systems. The purpose of the Source Water Assessment Program (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 (see Page 6 for SMCMUA summary). Further information on SWAP can be obtained by logging onto the NJDEP's website at www.state.nj.us/dep/swap or by phoning the NJDEP Bureau of Safe Drinking Water at (609) 292-5550.

SMCMUA has identified its watershed and wellhead protection areas. To become involved in the effort to protect and preserve local water resources contact The Passaic River Coalition's Ground Water Protection Committee at (973) 532-9830.



**SMCMUA Treatment and Pumping Apprentice Operator
Repairing Membrane Fibers Used to Filter Water at the
Clyde Potts Reservoir in the Township of Mendham**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDs or other immune system disorders, some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Monitoring Waivers

The Safe Drinking Water Act regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, volatile organic chemicals and synthetic organic chemicals. SMCMUA received waivers for the testing for synthetic organic compounds and asbestos. The State granted these monitoring waivers based on an assessment of the vulnerability of source waters to these contaminants and available monitoring data.

Monitoring Frequency

The table on Page 5 lists those substances that were found in SMCMUA's treated water during sample testing conducted in 2009. While the water is tested for many potential contaminants, only those that were detected are reported in the table.

The DEP requires monitoring for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old, as noted in the table.

Unregulated Contaminant Monitoring

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. During the first round of monitoring (1988-1997) the SMCMUA sampled for 12 unregulated contaminants including several volatile organic compounds and herbicides. Dacthal Acid Metabolites (DCPA) were detected at low levels. Sample tests from each source of water showed DCPA levels from non-detect to 3 parts per billion (ppb). Based on the toxicological information currently available for Dacthal Acid Metabolites, the Bureau of Safe Drinking Water has established an Action Level of 70 parts per billion (ppb).

The second round of monitoring was completed during 2009 and consisted of 10 unregulated contaminants including explosives and flame retardants. None of these contaminants were detected in sample tests from each source of water.

Additional information on unregulated contaminants can be found at <http://www.epa.gov/safewater/ucmr/index.html>.

Perfluorooctanoic Acid (PFOA)

Perfluorooctanoic Acid (PFOA) is a synthetic (man-made) chemical used in the manufacturing of several commercially important products. PFOA is very persistent in the environment and has been found at very low levels both in the environment and in the blood of the general U.S. population. On February 13, 2007, the New Jersey Department of Environmental Protection (NJDEP) Commissioner Lisa P. Jackson released the results of a study that evaluated the occurrence of PFOA in New Jersey. The study found very low levels in wells throughout the state, consistent with levels found in other areas of the country. PFOA is not currently regulated under the requirements of the New Jersey or Federal Safe Drinking Water Act. The NJDEP has taken the first step toward developing a preliminary drinking water guidance value for PFOA based on existing animal studies and estimates derived from a lifetime of exposure (70 years). The NJDEP has developed a "guidance level" of 0.04 parts per billion (ppb).

During 2009, SMCMUA tested each of its major sources for PFOA. All sample results were non-detect. Water purchased from the Passaic Valley Water Commission showed PFOA at 0.027 parts per billion. Additional information on PFOA can be found at <http://www.epa.gov/opptintr/pfoa/index.htm>.



SMCMUA Apprentice Operator of Water Quality Studying Water Samples in the Laboratory at the Authority's Headquarters in Cedar Knolls

IMPORTANT NOTICE ABOUT YOUR DRINKING WATER SODIUM RECOMMENDED UPPER LIMIT EXCEEDED

The Southeast Morris County Municipal Utilities Authority exceeded the Secondary Recommended Upper Limit (RUL) for sodium during 2009 at two wells that periodically supply water to Morris Plains and in treated surface water purchased from the Passaic Valley Water Commission that supplies water to other areas of the water system. The RUL for sodium is 50 parts per million (ppm) whereas the maximum detected level at any source was 74 ppm, on a Running Annual Average (RAA).

This is not an emergency, but as our customers, you have a right to know the results of the water source analysis.

For healthy individuals, the sodium intake from water is not important, because a much greater intake of sodium takes place from salt in the diet. However, sodium levels above the RUL might be of concern to individuals on sodium restricted diets.

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 process. This is not an emergency. If it had been, you would have been notified immediately.

The Southeast Morris County Municipal Utilities Authority will continue to monitor sodium at these sources on a quarterly basis and report the values in the annual Water Quality Report.

For more information, please contact Frank J. Marascia, Water Quality/Regulatory Specialist, at 973-326-7230 or fmarascia@smcmua.org.

This notice is being sent to you by The Southeast Morris County Municipal Utilities Authority, State Water System I.D. No. NJ1424001.

Date Distributed: June 2010

IMPORTANT INFORMATION ABOUT LEAD IN DRINKING WATER

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. 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 two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Definitions

In order to ensure that tap water is safe to drink, EPA prescribes regulations that 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 that must provide the same protection for public health. The following definitions describe the limits the EPA has established for drinking water. These definitions will assist you in reviewing the data on the following page.

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

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

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

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

Maximum Residual Disinfectant Level (MRDL): 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.

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



The Table on the following page lists substances that were found in the SMCMUA's treated water during testing conducted in 2009. The presence of these substances in water does not necessarily indicate that the water poses a health risk.

Table of Detected Contaminants

Contaminant	Range	Highest Level Detected	MCL	MCLG	Typical Source	Violation
Turbidity ⁽¹⁾ (NTU)	0.03 – 0.29	0.29	TT = 1 NTU TT = Percent of samples below 0.3 NTU	0	Soil runoff	No
Total Coliform Bacteria	N/A	1% ⁽²⁾	Presence of coliform bacteria in greater than 5% of monthly samples	0	Naturally present in the environment	No
E. Coli Bacteria	N/A	Detected in one groundwater source	Presence of E. coli bacteria in groundwater sources	0	Human and animal fecal waste	No
Chlorine (ppm)	0.36 – 0.61 ⁽³⁾	0.49 ⁽³⁾	MRDL = 4.0 as Cl ₂	MRDLG = 4	Water additive used to control microbes	No
Total Trihalomethanes (ppb)	6 – 74 ⁽⁴⁾	48 ⁽⁴⁾	80	N/A	By-product of drinking water disinfection	No
Five Haloacetic Acids (ppb)	ND – 52 ⁽⁴⁾	20 ⁽⁴⁾	60	N/A	By-product of drinking water disinfection	No
Methyl t-Butyl Ether (ppb)	1.3 – 1.5 ⁽⁴⁾	1.8 ⁽⁴⁾	70	70	Leaking underground gasoline and fuel oil tanks, gasoline and fuel oil spills	No
Barium (ppb)	9 – 82	82	2,000	2,000	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	No
Fluoride (ppb)	ND – 200	200	4,000	4,000	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	No
Nickel (ppb)	ND – 4	4	No MCL – Monitoring Required	N/A	Erosion of natural deposits	No
Nitrate ⁽⁵⁾ (ppb)	ND – 3,300	3,300	10,000	10,000	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	No
Alpha Emitters (pCi/L) ⁽⁶⁾	ND – 5.8 ⁽⁴⁾	4.0 ⁽⁴⁾	15	0	Erosion of natural deposits	No
Combined Radium 226 & 288 ⁽⁶⁾	ND – 5.4 ⁽⁴⁾	2.1 ⁽⁴⁾	5	0	Erosion of natural deposits	No

Contaminant	Recommended Upper Limit	Maximum Detected Level	Range	Typical Source	Exceeded
Sodium (ppm)	50	74 ⁽⁴⁾	68 – 81 ⁽⁴⁾	Erosion of natural deposits; leaching; runoff	Yes

Contaminant	Action Level ⁽⁷⁾	MCLG	Number of Samples	90 th Percentile ⁽⁸⁾	Number of Samples above Action Level	Typical Source	Violation
Lead (ppb) ⁽⁹⁾	15	0	31	10	2	Corrosion of household plumbing systems	No
Copper (ppb) ⁽⁹⁾	1,300	1,300	31	440	0	Corrosion of household plumbing systems; erosion of natural deposits	No

Contaminant	Highest Level Detected	Range	Average	Typical Source
Dacthal (DCPA) Acid Metabolites ⁽⁶⁾ ⁽⁹⁾ (ppb)	3	ND – 3	1	Degradation product of DCPA, a herbicide used on grasses and weeds with fruit and vegetable crops

MCL = Maximum Contaminant Level	NTU = Nephelometric Turbidity Unit	ND = not detected
MCLG = Maximum Contaminant Level Goal	TT = Treatment Technique	ppm = parts per million or milligrams per liter
MRDL = Maximum Residual Disinfectant Level	pCi/L = pico Curie per liter	ppb = parts per billion or micrograms per liter
MRDLG = Maximum Residual Disinfectant Level Goal	N/A = not applicable	

The potential health effects of the contaminants detected in the water supply are detailed on Page 6. Please note that the levels of the primary contaminants detected in the water supply did not exceed any MCLs.

- ¹ Turbidity is a measure of the cloudiness in the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.
- ² Maximum percentage of positive samples collected in any one month.
- ³ Maximum Detected Level indicated is the maximum running annual average. Range indicates the monthly averages detected.
- ⁴ Maximum Detected Level indicated is the maximum running annual average. Range indicates the discrete instantaneous values detected.
- ⁵ Nitrate in drinking water at levels above 10,000 ppb is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.
- ⁶ The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.
- ⁷ Action Level: The concentration of a contaminant that, if exceeded, triggers a treatment technique or other requirement, which a water system must follow.
- ⁸ Ninety percent of the samples test below the indicated action level.
- ⁹ Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. Based on the toxicological information currently available for Dacthal Acid Metabolites, the Bureau of Safe Drinking Water has established an Action Level of 70 ppb.

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.

FLUORIDE

The Southeast Morris County Municipal Utilities Authority frequently receives calls regarding the status of fluoridation of its water supply. These callers often include pediatricians and dentists inquiring if the areas where their patients live are receiving fluoridated water. If their patients do not receive fluoridated drinking water, fluoride supplements may be prescribed for their pediatric patients. The Southeast Morris County Municipal Utilities Authority DOES NOT fluoridate its water supply. This includes the Town of Morristown, Morris Township, Morris Plains, Hanover Township, and parts of Mendham Township and Harding Township. If you pay a water bill to The Southeast Morris County Municipal Utilities Authority then you are not receiving fluoridated water. For more information regarding fluoride and fluoride supplements contact your local health department or health care provider.

Susceptibility Ratings for Southeast Morris County MUA Sources

The table below illustrates the susceptibility ratings for the seven contaminant categories (and radon) for each source in the system. The table provides the number of wells and intakes that rated high (H), medium (M), or low (L) for each contaminant category. For susceptibility ratings of purchased water, refer to the specific water system's source water assessment report.

The seven contaminant categories are defined at the bottom of this page. DEP considered all surface water highly susceptible to pathogens; therefore all intakes received a high rating for the pathogen category. For the purpose of Source Water Assessment Program, radionuclides are more of a concern for ground water than surface water. As a result, surface water intakes' susceptibility to radionuclides was not determined and they all received a low rating.

If a system is rated highly susceptible for a contaminant category, it does not mean a customer is or will be consuming contaminated drinking water. The rating reflects the potential for contamination of source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any contaminants are detected at frequencies and concentrations above allowable levels. As a result of the assessments, DEP may customize (change existing) monitoring schedules based on the 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
Wells – 12		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		

- **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 (800) 648-0394.
- **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.

HOW TO REACH US

For bill inquiries, payment and other customer service information, call:

Lucille Araneo
Customer Service Supervisor
973-326-6880

For questions about water quality, testing results and procedures, call:

Frank Marascia
Water Quality/Regulatory Specialist
973-326-7230

For low pressure, discolored water or field problems, call:

Jim Lengyel
Assistant Superintendent
973-326-9021

For engineering and operational questions, call:

Paul Kozakiewicz
Superintendent
973-326-6865

For general management concerns, call:

William Hutchinson, P.E.
Executive Director/Chief Engineer
973-326-6866

Fax us at 973-326-9521, 973-326-6864, or send e-mail to Info@SMCMUA.ORG.

Check out our website at WWW.SMCMUA.ORG.

The SMCMUA Board

The Town of Morristown, the Townships of Hanover and Morris, and the Borough of Morris Plains each appoint two residents to serve as members of the SMCMUA Board. The Board establishes the overall policies of the Authority and hires appropriate officials to manage the day-to-day operations. Officers are elected by the Board at the Annual Reorganization Meeting on February 1.

Robert Carroll
Chairman
Representative of Morris Plains
Term expires 2015

Dennis Baldassari
Vice Chairman
Representative of Morris Twp.
Term expires 2011

Adolf Schimpf
Secretary
Representative of Hanover Twp.
Term expires 2012

William Conradi
Member
Representative of Morris Plains
Term expires 2014

Mary Dougherty
Member
Representative of Morristown
Term expires 2015

Saverio Iannaccone
Member
Representative of Hanover Twp.
Term expires 2011

Donald Kissil
Member
Representative of Morristown
Term expires 2014

Edward A. Taratko, Jr., P.E.
Member
Representative of Morris Twp.
Term expires 2013

BOARD MEETINGS

The SMCMUA Board normally meets on the third Thursday of every month at 7:30PM in the Saddle Road, Cedar Knolls headquarters of the Authority. The public is invited to attend and participate at the meetings. For a complete meeting schedule, please call Alexis Bozza, Recording Secretary, at 973-326-6867 or visit the Authority's website at www.smcmua.org.