

# ***Annual Drinking Water Quality Report***

## ***Morris County Municipal Utilities Authority***

**PWS ID# NJ1432001**  
**For the Year 2022, Results from the Year 2021**

Morris County MUA is pleased to provide you with our Annual Drinking Water Quality Report for the year 2021. This report includes results from water sample monitoring sampling performed by Southeast Morris County MUA (SMCMUA) on their surface water source. Water that you purchase from the Morris County MUA is SMCMUA surface water from their Clyde Potts Treatment Plant. These results are for you to incorporate into your CCR report with other additional sampling and results that you may have performed within 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.

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/](http://www.state.nj.us/dep/swap/) or by contacting the NJDEP, Bureau of Safe Drinking Water at 609-292-5550. A brief summary of this report is included.

**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 (1-877-927-6337).**

If you have any questions about this report, contact Superintendent of Water Operations, 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 (1-877-927-6337).

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.

### **What are PFOA and PFOS?**

Perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) are per- and polyfluoroalkyl substances (PFAS), previously referred to as perfluorinated compounds, or PFCs, that are man-made and used in industrial and commercial applications. PFOA was used as a processing aid in the manufacture of fluoropolymers used in non-stick cookware and other products, as well as other commercial and industrial uses based on its resistance to harsh chemicals and high temperatures. PFOS is used in metal plating and finishing as well as in various commercial products. PFOS was previously used as a major ingredient in aqueous film forming foams for firefighting and training, and PFOA and PFOS are found in consumer products such as stain resistant coatings for upholstery and carpets, water resistant outdoor clothing, and grease proof food packaging. Although the use of PFOA and PFOS has decreased substantially, contamination is expected to continue indefinitely because these substances are extremely persistent in the environment and are soluble and mobile in water. More information can be found at: [https://www.state.nj.us/dep/wms/bears/docs/2019-4-15-FAQs\\_PFOA-PFOS-websites-OLA%204-24-19SDM-\(003\).pdf](https://www.state.nj.us/dep/wms/bears/docs/2019-4-15-FAQs_PFOA-PFOS-websites-OLA%204-24-19SDM-(003).pdf)

The Morris County MUA and the Southeast Morris County MUA routinely monitor 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 1<sup>st</sup> to December 31<sup>st</sup>, 2021. 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 systems received monitoring waivers for two of these types of contaminants, 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 the data, though representative, are more than one year old.

<b>Southeast Morris County MUA 2021 TEST RESULTS</b>						
<b>PWS ID # NJ1424001</b>						
<b>Contaminant</b>	<b>Violation Y/N</b>	<b>Level Detected</b>	<b>Units of Measurement</b>	<b>MC LG</b>	<b>MCL</b>	<b>Likely Source of Contamination</b>
<b>Microbiological Contaminants:</b>						
Total coliform Bacteria	N	Highest Monthly -0.2% (2 out of 122 samples were Total Coliform (Positive))		0	5% of monthly samples	Naturally present in the environment
Turbidity	N	100% < 0.3 Highest result = 0.16		N/A	TT = 1	Soil runoff
<b>Inorganic Contaminants:</b>						
Barium	N	Range = 0.02 - 0.13 Highest detect = 0.13	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium	N	Range = ND - 1.2 Highest detect = 1.2	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Copper Result at 90 <sup>th</sup> Percentile	N	1.26 4 samples out of 34 exceeded the action level	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Arsenic	N	Range = ND - 1.0 Highest detect = 1.0	ppb	n/a	5	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Lead Result at 90 <sup>th</sup> Percentile	N	3.2 No samples exceeded the action level	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nickel	N	Range = ND - 1.3 Highest detect = 1.3	ppb	N/A	N/A	Erosion of natural deposits
Nitrate (as Nitrogen)	N	Range = 0.1 - 3.9 Highest detect = 3.9	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Volatile Organic Contaminants / Disinfection Byproducts:</b>						
Methyl tertiary butyl ether (MTBE)	N	Range = ND - 1.1 Highest detect = 1.1	ppb	70	70	Leaking underground gasoline and fuel oil tanks. Gasoline and fuel oil spills.
TTHM Total Trihalomethanes	N	Range = 10 - 97 Highest LRAA = 66	ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids	N	Range = 11 - 66 Highest LRAA = 50	ppb	N/A	60	By-product of drinking water disinfection
<b>PFAS Per- and Polyfluoroalkyl Substances:</b>						
PFOS Perfluorooctane Sulfonic Acid	N	Range = ND - 6.6 Highest detect = 6.6	ppt	N/A	13	Used in the manufacture of fluoropolymers
PFOA Perfluorooctane Acid	N	Range = ND - 11 Highest detect = 11	ppt	N/A	14	Used in the manufacture of fluoropolymers
<b>Regulated Disinfectants</b>		<b>Level Detected</b>	<b>MRDL</b>		<b>MRDLG</b>	
Chlorine		Range = 0.9 - 1.3 ppm Average = 1.1 ppm	4.0 ppm		4.0 ppm	

**Chlorine:** Water additive used to control microbes.

Secondary Contaminant	Level Detected	Units of Measurement	RUL
Sodium* Test results Yrs. 2020 & 2021	Range = 14 - 128	ppm	50

The SMCMA exceeded the secondary Recommended Upper Limit (RUL) for sodium. 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 Recommended Upper Limit (RUL) may be of concern to individuals on a sodium restricted diet.

Listed in the table are the contaminants that were detected. In the “Test Results” table you may find some 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.
- **Parts per trillion (ppt)** or nanogram per liter - one part per trillion corresponds to one minute in 20,000 years, or a single penny in \$100,000,000.
- **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.
- **Nephelometric Turbidity Unit (NTU)** - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- **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 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.

#### Sources of Lead in Drinking Water

Although most lead exposure occurs from inhaling dust or from contaminated soil, or when children eat paint chips, the U.S. Environmental Protection Agency (USEPA) estimates that 10 to 20 percent of human exposure to lead may come from lead in drinking water. Infants who consume mostly mixed formula can receive 40 percent to 60 percent of their exposure to lead from drinking water. Lead is rarely found in the source of your drinking water but enters tap water through corrosion, or wearing away, of materials containing lead in the water distribution system and household plumbing materials. These materials include lead-based solder used to join copper pipes, brass, and chrome-brass faucets, and in some cases, service lines made of or lined with lead. New brass faucets, fittings, and valves, including those advertised as “lead-free”, may still contain a small percentage of lead, and contribute lead to drinking water. The law currently allows end-use brass fixtures, such as faucets, with up to 0.25 percent lead to be labeled as “lead free”. However, prior to January 4, 2014, “lead free” allowed up to 8 percent lead content of the wetted surfaces of plumbing products including those labeled National Sanitation Foundation (NSF) certified. Visit the NSF website at [www.nsf.org](http://www.nsf.org) to learn more about lead-containing plumbing fixtures. Consumers should be aware of this when choosing fixtures and take appropriate precautions. When water stands in lead service lines, lead pipes, or plumbing systems containing lead for several hours or more, the lead may dissolve into your drinking water. This means the first water drawn from the tap in the morning, or later in the afternoon if the water has not been used all day, can contain fairly high levels of lead.

#### Steps You Can Take to Reduce Exposure to Lead in Drinking Water

For a full list of steps visit: <https://www.state.nj.us/dep/watersupply/dwc-lead-consumer.html>

**Run the cold water to flush out lead.** Let the water run from the tap before using it for drinking or cooking any time the water in the faucet has gone unused for more than six hours. The longer the water resides in plumbing the more lead it may contain. Flushing the tap means running the cold-water faucet. Let the water run from the cold-water tap based on the length of the lead service line and the plumbing configuration in your home. In other words, the larger the home or building and the greater the distance to the water main (in the street), the more water it will take to flush properly. Although toilet flushing or showering flushes water through a portion of the plumbing system, you still need to flush the water in each faucet before using it for drinking or cooking. Flushing tap water is a simple and inexpensive measure you can take to protect your health. It usually uses less than one gallon of water.

**Use cold, flushed water for cooking and preparing baby formula.** Because lead from lead-containing plumbing materials and pipes can dissolve into hot water more easily than cold water, never drink, cook, or prepare beverages including baby formula using hot water from the tap. If you have not had your water sampled or if you know, it is recommended that bottled or filtered water be used for drinking and preparing baby formula. If you need hot water, draw water from the cold tap and then heat it.

**Do not boil water to remove lead.** Boiling water will not reduce lead; however, it is still safe to wash dishes and do laundry. Lead will not soak into dishware or most clothes.

**Use alternative sources or treatment of water.** You may want to consider purchasing bottled water or a water filter. Read the package to be sure the filter is approved to reduce lead or contact NSF International at 800-NSF-8010 or [www.nsf.org](http://www.nsf.org) for information on performance standards for water filters.

**Determine if you have interior lead plumbing or solder.** If your home/building was constructed prior to 1987, it is important to determine if interior lead solder or lead pipes are present. You can check yourself, hire a licensed plumber, or check with your landlord.

**Replace plumbing fixtures and service lines containing lead.** Replace brass faucets, fittings, and valves that do not meet the current definition of "lead free" from 2014 (as explained above). Visit the NSF website at [www.nsf.org](http://www.nsf.org) to learn more about lead-containing plumbing fixtures.

**Remove and clean aerators/screens on plumbing fixtures.** Over time, particles and sediment can collect in the aerator screen. Regularly remove and clean aerators screens located at the tip of faucets and remove any particles.

**Test your water for lead.** Please call Superintendent of Water Operator, Anthony Milonas at (973-584-5503) to find out how to get your water tested for lead. Testing is essential because you cannot see, taste, or smell lead in drinking water.

**Get your child tested.** Contact your local health department or healthcare provider to find out how you can get your child tested for lead if you are concerned about lead exposure. New Jersey law requires that children be tested for lead in their blood at both 1 and 2 years of age and before they are 6 years old if they have never been tested before or if they have been exposed to a known source of lead.

**Have an electrician check your wiring.** If grounding wires from the electrical system are attached to your pipes, corrosion may be greater. Check with a licensed electrician or your local electrical code to determine if your wiring can be grounded elsewhere. DO NOT attempt to change the wiring yourself because improper grounding can cause electrical shock and fire hazards.

**Water softeners and reverse osmosis units** will remove lead from water but can also make the water more corrosive to lead solder and plumbing by removing certain minerals; therefore, the installation of these treatment units at the point of entry into homes with lead plumbing should only be done under supervision of a qualified water treatment professional.

#### **Health Effects of Lead**

Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones, and it can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development. Contact your local health department or healthcare provider to find out how you can get your child tested for lead if you are concerned about lead exposure. You can find out more about how to get your child tested and how to pay for it at <https://www.state.nj.us/health/childhoodlead/testing.shtml>.

The following is a brief summary of the Southeast Morris County's MUA Clyde Potts Reservoir source water. The table below illustrates the susceptibility ratings on the source water assessment area. The 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.

Southeast Morris County MUA Source Water Assessment																								
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																								
Surface water intake -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.

**Volatile Organic Compounds:** Manmade chemicals used as solvents, degreasers, and gasoline components.

**Pesticides:** Manmade 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](mailto:swap@dep.state.nj.us) or call 609-292-5550

*Morris County MUA is pleased to report that our drinking water is safe and meets federal and state standards.*

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

Very truly yours,  
Morris County Municipal Utilities Authority