

Annual Drinking Water Quality Report

Morris County Municipal Utilities Authority

PWS ID NJ1432001

For the Year 2011, Results from the Year 2010

The Morris County MUA is pleased to provide you with our Annual Drinking Water Quality Report for the year 2011. This report includes the water quality monitoring results from the Morris County MUA. These results are for you to incorporate into your Consumer Confidence Report (CCR) with the additional sampling results from your distribution system. We want to keep you informed about the excellent water quality and delivery services we have provided to you over the past year. Our goal is and always has been, to provide a safe and dependable supply of drinking water. Morris County MUA is exclusively a bulk water wholesaler. Our source is ground water, treated with sodium hypochlorite for disinfection and lime for pH adjustment.

The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment Report and Summary for this public water system, which is available at www.state.nj.us/dep/swap/ or by contacting the NJDEP, Bureau of Safe Drinking Water at 609-292-5550. For a brief summary of this report see page 3.

If you have any questions about this report, contact Chief Engineer, John Scarmozza at (973-285-8386) or Chief Water Operator, Anthony Milonas at (973-584-5503). We want our valued customers to be informed about their water quality. If you want to learn more, feel free to attend any of our regularly scheduled meetings, call (973-285-8385) for date and time.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791).

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human 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.
- **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.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

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.

Morris County M.U.A. routinely monitors for contaminants in your drinking water according to federal and state laws. The following table shows the results of our monitoring for the period of January 1st to December 31st 2010. 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. Our system received monitoring waivers for asbestos and synthetic organic chemicals. State law also allows us to monitor for some contaminants less than once a year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

DEFINITIONS

In the following table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

- ***Non-Detects (ND)*** - laboratory analysis indicates that the constituent is not present.
- ***Parts per million (ppm) or Milligrams per liter (mg/l)*** - one part per million corresponds to one minute in two years or a single penny in \$10,000.
- ***Parts per billion (ppb) or Micrograms per liter*** - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- ***Maximum Contaminant Level*** - The "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- ***Maximum Contaminant Level Goal*** - The "Goal"(MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- ***Treatment Technique (TT)*** – A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
- ***Action Level (AL)*** – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- ***Picocuries per liter (pCi/L)*** – picocuries per liter is a measure of the radioactivity in water.
- ***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 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer who have undergone 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 (1-800-4791).

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. Morris County M.U.A. is responsible for providing high quality drinking water, but can not 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 and 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 at 800-426-4791 or at <http://www.epa.gov/safewater/lead>.

Morris County MUA Test Results

Contaminant	Violati on Y/N	Level Detected	Units of Measure ment	MCL G	MCL	Likely Source of Contamination
Radioactive Contaminants:						
Gross Alpha Test results Yr. 2008	N	Range = 0.2 – 4.3 Average = 1.6	pCi/l	0	15	Erosion of natural deposits
Combined Radium 226 & 228 Test results Yr. 2008	N	Range = 0.3 – 2.3 Average = 0.9	pCi/l	0	5	Erosion of natural deposits
Inorganic Contaminants:						
Barium Test results Yr. 2008	N	Range = 0 – 0.5 Highest detect = 0.5	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Cadmium Test results Yr. 2008	N	Range = 0 – 2 Highest detect = 2	ppb	5	5	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Nitrate (as Nitrogen) Test results Yr. 2010	N	Range = 0.6 – 3.5 Highest detect = 3.5	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Volatile Organic Contaminants / Disinfection Byproducts:						
Methyl <i>tertiary</i> butyl ether (MTBE) Test results Yr. 2010	N	Range = ND – 0.9 Highest Detect = 0.9	ppb	70	70	Leaking underground gasoline and fuel oil tanks. Gasoline and fuel oil spills.
1,1,1 – Trichloroethane Test results Yr. 2010	N	Range = ND – 0.4 Highest detect = 0.4	ppb	200	30	Discharge from metal degreasing sites and other factories
TTHMs Total Trihalomethanes Test results Yr. 2010	N	Range = ND – 12 Annual Average = 4	ppb	N/A	80	By-product of drinking water disinfection
HAA5s Haloacetic Acids Test results Yr. 2010	N	Range = ND – 20 Annual Average = 2	ppb	N/A	80	By-product of drinking water disinfection
Regulated Disinfectants:		Level Detected		MRDL		MRDLG
Chlorine (Sodium Hypochlorite)		Average = 0.5		4.0 ppm		4.0 ppm

The following is a brief summary of our source water assessment performed by the NJDEP. Morris County M.U.A. is a public community water system consisting of 8 wells, 0 - wells under the influence of surface water, 0 - surface water intakes. The systems source water comes from the following aquifers, glacial sand and gravel, limestone. The table below illustrates the susceptibility ratings on the following potential contaminant sources that the NJDEP found with in the source water assessment areas. Each source has a susceptibility rating of high, medium, or low for each potential contaminant.

If a system is rated highly susceptible for a contamination 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.

Potential Contaminants	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radionuclides			Radon			Disinfection Byproducts 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	
Sources																									
Wells - 8		8		4	2	2		2	6	2		6		1	7	1	6	1	2	6		5	3		
GUDI - 0																									
Surface water intakes -0																									

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.

Volatile Organic Compounds: Man made chemicals used as solvents, degreasers, and gasoline components.

Pesticides: Man made chemicals used to control pests, weeds and fungus. Common sources include land application and manufacturing centers of pesticides.

Inorganics: Mineral-based compounds that are naturally occurring and man made.

Radionuclides: Radioactive substances that are naturally occurring and man made.

Radon: Colorless, odorless, cancer causing gas that occurs naturally in the environment.

Disinfection Byproduct Precursors: A common source is naturally occurring organic matter in surface water.

Disinfection by products are formed when the disinfectants (usually chlorine) is used to kill pathogens react with dissolved organic material present in water.

If you have any questions regarding the source water assessment report or summary please contact the Bureau of Safe Drinking Water at swap@dep.state.nj.us or cll 609-292-5550

Our system had no violations. We are proud that your drinking water meets or exceeds all Federal and State standards. We learned through our monitoring and testing that some contaminants were detected, however the EPA has determined that your water IS SAFE at this level.

Thank you for allowing us to continue providing your municipality with clean, quality water this year.

Very truly yours,
Morris County Municipal Utilities Authority