Annual Drinking Water Quality Report

Borough of Roseland Water System

For the Year 2025, Results from the Year 2024

We are pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water.

We are committed to ensuring the quality of your water. The Borough of Roseland Water System is owned and operated by the Borough and is supplied with water purchased from the Borough of Essex Fells Water Utility. They have sixteen wells which draw groundwater from the Watchung Basalt, Brunswick Shale, and Stratified Glacial Drift Aquifer Systems. The wells range in depth from 94 to 566 feet and they provide most of their drinking water throughout the year. In 2024 they purchased water from New Jersey American Water. Water quality test results for the Essex Fells Water Utility and New Jersey American Water are included in this report. 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 https://www.nj.gov/dep/watersupply/swap/index.html or by contacting NJDEP's Bureau of Safe Drinking Water at (609) 292-5550. You may also contact your public water system to obtain information regarding Essex Fells Water Utility Source Water Assessment. Essex Fells Water Utility's and New Jersey American Water's source water susceptibility ratings and a list of potential contaminant sources is included.

If you are a landlord, you must distribute this Drinking Water Quality Report to every tenant as soon as practicable, but no later than three business days after receipt. Delivery must be made by hand, mail, or email, and by posting the information in a prominent location at the entrance of each rental premises, pursuant to section #3 of NJ P.L. 2021, c.82 (C.58:12A-12.4 et seq.).

The Borough of Roseland Water System, the Essex Fells Water Utility and New Jersey American Water routinely monitor for contaminants in your drinking water according to Federal and State laws. The tables show the results of that monitoring for the period of January 1st to December 31st, 2024. The state allows monitoring for some contaminants less than once per year because the concentrations of these contaminants does not change frequently. Some of the data, though representative, are more than one year old.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people such as people with cancer undergoing chemotherapy, people 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).

We have learned through our monitoring and testing that some contaminants have been detected.

Borough of Roseland Water System Test Results
PWS ID #NJ0718001

Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants:						
Copper Test results Yr. 2023 Result at 90th Percentile	N	0.13 No samples exceeded the action level. 20 samples. Range of detections: (ND – 0.148)	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead Test results Yr. 2023 Result at 90th Percentile	N	1.29 No samples exceeded the action level. 20 samples. Range of detections: (ND – 7.8)	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Disinfection Byproducts:						
TTHM Total Trihalomethanes Test results Yr. 2024	N	Range = 4 - 28 Highest LRAA = 15	ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids Test results Yr. 2024	N	Range = ND – 1 Highest LRAA = 1	ppb	N/A	60	By-product of drinking water disinfection

Regulated Disinfectants	Level Detected	MRDL	MRDLG
Chlorine Test results Yr. 2024	Range = 0.6 – 1.1 ppm Average = 0.8 ppm	4.0 ppm	4.0 ppm

Chlorine: Water additive used to control microbes.

For Total Halocetic Acids (HAA5s) and Total Trihalomethanes (TTHMs), which are disinfection byproducts, compliance is based on a Locational Running Annual Average (LRAA), calculated at each monitoring location. The LRAA calculation is based on four completed quarters of monitoring results.

Treatment: To ensure the continued quality of their water the Borough of Essex Fells Water Utility treats it in several ways. They employ an air stripper system to eliminate trichloroethylene and other volatile organic compounds in their water. As a precautionary measure, they disinfect their water using Calcium Hypo-Chloride.

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. The Essex Fells Water Utility received monitoring waivers for asbestos and synthetic organic chemicals.

Essex Fells Water Utility - 2024 Test Results

PWS ID #NJ0706001

Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants:						
Barium	N	0.174	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium	N	1.74	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Nickel	N	2.26	ppb	N/A	N/A	Erosion of natural deposits
Nitrate (as Nitrogen)	N	2.0	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
PFAS Per- and Polyfluoroalkyl Substances:						
PFOA Perfluorooctane Acid	N	Range = ND – 11.5 Highest detect = 11.5 Highest Average = 4.5	ppt	N/A	14	Discharge from industrial, chemical, and manufacturing factories, release of aqueous film forming foam.
PFOS Perfluorooctane Sulfonic Acid	N	Range = ND – 3.0 Highest detect = 3.0 Highest Average = 1.4	ppt	N/A	13	Discharge from industrial, chemical, and manufacturing factories, release of aqueous film forming foam.
Radioactive Contaminants:						
Gross Alpha	N	10.9	pCi/l	0	15	Erosion of natural deposits
Uranium	N	1.84	ppb	0	30	Erosion of natural deposits

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've provided the following definitions:

Non-Detects (ND) - laboratory analysis indicates that the contaminant.

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.

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

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 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.

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.

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.

Total Organic Carbon – Total Organ Carbon (TOC) has no health effects. However, TOC provides a medium for the formation of disinfection byproducts. The *Treatment Technique* for TOC requires that 35% - 45% of the TOC in the raw water is removed through the treatment processes.

Turbidity – Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium microbial growth. Turbidity is measured as an indication of the effectiveness of the filtration process. The *Treatment Technique* for turbidity requires that no individual sample exceeds 1 NTU and 95% of the samples collected during the month must be less than 0.3 NTU.

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_PFOS-PFOA-websites-OLA%204-24-19SDM-(003).pdf

New Jersey American Water – Short Hills System is a public community water system consisting of 25 wells, 4 surface water intakes, 12 purchased groundwater sources, 3 purchased surface water sources. Source water comes from the following aquifers and / or surface water bodies: Passaic River, Brunswick Aquifer System, and Canoe Brook.

New Jersey American Water – Short Hills System - Test Results
PWS ID # NJ0712001

Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants:						
Total Organic Carbon Test results Yr. 2024	N	Range = 45 – 84% (25 – 65% Required)	ppm	N/A	TT % of removal	Naturally present in the environment
Turbidity Test results Yr. 2024	N	Range = 0.02 – 0.40 99.98% samples < 0.3	NTU	0	TT = % of samples <0.3	Soil runoff
Inorganic Contaminants:						
Arsenic Test results Yrs. 2023 & 2024	N	Range = ND – 2 Highest detect = 2	ppb	N/A	5	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium Test results Yrs. 2023 & 2024	N	Range = ND – 0.3 Highest detect = 0.3	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium Test results Yrs. 2023 & 2024	N	Range = ND – 1 Highest detect = 1	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride Test results Yr. 2024	N	Range = ND – 0.2 Highest detect = 0.2	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nickel Test results Yr. 2024	N	Range = ND – 21 Highest detect = 21	ppb	N/A	N/A	Erosion of natural deposits
Nitrate (as Nitrogen) Test results Yr. 2024	N	Range = 0.1 – 5.0 Highest detect = 5.0	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium Test results Yrs. 2023 & 2024	N	Range = ND – 3 Highest detect = 3	ppb	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Microbiological Contaminants:						
Total coliform Bacteria Test results Yr. 2024	N	Range = ND – 1.5% Highest Detect = 1.5%	N/A	0	5% of monthly samples	Naturally present in the environment
Radioactive Contaminants:						
Gross Alpha Test results Yr. 2023	N	Range = ND – 14 Highest detect = 14	pCi/l	0	15	Erosion of natural deposits
Combined Radium 228 & 226 Test results Yr. 2023	N	Range = ND – 2 Highest detect = 2	pCi/l	0	5	Erosion of natural deposits
Combined Uranium Test results Yr. 2023	N	Range = ND – 4 Highest detect =4	ppb	0	30	Erosion of natural deposits
Volatile Organic Contaminants:						
1,2 Dichlorobenzene Test results Yr. 2024	N	Range = ND – 0.8 Highest detect = 0.8	ppb	600	600	Discharge from industrial chemical factories
Tetrachloroethylene Test results Yr. 2024	N	Range = ND – 0.7 Highest detect = 0.7	ppb	0	5	Leaching from PVC pipes; discharge from factories and dry cleaners
PFAS Per- and Polyfluoroalkyl Substances:						
PFOA Perfluorooctane Acid Test results Yr. 2024	N	Range = ND - 10 Highest detect = 10	ppt	N/A	14	Discharge from industrial, chemical, and manufacturing factories, release of aqueous film forming foam.
PFOS Perfluorooctane Sulfonic Acid Test results Yr. 2024	N	Range = ND – 12 Highest detect = 12	ppt	N/A	13	Discharge from industrial, chemical, and manufacturing factories, release of aqueous film forming foam

Secondary Contaminant	Level Detected	Units of Measurement	RUL
Manganese Test results Yr. 2024	Range = ND - 69	ppb	50
Secondary Contaminant	**Level Detected**	**Units of Measurement**	**RUL**
Sodium Test results yr. 2024	Range = 6 - 128	ppb	50

New Jersey American Water exceeded the 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 your diet. However, sodium levels above the RUL may be of concern to individuals on a sodium restricted diet.

New Jersey American Water exceeded the secondary Recommended Upper Limit (RUL) for Manganese. The secondary (RUL) 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. Manganese is

a naturally occurring element in soil, groundwater, and some surface waters. Manganese is considered harmless to health however, it may give water an off taste or color, cause splotchy yellow stains on laundry, and clog water systems.

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 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.

Cryptosporidium is a microbial pathogen found in surface water throughout the United States. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100% removal. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at a greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through other means than drinking water. New Jersey American Water conducted a study of their water supply to determine the amount of Cryptosporidium in untreated raw source water. Cryptosporidium range of detections = ND – 0.182

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 adults do, on a body weight basis, because they may drink a greater amount of water per pound of body weight than adults do. 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.

Sources of Lead in Drinking Water
The Borough of Roseland Water System, the Essex Fells Water Utility and New Jersey American Water are responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. 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 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 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 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 973-226-6565 ext. 6856 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, 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 Borough of Roseland Water System is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested; please contact Christopher Critchett, Superintendent of Public Works at 973-226-6565 ext. 6856. for Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at t*http://www.epa.gov/safewater/lead*.

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney or nervous system problems.

In July 2021, P.L.2021, Ch.183 (Law) was enacted, requiring all community water systems to replace lead service lines in their service area within 10 years. Under the law, the Borough of Roseland Water System is required to notify customers, non-paying consumers, and any off-site owner of a property (e.g., landlord) when it is known they are served by a lead service line*. Our service line inventory is available upon request.

Essex Fells Water Utility - PWSID # NJ0706001

Essex Fells Water Department is a public community water system consisting of 16 wells.

This system can purchase water from the following water systems: Twp. Of Verona, New Jersey American Water – Short Hills System

Susceptibility Ratings for Essex Fells Water Utility Sources

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

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

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

	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 - 16		11	5	8	8			3	13	16			4	11	1	3	13		16			4	12	

NJ American Water - Short Hills - PWSID # NJ0712001

NJ American Water - Short Hills is a public community water system consisting of 25 wells, 4 surface water intakes, 12 purchased ground water sources, and 3 purchased surface water sources.

This system's source water comes from the following aquifers and/or surface water bodies: Passaic River, Brunswick Aquifer, Canoe Brook , Glacial Sand and Gravel Aquifer System and Igneous and Metamorphic Rocks.

Susceptibility Ratings for NJ American Water Company - Short Hills Division Sources

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

The seven contaminant categories are defined at the bottom of this page. DEP considered all surface water highly susceptible to pathogens, therefore all intakes received a high rating for the pathogen category. For the purpose of the 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.

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	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 - 25	**1**	**21**	3	**13**	**12**			**6**	**19**	**17**		**8**	**10**	**11**	**4**		**25**		**25**			**3**	**22**	
Surface water intakes - 4	**4**			**2**	**2**			**2**	**2**		**4**		**4**					**4**			**4**	**4**			

Pathogens: Disease-causing organisms such as bacteria and viruses. Common sources are animal and human fecal waste.

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.

UNREGULATED CONTAMINANT MONITORING RULE

Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is necessary. Every five years, the EPA issues a new list of no more than 30 unregulated contaminants to be monitored. If you are interested in examining the results, please contact **New Jersey American Water's Customer Service Center** Monday to Friday, 7a.m. to 7p.m. at 1-800-272-1325. More information on the UCMR process, which at this time includes monitoring for 29 PFAS analytes and lithium, is available at https://www.epa.gov/dwucmr/fifth-unregulated-contaminant-monitoring-rule.

The UCMR 5 analytical results are publicly available through the EPA's UCMR 5 Data Finder. The table below provides information on the unregulated contaminants that were detected in the water system.

1Hazard Index or HI. The Hazard Index is an approach that determines the health concerns associated with mixtures of certain PFAS in finished drinking water. Low levels of multiple PFAS that individually would not likely result in adverse health effects may pose health concerns when combined in a mixture. The Hazard Index MCL represents the maximum level for mixtures of PFHxS, PFNA, HFPO–DA, and/or PFBS allowed in water delivered by a public water system. A Hazard Index greater than 1 requires a system to take action.

In 2023, U.S. EPA proposed drinking water standards for six PFAS chemicals – PFOA (4 ppt), PFOS (4 ppt) and GenX, PFBS, PFNA, and PFHxS as a group using a Hazard Index of 1. For more information on the U.S. EPA's proposed PFAS drinking water standards, including the Hazard Index, please visit https://www.epa.gov/pfas.

PFAS chemicals are unique, so two PFAS chemicals at the same level typically do not present the same risk. Therefore, you should not compare the results for one PFAS chemical against the results of another.

Parameter	Year Sampled	Average Amount Detected	Range Low-High	Proposed U.S. EPA MCL	Hazard Index Calculation	Typical Sou
Perfluorohexane sulfonic acid (PFHxS)	2023	0.1 ppt	ND to 4 ppt	9.0 ppt		
Hexafluoropropylene oxide dimer acid (HFPO-DA) (GenX chemicals)	2023	0 ppt	ND	10.0 ppt	0.02 ppt	
Perfluorobutanesulfonic acid (PFBS)	2023	0 ppt	ND	2000 ppt		Manufactured chemical(s); grease, heat and water resi
Perfluorononanoic acid (PFNA)	2023	0 ppt	ND	N/A		
Perfluoropentanoic acid (PFPeA)	2023	0.2 ppt	ND to 28 ppt	NA	NA	
Perfluorobutanoic acid (PFBA)	2023	0.5 ppt	ND to 6 ppt	NA	NA	
Perfluorohexanoic acid (PFHxA)	2023	1 ppt	ND to 40 ppt	NA	NA	
Perfluorooctanoic acid (PFOA)	2023	2 ppt	ND to 88 ppt	4.0 ppt	NA	
Perfluorooctanesulfonic acid (PFOS)	2023	0.3 ppt	ND to 6 ppt	4.0 ppt	NA	
Lithium	2023	3 ppb	ND to 28 ppb	NA	NA	Naturally occurring with m commercial uses

If you have any questions about this report or concerning your water utility, please contact Christopher Critchett, Superintendent of Public Works at 973-226-6565 ext. 6856. Always feel free to attend one of the regularly scheduled Borough Council meetings.