

Annual Drinking Water Quality Report

The Township of Roxbury Water Utility

Report for the Year 2021, Results from the Year 2020

Following is this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality of water and services we deliver to you every day. The Township of Roxbury Water Utility routinely monitors for contaminants in your drinking water according to Federal and State laws. The tables show the 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 does not change frequently. Some of our data, though representative, are more than one year old.

Our water sources: We have two sources: our wells and water purchased from the Morris County MUA. Our water utility consists of three individual water systems as shown in the tables below. Our nine (9) wells draw water from geologic formations known as the Precambrian Granite and Stratified Drift Aquifers. Well depths in those formations vary between 90 feet to 170 feet and vary between 75 feet to 220 feet deep respectively. The Morris County MUA draws water from the Stratified Glacial Drift and the Leithville Limestone Formations. The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment Report and Summary for these public water systems, which are available at www.state.nj.gov/dep/swap/index.html or by contacting NJDEP's Bureau of Safe Drinking Water at (609) 292-5550 or watersupply@dep.nj.gov. You may also contact your public water system to obtain information regarding your water system's Source Water Assessment. Our source water susceptibility ratings are included in this report.

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

Skyview Estates - PWS ID # NJ1436004 "Test Results"						
Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source
Inorganic Contaminants:						
Barium Test Results Yr. 2018	N	Range = 0.11 – 0.19 Highest detect = 0.19	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper Test Results 1 st ½ of 2020 Result at 90 th Percentile	N	0.21 No samples exceeded the action level	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Copper Test Results 2 nd ½ of 2020 Result at 90 th Percentile	N	0.23 No samples exceeded the action level	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead Test Results 1 st ½ of 2020 Result at 90 th Percentile	N	3.7 2 samples out of 42 exceeded the action level	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Lead Test Results 2 nd ½ of 2020 Result at 90 th Percentile	N	6.96 2 samples out of 40 exceeded the action level	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen) Test Results Yr. 2020	N	Range = 1.6 – 2.8 Highest detect = 2.8	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Landing/Shore Hills PWS ID # NJ1436003 "Test Results"						
Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source
Inorganic Contaminants:						
Barium Test results Yr. 2018	N	Range = 0.23 – 0.27 Highest detect = 0.27	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper Test Results Yr. 2018 Result at 90 th Percentile	N	0.51 No samples exceeded the action level.	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead Test Results Yr. 2018 Result at 90 th Percentile	N	7.3 1 sample out of 21 exceeded the action level.	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Landing/Shore Hills PWS ID # NJ1436003 "Test Results" (continued)						

Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source
Inorganic Contaminants:						
Nitrate (as Nitrogen) Test Results Yr. 2020	N	Range = ND – 0.8 Highest detect = 0.8	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Radioactive Contaminants:						
Combined Radium 228 & 226 Test results Yr. 2018	N	Range = ND – 1.9 Highest detect = 1.9	pCi/l	0	5	Erosion of natural deposits
Combined Uranium Test results Yr. 2018	N	Range = ND – 1.9 Highest detect = 1.9	ppb	0	30	Erosion of natural deposits

Secondary Contaminants:	Level Detected	Units of Measurement	RUL
Sodium Test Results Yr. 2020	Range = 50 - 65	ppm	50

The Landing/Shore Hills and the Morris County MUA Systems exceeded the Secondary Recommended Upper Limit (RUL) for sodium. For healthy individuals, the sodium intake from water is not considered significant, 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.

Evergreen Acres PWS ID # NJ1436006 “Test Results”						
Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source
Inorganic Contaminants:						
Arsenic Test results Yr. 2018	N	1.2	ppb	N/A	5	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium Test results Yr. 2018	N	0.17	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper Test Results Yr. 2018 Result at 90 th Percentile	N	0.09 No samples exceeded the action level	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead Test Results Yr. 2018 Result at 90 th Percentile	N	ND No samples exceeded the action level	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Secondary Contaminants:						
Manganese Test Results Yr. 2018		81	ppb			RUL 50

The Evergreen Acres Water System exceeded the Secondary Recommended Upper Limit (RUL) for manganese. The recommended upper limit for manganese is based on staining of laundry. Manganese is an essential nutrient, and toxicity is not expected from levels which would be encountered in drinking water.

All Roxbury Township Water Systems PWS ID # NJ1436003, NJ1436004 & NJ1436006 “Test Results”						
Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source
Disinfection By-Products – All Township Water Systems						
TTHM Total Trihalomethanes Test Results Yr. 2020	N	Range = ND – 20 Highest Detect = 20	ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids Test Results Yr. 2020	N	Range = ND – 1 Highest detect = 1	ppb	N/A	60	By-product of drinking water disinfection
Regulated Disinfectants:						
Chlorine (All Roxbury Systems) Test Results Yr. 2020		Range = 0.2 – 0.6 ppm Average = 0.3 – 0.4 ppm		MRDL 4.0 ppm		MRDLG 4.0 ppm

Chlorine: Water additive used to control microbes.

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. Our systems received monitoring waivers for asbestos and synthetic organic chemicals.

Our systems 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.

For additional information: If you have any questions about this report or any matter concerning your water utility, please call Michael A. Kobylarz, Township Engineer/Director of Utilities at (973) 448-2018 or Melanie Michetti, Sr. Assistant to the Township Engineer at (973) 448-2074. Major water utility issues and decisions are discussed at Township Council meetings, 1715 Route 46, Ledgewood. Meetings are normally held on the second and fourth Tuesday nights at 7:30 p.m. You may call (973) 448-2001 to confirm the meeting schedule.

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 Township of Roxbury Water Utility and the Morris County MUA 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 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 or at <http://www.epa.gov/safewater/lead>.

Unregulated Contaminant Monitoring: The Roxbury Township Water Utility and the Morris County MUA monitored for the following unregulated contaminants in 2019 & 2020. Unregulated contaminants are those for which the US Environmental Protection Agency (EPA) or the New Jersey Department of Environmental Protection (NJDEP) has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA and NJDEP in determining the occurrence of unregulated contaminants in drinking water and whether regulation is warranted. Per – and polyfluoroalkyl substances (PFAS) are widely found in the environment. EPA has identified a health advisory level for two PFAS analytes, PFOA and PFOS 70 ng/l either singly or combined, and NJDEP has adopted new drinking water standards (Maximum Contaminant Levels (MCLs)) for PFOA and PFOS of 14 ng/L (ppt) and 13 ng/L (ppt), respectively, as of January 2021.

Skyview Estates - PWS ID # NJ1436004 “Test Results”			
Contaminant	Level Detected	Units of Measurement	Likely source
(PFOS) Perfluorooctane Sulfonate	Range = 2.3 – 5.3	ppt	Used in the manufacture of fluoropolymers.
(PFOA) Perfluorooctanoic Acid	Range = 2.3 – 3.7	ppt	Used in the manufacture of fluoropolymers.

Landing/Shore Hills PWS ID # NJ1436003 “Test Results”			
Contaminant	Level Detected	Units of Measurement	Likely source
(PFOS) Perfluorooctane Sulfonate	Range = ND – 11	ppt	Used in the manufacture of fluoropolymers.
(PFOA) Perfluorooctanoic Acid	Range = ND – 16	ppt	Used in the manufacture of fluoropolymers.

Evergreen Acres PWS ID # NJ1436006 “Test Results”			
Contaminant	Level Detected	Units of Measurement	Likely source
(PFOS) Perfluorooctane Sulfonate	ND	ppt	Used in the manufacture of fluoropolymers.
(PFOA) Perfluorooctanoic Acid	ND	ppt	Used in the manufacture of fluoropolymers.

Morris County MUA PWS ID # NJ1432001 “Test Results”			
Contaminant	Level Detected	Units of Measurement	Likely source
(PFOS) Perfluorooctane Sulfonate	Range = ND – 6.9	ppt	Used in the manufacture of fluoropolymers.
(PFOA) Perfluorooctanoic Acid	Range = ND – 8.6	ppt	Used in the manufacture of fluoropolymers.

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).

Definitions:

In the “Test Results” tables you may find some terms and abbreviations you might not be familiar with. To help you better understand these terms, we have provided the following definitions:

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

Parts per million (ppm) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) - 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 (ng/l) - one part per trillion corresponds to one minute in 20,000 years, or a single penny in \$10,000,000,000.

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

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 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.

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.

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. RUL's are recommendations, not mandates.

Morris County MUA PWS ID # NJ1432001 "Test Results"						
Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source
Inorganic Contaminants:						
Barium Test results Yr. 2020	N	Range = 0.01 – 0.1 Highest detect = 0.1	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium Test Results Yr. 2020	N	Range = ND – 0.7 Highest detect = 0.7	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride Test Results Yr. 2020	N	Range = ND – 0.13 Highest detect = 0.13	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen) Test Results Yr. 2020	N	Range = 0.7 – 2.9 Highest detect = 2.9	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nickel Test Results Yr. 2020	N	Range = ND – 0.9 Highest detect = 0.9	ppb	N/A	N/A	Erosion of natural deposits

Secondary Contaminants:	Level Detected	Units of Measurement	RUL
Sodium Test Results Yr. 2020	Range = 6 - 52	ppm	50

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

The Morris County MUA Monitored Late for Inorganic Contaminants

This past year the Morris County MUA received a Monitoring and Reporting (M&R) violation for missed monitoring. Although this was not an emergency, as their customers, you have a right to know what happened.

They inadvertently missed monitoring for Inorganic Contaminants (IOCs) during the last monitoring period. They were required to monitor once between January 1, 2017 and December 31, 2019, but they monitored in August 2020. The IOC detections are listed in the "Test Results" table. All results were in compliance.

Inorganic Contaminants:

Antimony; Arsenic; Asbestos; Barium; Beryllium; Cadmium; Chromium; Cyanide; Fluoride; Mercury; Nickel; Nitrate; Nitrite; Selenium; Thallium

What should I do?

There is nothing you need to do at this time.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Special Notice from the Morris County MUA:

All Water Systems must provide a Certification Form to the New Jersey Department of Environmental Protection (NJDEP) that a Consumer Confidence Report (Drinking Water Quality Report) was made available to their customers, no later than October 1st for any given year. In 2020, the Morris County MUA did not provide that Certification Form to NJDEP until December 2020.

Susceptibility Ratings for Roxbury Township Water Department

The tables below illustrate the susceptibility ratings for the seven contaminant categories (and radon) for each source in the system. Each table specifies 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 end of the tables. DEP considered all surface water highly susceptible to pathogens, therefore all intakes received a high rating for the pathogen category. For the purpose of this 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 with dissolved organic material (for example leaves) present in surface water.

Evergreen System Sources

	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radionuclides			Radon			Disinfection Byproduct Precursors		
Sources	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 – 1			1	1					1			1			1	1				1			1	

Shore Hills System Sources

	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radionuclides			Radon			Disinfection Byproduct Precursors		
Sources	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 – 4		2	2	4				1	3	3		1		4			4		1	3			4	

Skyview Estates Sources

	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radionuclides			Radon			Disinfection Byproduct Precursors		
Sources	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 – 4		2	2	2	2			2	2	1		3			4	2	2		4				4	

Potential sources of contamination: The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban 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 result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

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 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.

We at the Township of Roxbury Water Utility work hard to ensure quality drinking water for each customer we serve. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future. Please call our office if you have questions. Thank you for the opportunity to provide you this important resource.

**TOWNSHIP OF ROXBURY
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LEDGEWOOD, NEW JERSEY 07852**

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**ANNUAL DRINKING WATER
QUALITY REPORT FOR 2021
RESULTS FROM THE YEAR 2020**

**TOWNSHIP OF ROXBURY
WATER UTILITY**