

MONROE MUNICIPAL UTILITIES AUTHORITY

Gloucester County
372 South Main Street
Williamstown, New Jersey 08094

Annual Drinking Water Quality Report

We're pleased to present our Twenty second Annual Drinking Water Quality Report to you covering JANUARY 1ST TO DECEMBER 31ST, 2020. The Federal Safe Drinking Water Act (SDWA) requires that Utilities issue an annual Consumer Confidence Report besides other notices that may be required by law. We designed this report to inform you about the quality of our water and services we deliver to you every day.

The Monroe Municipal Utilities Authority is committed to delivering a safe and reliable supply of drinking water to the approximate 27,000 residents of Monroe Township that the Authority serves. Informed customers are the best allies in maintaining safe drinking water. The Authority is pleased to report that water delivered by our Utility meets or surpasses all federal and state drinking water standards.

We believe in education and our employees attend various classes and seminars on water treatment processes and distribution system operations. The Authority's Water Quality Supervisor holds the required New Jersey water treatment and water distribution licenses. During the year, our State certified lab collects numerous water samples for various testing. The data presented in this report is the same data collected to comply with U.S. Environmental Protection Agency and New Jersey Department of Environmental Protection monitoring and testing requirements.

WATER SOURCE

The Monroe Municipal Utilities Authority water supply is from ground water. We have eight wells, six draw water from the Cohansey Aquifer and Wells #12 and #13 which draw water from the Piney Point Aquifer. These wells range in depth from 143 feet to 355 feet. The Authority has developed two Aquifer Storage and Recovery (ASR) wells in the Potomac-Raritan-Magothy (P.R.M.) Aquifer. This will allow us to pump system water down into the aquifer in the winter to be recovered in the summer when water demands are much higher. Also we purchase 15.25 million gallons of water per month from New Jersey American Water.

We have four interconnections in our water distribution system, two with the Borough of Clayton and one each with Glassboro and Washington Township. This enables us in the event of an emergency to obtain water through the interconnections and/or supply water to these communities.

The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment Report and Summary for the 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.

Table 9: Susceptibility Rating for Drinking Water Source(s)

EPTDS ID	Source ID	Source Name	Contaminant Category							
			Pathogens	Nutrients	Pesticides	VOCs	Inorganics	Radionuclides	Radon	DBPs
			Rating	Rating	Rating	Rating	Rating	Rating		Rating
02	005	WELL 5 / WATER STREET	L	H	M	H	H	H	M	M
03	007	WELL 6/ LAKE AVENUE	L	H	M	H	M	H	M	M
04	011	WELL 7 / CORKERY LANE	L	H	M	H	M	H	M	M
04	022	ASR WELL#11 COKERY LANE	L	L	L	L	M	M	L	M
05	015	WELL 8	M	H	L	H	M	H	M	M
05	024	ASR WELL#14 RT. 42 BLACK HORSE PIKE	L	H	L	L	M	M	L	M
08	019	WELL 9/ TUCKAHOE RD	L	H	M	H	L	H	M	M
08	020	WELL 10 / TUCKAHOE RD	L	H	M	H	L	H	M	M

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.

AN EXPLANATION OF THE WATER QUALITY DATA TABLE

The Monroe MUA routinely monitors for contaminants in our drinking water according to Federal and State Laws. This table shows the test results of our monitoring for the period of January 1st to December 31st, 2020. 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 test results, though representative, are more than one year old. In the table that follows, you will find terms and abbreviations you might not be familiar with. To help you better understand these terms, we have provided the following definitions:

90th Percentile - the ninth highest reading (of ten samples), which is used to determine compliance with the Lead and Copper Rule.

Non-Detects (ND) - laboratory analysis indicates that contaminant is not present.

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

Treatment Technique (TT) - (mandatory language) A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level- (mandatory language) The “Maximum Allowed” (MCL) is the highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal - (mandatory language) 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.

Secondary Contaminant - Substances that do not have an impact on health. Secondary Contaminants affect aesthetic qualities such as odor, taste or appearance. Secondary standards are recommendations, not mandates.

Recommended Upper Limits (RUL) - Recommended maximum concentrations of secondary contaminants. These reflect aesthetic qualities such as odor, taste or appearance. RUL’s are recommendations, not mandates.

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. MRDLG’s 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 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).

* The Monroe MUA has a permanent interconnect with Glassboro, attached please find their CCR Report

TEST RESULTS

Key: **mcl**=maximum contaminant level • **Mclg**=maximum contaminant level goal • **ppm**=parts per million, or milligrams per liter (mg/l)
ppb=parts per billion, or micrograms per liter (ug/l) • **ppt**=parts per trillion, or picograms per liter (ng/l)

Contaminant	Units	Range Detected	Highest Level Detected	MCLG	MCL	Meets Standards Y/N	Likely Source Contaminant
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Microbiological Contaminants

1. Total Coliform Bacteria	100 ml	ND	ND	0	Presence of coliform bacteria in 5% of monthly samples	Y	Naturally present in the environment
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Radioactive Contaminants

2. Gross Alpha	pci/l	.09 to 7.2	7.2	0	15	Y	Erosion of natural deposits
3. Radium Combined (226,228)	pci/l	.2 to 1.8	1.8	0	5	Y	Erosion of natural deposits

Inorganic Contaminants

4. Mercury	ppb	ND to 3.8	3.8	2	2	N	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from crop land.
5. Nitrates	ppm	ND to 3.74	3.74	10	10	Y	Runoff from fertilizer use; leaching from septic tanks, sewage, erosion of natural deposits.
6. Copper (2020) 90th Percentile	ppm	.05		1.3	AI = 1.3	Y	Corrosion of household plumbing systems.
7. Lead (2020) 90th Percentile	ppb	1.28		0	AI = 15	Y	Corrosion of household plumbing systems.
8. Barium	ppm	.003 to .10	.10	2	2	Y	Naturally occurring
9. Arsenic	ppb	ND to 1.5	1.5	0	5	Y	Naturally occurring
10. Beryllium	ppb	ND	.ND	4	4	Y	Weathering of rocks and soils
11. Thallium	ppb	ND to .8	.8	.5	2	Y	Metals found in natural deposits
12. Cadmium	ppb	ND	ND	5	5	Y	Natural occurring metal
13. Antimony	ppb	.6	.6	6	6	Y	Discharge from Petroleum refineries, fire retardants, ceramics, electronics and solder
14. Nickel	ppm	1.0	1.0	N/A	N/A		Natural hard corrosion resistant metal
15. Fluoride	ppb	ND to 1.0	1.0	4	4	Y	Mineral deposit

Stage 2 DBPR

16. Total Trihalomethanes	ppb	8-23	23	N/A	80	Y	By-product of drinking water disinfection.
17. Haloacetic Acids	ppb	.65-7	7	N/A	60	Y	By-product of drinking water disinfection.

Compliance is based on the running annual average of each location tested. The range detected reflects all samples from this year to calculate the running annual average.

Regulated Disinfectants

		Range Detected	MRDL	MRDLG		
Total Chlorine Residual	ppm	.07-2.00 Average .56	4	4		Water additive to control Microbes

Secondary Standards

1. Chlorides	ppm	5-21	21	N/A	250	Runoff from natural deposits.
2. Hardness	ppm	5-39	39	N/A	250	Naturally occurring.
3. *Sodium	ppm	58-62	62	N/A	50	Naturally occurring.
4. Aluminum	ppm	ND -.38	.38	N/A	.2	Naturally occurring metal
5. Manganese	ppm	ND- .03	.03	N/A	.05	Erosion of natural deposits
6. Iron	ppm	ND - .13	.13	N/A	.3	Natural mineral deposit
7. Silver	ppm	ND -.002	.002	N/A	.1	Formed from sulfur compounds
8. Total Dissolved Solids	ppm	52-342	342	N/A	500	Organic and Inorganic materials

*For a 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 may be a concern to individuals on a sodium restricted diet.

Contaminant	Units	Range Detected	Highest Level Detected	MCLG	MCL	Meets Standards Y/N	Likely Source Contaminant
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Volatile Organic Compounds

Methyl Tertiary Butyl Ether	ppb	ND - .27	.27	70	70	Y	Leaking underground storage tanks
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Regulated Perfluorinated Compounds

Perfluorononanoic Acid (PFNA)	ppt	ND - 10	10	N/A	13	Y	Used to make teflon, Scotchguard, fire fighting foams
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Unregulated Perfluorinated Compounds

Perfluorooctanoic Acid (PFOA)	ppt	ND - 7.4	7.4				Used for its emulsifier and surfactant properties in cosmetics, paints, lubricants and fire fighting foam
Perfluorooctanesulfonic Acid (PFOS)	ppt	ND - 5.7	5.7				Man made chemicals used in products for stain, grease and water resistance
Perfluorohexanoic Acid (PFHXA)	ppt	ND - 4.4	4.4				Used in stain resistant fabrics, fire fighting foam and food packaging

HEALTH EFFECTS OF DETECTED CONTAMINANTS

Combined Radium - Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

Copper - Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

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. The Monroe Municipal Utilities Authority 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 is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Mercury - Some people who drink water containing inorganic mercury well in excess of MCL over many years could experience kidney damage.

Nitrate - Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and if untreated may die. Symptoms include shortness of breath and blue baby syndrome.

Barium - Some people who drink water above the drinking water standards over a short period of time can experience increased blood pressure, stomach irritation, muscle weakness, kidney and heart damage.

Arsenic - The consumption of water containing high concentration of arsenic 100ug/l (PPB) and higher have been associated with health affects including cardiovascular and peripheral vascular disease, hypertension, diabetes, anemia, neurological disorders, hearing loss and high blood pressure.

Beryllium - People who drink water containing Beryllium in excess of the (MCL) maximum contaminant level for many years could develop internal lesions.

Thallium - People who drink water containing Thallium in excess of the (MCL) maximum contaminant level for many years could experience hair loss, changes in their blood, kidney, intestines and liver problems.

Cadmium - People who drink water containing Cadmium in short or high exposures can experience kidney disease as older adults. Low level exposure to Cadmium can decrease bone density and disrupt bone composition in children.

Manganese - Natural occurring substance found in many types of rocks and soil. The EPA is not concerned with the health effects until concentrations are approximately 10 times higher than average.

Iron - Too much iron can cause stomach upsetment and pain, constipation or diarrhea, nausea and vomiting.

Silver - May cause cosmetic effects such as skin or teeth discoloration.

Total Dissolved Solids (TDS) - Measure of dissolved combined content of organic and inorganic substances present in various forms. Elevated levels can result in the water having a salty or bitter taste and film or precipitates on fixtures.

Aluminum - Oral exposure is normally not harmful. Some studies show that people exposed to high levels of aluminum may develop Alzheimer's disease but other studies have found that not to be true.

PFNA (Perfluorononanoic Acid), PFOA (Perfluorooctanoic Acid), PFOS (Perfluorooctanesulfonic Acid) - Studies indicate PFNA, PFOA and PFOS over certain levels may result in adverse health effects including developmental effects to the fetus during pregnancy, accelerated puberty, skeletal variations, cancers such as: kidney, testicular, liver and cholesterol changes.

Nickel - The most common harmful effect of Nickel in humans is an allergic reaction or skin rash. Less frequently some people who are sensitive to Nickel may have an Asthma Attack when exposed to Nickel.

Antimony - Short term exposure to Antimony in drinking water at a very high concentration above 30 mg/l can cause nausea, vomiting and diarrhea.

Methyl tertiary-Butyl ether (MTBE) - MTBE can cause nausea, dizziness, light headedness, headache, confusion, nose and throat irritation, liver damage and kidney damage.

SPECIAL CONSIDERATIONS REGARDING CHILDREN, PREGNANT WOMEN, NURSING MOTHERS, AND OTHERS

Children may receive a slightly higher amount of a contaminant present in the water than do adults, on a body weight basis, because they may drink a greater amount of water per pound of body weight than do adults. For this reason, reproductive or developmental effects are used for calculating a drinking water standard if these effects occur at lower levels than other health effects of concern. If there is insufficient toxicity information for a chemical (for example, lack of data on reproductive or developmental effects), an extra uncertainty factor may be incorporated into the calculation of the drinking water standard, thus making the standard more stringent, to account for additional uncertainties regarding these effects. In the cases of lead and nitrate, effects on infants and children are the health endpoints upon which the standards are based.

Nitrate: Nitrate in drinking water at levels above 10 ppm 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.

Lead: Infants and your children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home plumbing. If you are concerned about elevated lead levels in your home water, you may wish to have your water tested and flush your tap for 30 seconds to two minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (1 800 426 4791).

MISCELLANEOUS INFORMATION

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 sometimes, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

To ensure that tap water is safe to drink, EPA prescribes limits on the amounts of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in 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 show that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at (1 800 426 4791).

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 storm water 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 storm water 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 storm water runoff, and septic systems.

***Radioactive contaminants**, which can be naturally occurring or be the results 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 some 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.

If you have any questions about this document or concerning our water utility, please contact our office at 856-226-3628, between the hours of 8:00 A.M. to 3:30 P.M. Monday thru Friday. Additionally, you may contact us through our Web Page www.monroemuanj.com, or attend one of our regularly scheduled Board meetings.

Violations accrued in 2020

On November 6, 2020 we received a monitoring and reporting violation for a late submittal for TTHM's and HAA5's. The samples were collected on time however they were submitted late by the lab. The Monroe MUA is now back in compliance.

On January 27, 2021 we received a monitoring and reporting violation for a late submittal of 1, 2-Dibromo-3 chloropropane, ethylene DiBromide and 1,2,3 Trichloropropane. The samples were collected on time however they were submitted late by the lab. The Monroe MUA is now back in compliance.

On January 29, 2021 we received a monitoring and reporting violation for a late submittal of PFNA. The samples were collected on time however they were submitted late by the lab. The Monroe MUA is now back in compliance.

On March 16, 2021, we received a violation for a Lead Consumer Notice.

All results from the Lead and Copper Testing were sent out on time however the Certification Form was submitted late. The Monroe MUA is now back in compliance.

PWS ID# NJ 0806001 Violations

-10/27/2020 Monitoring and reporting violation for sodium. Sampled and submitted data. Back in compliance.

-11/2/2020 Monitoring and reporting violation for Ethylene Dibromide sampling at 3 well locations. Sampled and submitted data late. Back in compliance.

-11/2/2020 Monitoring and reporting violation for 1,2,3 trichloropropane sampling at 3 well locations. Sampled and submitted data late. Back in compliance.

-11/2/2020 Monitoring and reporting violation for 1,2,3 Dibromo-3-Chloropropane at 3 well locations. Sampled and submitted data late. Back in compliance.

-11/4/2020 Monitoring and reporting violation for PFNA at 3 well locations. Sampled and submitted data late. Back in compliance.

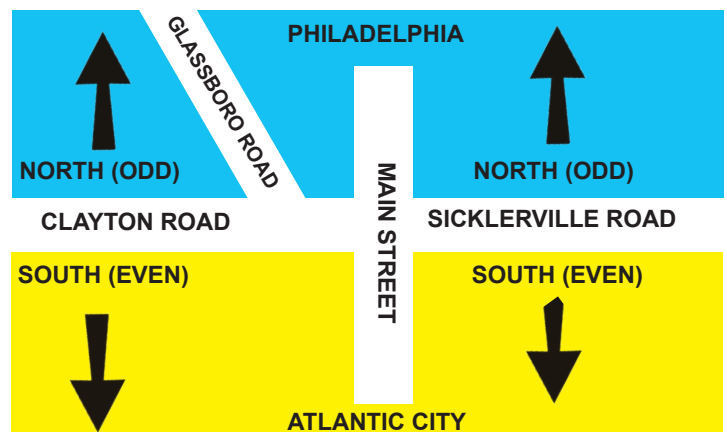
Water Conservation Measures

Water conservation measures have been instituted by the Monroe Municipal Utilities Authority.

Restrictions are in effect for non essential outdoor use of water by the residential and commercial customers between the hours of 10:00 a.m. through 6:00 p.m. Non essential use includes the sprinkling of lawns, washing of cars, filling of pools and power washing. Outside use of water may take place only from 6:00 a.m. to 10:00 a.m. and from 6:00 p.m. through 9:00 p.m. based on an odd/even calendar day system, which has been established on a geographical basis as detailed by the following map.

You may use water outside on ODD NUMBERED CALENDAR DAYS from 6:00 a.m. to 10:00 a.m. and from 6:00 p.m. to 9:00 p.m., if your property is located to the NORTH SIDE of Clayton Road and Sicklerville Road.

You may use water outside on EVEN NUMBERED CALENDAR DAYS from 6:00 a.m. to 10:00 a.m. and from 6:00 p.m. to 9:00 p.m., if your property is located to the SOUTH SIDE of Clayton Road and Sicklerville Road.



Glassboro Water Department Test Results

The Glassboro Water Department routinely monitors for contaminants in your drinking water according to federal and state laws. This table shows the results of our monitoring for the period of January 1st to December 31st, 2020. We are pleased to report that your drinking water meets or exceeds all federal and state safety requirements. We have learned through our monitoring and testing that some contaminants have been detected. As you can see by the table, our system had no violations.

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 (µg/L) – 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 Nanograms per liter (ng/L) – one part per trillion corresponds to one minute in 2,000,000 years or one penny in \$10,000,000,000.

Parts per quadrillion (ppq) or Picograms per liter (pg/L) – one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.

Picocuries per liter (pCi/L) – picocuries per liter is a measure of the radioactivity in water.

Millirems per year (mrem/yr) – measure of the radiation absorbed by the body.

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.

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

Treatment Technique (TT) – A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level – The “Maximum Allowable” (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 measurement 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.

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 contaminants.

Secondary Contaminant – Substances that do not have an impact on health. Secondary Contaminants affect aesthetic qualities such as odor, taste or appearance. Secondary standards are recommendations, not mandates.

Recommended Upper Limit (RUL) – Recommended maximum concentration of secondary contaminants. These reflect aesthetic qualities such as odor, taste or appearance. RULs are recommendations, not mandates.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as 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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

EPA requires monitoring for over 80 drinking water contaminants. Those contaminants listed in the table are only contaminants detected in your water.

Inorganic Contaminants

Contaminant (Unit of Measurement)	Violation Y/N	Level Detected	MCLG	MCL	Likely Source of Contamination
Antimony (ppm)	N	ND	0.006	0.006	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic (ppm)	N	0.0021	0.010	0	Erosion of natural deposits; runoff from orchards; runoff from glass & electronics production wastes
Barium (ppm)	N	0.014	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium (ppm)	N	ND	0.1	0.1	Discharge from steel and pulp mills; erosion of natural deposits
Copper (ppm)	N	0.43*	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Cyanide, free (ppb)	N	0.0021	0.02	0.02	Discharge from steel metal factories; discharge from plastic and fertilizer factories
Fluoride (ppm)	N	1.6	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead (ppb)	N	0.002*	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits
Nickel (ppm)	N	0.0016	N/A	N/A	N/A
Nitrate (as Nitrogen) (ppm)	N	1.5	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppm)	N	0.0014	0.05	0.05	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines

* 90th percentile level detected.

The Borough of Glassboro is not vulnerable to potential asbestos contamination; therefore the Bureau of Safe Drinking Water has approved a waiver for asbestos monitoring for the current nine-year compliance cycle 2020-2028.

Disinfection Byproducts

Contaminant (Unit of Measurement)	Violation Y/N	Level Detected	MCLG	MCL	Likely Source of Contamination
Haloacetic Acids (HAA5) (ppb)	N	14.6	NA	60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	N	46.3	NA	80	By-product of drinking water disinfection

	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radionuclides			Radon			Disinfection Byproduct Precursors		
Source	P	M	L	P	M	L	P	M	L	P	M	L	P	M	L	P	M	L	P	M	L	P	M	L
Wells - 8		2	6	3		5		3	5	3		5		7	1	3	4	1		4	4	3	5	
GUDI - 0																								
Surface Water																								

Radioactive Contaminants

Contaminant (Unit of Measurement)	Violation Y/N	Level Detected	MCLG	MCL	Likely Source of Contamination
Gross Alpha (pCi/l)	N	1.26	0	15	Erosion of natural deposits
Combined Radium - 228 & 226 (pCi/l)	N	0.62	0	5	Erosion of natural deposits

Regulated Disinfectants

Contaminant (Unit of Measurement)	Level Detected (Average & Highest Detect)	MRLG	MRL
Chlorine (ppm)	0.30 / 0.45	4.0	4.0

Secondary Contaminants

Contaminant (Unit of Measurement)	Level Detected	RUL
Iron (ppm)	ND	0.3
Manganese (ppb)	0.02	50
Sodium* (ppm)	93	100
Sulfate (ppm)	11	250

* For healthy individuals the sodium intake from water is not important, because a much greater consumption 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.

While our highest sodium level reported is slightly lower than the RUL, Glassboro operates a Reverse Osmosis treatment plant and other treatment methods to keep sodium levels well below the RUL for drinking water.

NOTE: The state allows us to monitor for certain substances 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.

Source Water Assessment

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 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.

- **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 to dissolved organic material (for example leaves) present in surface water.

UCMR4(Unregulated Contaminant Monitoring)**Cyanotoxins / Haloacetic Acid**

Contaminant	Result	Range
Anatoxin	<0.030	NA
Bromochloroacetic Acid	0.89	NA
Bromodichloroacetic Acid	<0.05	NA
Chlorodibromacetic Acid	<0.30	NA
Cylindrospermopsin	<0.090	NA
Dibromacetic Acid	0.36	NA
Dichloroacetic Acid	2.6	NA
Monobromoacetic Acid	<0.30	NA
Monochloroacetic Acid	<2.0	NA
Tribromoacetic Acid	<2.0	NA
Trichloroacetic Acid	1.7	NA
Bromobutanoic Acid	102%	Range 70-130%

Semivolatile Chemical

Benzo	82%	Range 80-130%
Dimethyl-2nitrobenzene(S)	101%	Range 80-130%
Triphenylphosphate (S)	94%	Range 80-130%

Pesticides

Alpha-BHC	<0.010	
Chlorpyrifos	<0.030	
Dimethipin	<0.20	
Ethoprop	<0.30	
Oxyfluorfen	<0.050	
Permethrin	<0.040	
Profenofos	<0.30	
Tebucomazole	<0.20	
Tribufos	<0.070	

Alcohols

2-Methoxyethanol	<0.40	
1-Butanol	<2.0	
2-Propen	<0.50	

Metals

Germanium	<0.30	
Manganese	<0.40	

Organics

Toluidine-d9	107%	Range 50-130%
Quinoline-d7	100%	Range 70-130%

The fourth Unregulated Contaminant Monitoring Rule (UCMR 4) was published in the Federal Register on December 20, 2016. UCMR 4 requires monitoring for 30 chemical contaminants between 2018 and 2020 using analytical methods developed by EPA and consensus organizations. This monitoring provides a basis for future regulatory actions to protect public health.





Monroe Municipal Utilities Authority
372 South Main Street
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2020 Annual Water Quality Report

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Public meetings of the Authority's Board of Directors are held the third Wednesday of each month. Meetings begin at 7:00 p.m. in the conference room of MUA's Administration Building located at 372 South Main Street, Williamstown

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