WATER QUALITY REPORT 2021
For Calendar Year 2020
PWSID# NJ1205001

Sources of Drinking Water

Both tap water and bottled water may come from groundwater (springs, wells) or surface waters (rivers, lakes, ponds, streams, and reservoirs). As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activity.

Water for the Edison System is purchased from New Jersey American Water (Raritan Water System) and Middlesex Water Company. Source water for the Raritan and Middlesex Water Systems is surface water that comes from the Millstone River, the Raritan River and the Delaware & Raritan Canal. The water is filtered and disinfected before distribution.

The New Jersey Department of Environmental Protection (NJDEP) completed and issued the Source Water Assessment Report and Summary for this public water system in 2004. It is available at www.state.nj.us/dep/swap/ or by contacting the NJDEP, Bureau of Safe Drinking Water at 609.292.5550.

The assessment found medium to high susceptibility to contamination by pathogens, nutrients, pesticides, inorganics and disinfection by-products; and low susceptibility to radionuclide and radon contamination. This is typical for surface water sources in developed areas.

Cryptosporidium

Cryptosporidium is a protozoan found in untreated surface waters throughout the United States (the organism is generally not present in a ground water source). 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, people with severely weakened immune systems have a risk of developing life-threatening illness. We encourage such people to consult their doctors regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it is spread through means other than drinking water.

USEPA issued a new rule in 2006 that requires systems with higher Cryptosporidium levels in their source water to provide additional treatment. Both New Jersey American Water and Middlesex Water Company monitor for cryptosporidium in their source water (2015 to 2020). Levels ranged from non-detect to 0.9 oocysts per liter. Although this organism is present, it is at levels low enough that no supplemental treatment is required. Current test methods do not enable us to determine if these organisms are capable of causing disease. We are not aware of a specific source of Cryptosporidium.

Susceptibility Ratings for Edison Water Utility Sources

The Source Susceptibility Ratings table below illustrates the susceptibility ratings for the seven contaminant categories (and radon) for each source in the systems that Edison purchases water from. The table provides the number of wells and intakes for Middlesex Water Company and NJ American Water Company, 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.

Compliance with Drinking Water Standards

In order to ensure that tap water is safe to drink, the Environmental Protection Agency (EPA), and the NJDEP prescribe regulations which limit the amount of certain contaminants in water provided by public water systems and require water suppliers to monitor and treat for potentially harmful contaminants. Bottled water is similarly regulated by the Food and Drug Administration and must provide the same protection for public health as tap water. Our water is treated according to the EPA's and NJDEP's regulations, to meet or surpass the quality standards set by those agencies.

Water System Improvements

Edison Water is committed to providing water that meets or exceeds all Federal and state requirements for drinking water. In general, the water system is in good condition as a result of rehabilitation and improvements to the to the water system, including water main valves and fire hydrant maintenance and replacement, service line repairs and replacements, etc. If you are experiencing water quality or water pressure issues, please contact our Customer Service Department at 732-248-6400.

How to Contact Us

We want you to continue to be informed about the water we serve you. If you have any questions about this report, please contact our Customer Service Department at 732-248-6400. You can also visit our website at: edisonwaterutility.org

We will keep you informed on any public participation opportunities regarding decisions that affect drinking water quality. This report contains important information about your drinking water. If you do not understand it, please have someone translate it for you.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

આ અહેવાલ માં તમારા પીવાના પાણી વિષે અગત્ય ની જાણકારી આપવા માં આવી છે.
એનો અનુવાદ કરો અથવા કોને સમજવા પડતી હોય તેની સાથે વાત કરો

本报告与您的饮用水有关。
如果您不了解其内容，应请别人为您翻译解说。

이 보고서에는 귀하께서 사용하고 계시는 식수에 관한 정보가 들어있습니다.
만약에 이해를 못하시면 누군가에게 번역을 의뢰하십시오.

Source Susceptibility Ratings Tables

Middlesex Water Company PWSID # 1225001	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radio-nuclides			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 - 31		29	2	10	21			4	27	31			14	17		3	28		31			14	17	
GUDI (Ground Water Under the Direct Influence of surface water) - 0																								
Surface water intakes - 1	1			1				1			1		1					1			1	1		

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NJ American Water Company Elizabethtown Division PWSID #2004002	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radio-nuclides			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 - 129	4	65	29	42	56			24	74	88		10	16	66	16	39	59		92	6		25	73	
GUDI (Ground Water Under the Direct Influence of surface water) - 0																								
Surface water intakes - 7	7			7			7			7			7				7			7		7		

- **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.

Water Quality Data Table

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).

Contaminant	Unit	MCL	MCLG	Maximum Detected Level	Range	Compliance Achieved	Violation	Major Sources in Drinking Water
Turbidity [1]	NTU	TT: 1 NTU; 95% samples/month below 0.3 NTU	N/A	0.50	98% <0.3	Yes	No	Soil Runoff
DISINFECTANTS AND DISINFECTION BY-PRODUCTS								
Chlorine [2]	ppm	MRDL & MRDLG = 4.0		Highest RAA: 0.9	<0.02 - 7.29	Yes	No	Water additive used to control microbes
Total Trihalomethanes (TTHM) [2]	ppb	80	N/A	Highest LRAA: 28	8 - 43	Yes	No	By-product of drinking water disinfection
Five Haloacetic Acids (HAA5) [2]	ppm	60	N/A	Highest LRAA: 24	8 - 36	Yes	No	By-product of drinking water disinfection
BACTERIOLOGICAL								
Total Coliform Bacteria		< 5% of Monthly Samples		14% (Oct, 2020)	ND - 14%	Yes	No	Naturally present in the environment
E.Coli Bacteria[4]		0 (Not Present)		4	ND - 4	Yes	Yes	Naturally present in the environment
INORGANIC CONTAMINANTS								
Barium	ppm	2	2	0.03	N/A	Yes	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Nickel	ppb	N/A	N/A	1.2	N/A	Yes	No	Erosion from natural deposits
Nitrate	ppm	10	10	1.65	0.8 - 1.65	Yes	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

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LEAD AND COPPER [4]								
Lead	ppb	AL=15	0	90th Percentile	0.6 No sites > AL	Yes	No	Corrosion of household plumbing systems
Copper	ppm	AL=1.3	1.3	90th Percentile	0.3 No sites > AL	Yes	No	Corrosion of household plumbing systems; erosion of natural deposits
TOC REMOVAL								
TOC Removal Ratio [2]	N/A	RAA>1.0	N/A	Lowest Ratio (RAA) = 1.4	Range of Ratios: 1.4 - 1.7	Yes	No	Naturally present in the environment. The removal ratio is a measure of organic material removal, which can serve as precursors to disinfection by products
UNREGULATED CONTAMINANTS [3]								
Chlorate	ppb	N/A	N/A	262	104 - 262	Yes	No	By-product of drinking water disinfection
Perchlorate	ppt	N/A	N/A	0.2	0.1 - 0.2	Yes	No	By-product of drinking water disinfection
Perfluoro octane sulfonic acid (PFOS)	ppt	N/A	N/A	5.8	ND - 5.8	Yes	No	Surfactant or emulsifier; used in fire-fighting foam, circuit board etching acids, alkaline cleaners, floor polish, and as a pesticide active ingredient
Perfluoro octanoic acid (PFOA)	ppt	N/A	N/A	5.3	ND - 5.3	Yes	No	Surfactant or emulsifier; used in teflon, fire-fighting foam, cleaners, cosmetics, greases and lubricants, paints, polishes, adhesives and photographic films
Perfluoro heptanoic acid (PFHpA)	ppb	N/A	N/A	3	ND - 3	Yes	No	Used to make products stain, grease, heat and water resistant
Perfluoro hexanoic acid (PFHxA)	ppb	N/A	N/A	2	ND - 2	Yes	No	Used to make products stain, grease, heat and water resistant
Chromium-6	ppb	N/A	N/A	0.11	0.06 - 0.11	Yes	No	Naturally-occurring element; used in making steel and other alloys, and in industry
HAABr6	ppb	N/A	N/A	0.1	ND - 0.1	Yes	No	By-product of drinking water disinfection
1,4-Dioxane	ppb	N/A	N/A	4.4	0.1 - 4.4	Yes	No	Used as a solvent or solvent stabilizer in manufacture and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos

Contaminant	Unit	Secondary MCL	MCLG	Maximum Detected Level	Range	Compliance Achieved	Violation	Major Sources in Drinking Water
SECONDARY CONTAMINANTS								
Aluminum	ppb	200	200	10	ND - 10	Yes	No	Treatment Process
Manganese	ppb	50	50	12	ND - 12	Yes	No	Erosion of natural deposits
Sodium	ppm	50	50	32	27 - 32	Yes	No	Naturally present in the environment; road salts

Note: Secondary standards are non-mandatory guidelines to assist public water systems in managing their drinking water for aesthetic considerations such as taste, color and odor.

SOURCE WATER DATA (LT2ESWTR)

NJ American Water Company and Middlesex Water Company monitor for Cryptosporidium, a microbial parasite commonly found in surface water, and found some evidence of these microbes in the raw untreated source water. Levels range from ND to 0.9 oocysts per liter. Although this organism is present, it is at levels low enough that no supplemental treatment is required, per USEPA standards. Current test methods do not enable us to determine if these organisms are capable of causing disease. We are not aware of a specific source of Cryptosporidium. Please contact your water supplier for additional information.

Water Quality Data Tables

The tables list all drinking water contaminants detected during the 2020 calendar year. The presence of these contaminants does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data shown in the tables represent the highest result found from testing performed on samples of water taken from Jan.1 through Dec.31, 2020 The State allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year.

Footnotes for Water Quality Data Tables

Synthetic Organic Chemicals (SOC) sampling waivers have not yet been issued for the 2020-2022 compliance period, however our supplying utilities expect to receive one pending NJDEP review.

1. Turbidity is a measure of the cloudiness in the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

2. "Maximum Detected Level" indicated is the maximum running annual average (RAA) or Locational running annual average (LRAA). "Range" indicates the range of individual sample results.

3. Unregulated contaminants are those which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. Perfluorinated compounds are widely found in the environment. EPA has identified a guidance level of 0.070 ppb for PFOA/PFOS (combined), and the New Jersey Department of Environmental Protection (NJDEP) has issued new drinking water Maximum Contaminant Level (MCL) standards for PFOA and PFOS of 14 ng/L (0.014 ppb) and 13 ng/L (0.013 ppb), respectively. Compliance will be determined following quarterly monitoring in 2021. Edison's results for unregulated contaminants are from 2015 through 2020.

Violations Information for 2020

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. Please see the following violations information below for details on any non-compliance events that occurred in 2020.

4. Edison Water Utility experienced an E.Coli violation in 2020, which required the distribution of a drinking water warning and associated boil water notice. The notice was distributed on October 5, 2020. On October 1, October 8, and October 15, 2020 some samples collected from the distribution system tested positive for E.Coli (a total of 4 samples, which we believe was the result of poor sampling technique performed by the contract laboratory). These bacteria can make you sick, and are especially a concern for people with weakened immune systems. Bacterial contamination can occur when increased run-off enters the drinking water source (for example, following heavy rains). It can also happen due to a break in the distribution system pipes or a failure in the water treatment process. Edison Water continued to collect the required repeat bacteriological samples to determine the presence of E.Coli in the distribution system until E.Coli was no longer detected. The boil water advisories associated with the positive E.Coli samples were lifted when E.Coli was no longer detected in the distribution system. Samples collected after October 15, 2020 did not show the presence of E.Coli.

Edison Water also performed a "Level 2 Assessment", as required by the state. When Revised Total Coliform Rule (effective April 1, 2016) monitoring shows that a public water system is vulnerable to microbial contamination, the system is required to conduct an "assessment" to identify sanitary defects and to take corrective action. "Sanitary defects" can provide a pathway for microbial contamination to enter the distribution system (DS) or can indicate a failure of a barrier, such as treatment. The type of assessment – Level 1 or Level 2 – is based upon the number of positive total coliform (TC) or E. coli (EC) routine and repeat samples collected and/or the system's microbiological results from the previous 12-months. Completed Level 1 and Level 2 Assessments are due to the NJDEP 30 days after the system learns they have triggered the criteria for conducting the assessment: upon receiving notification of the results. Edison Water Utility achieved compliance with all state requirements on December 16, 2020.

Edison Water experienced monitoring and reporting violations in January, 2020 due to a contract laboratory error. We are required to collect a minimum of 40 samples each month for total coliform bacteria, E.Coli bacteria and disinfectant residual.The laboratory only collected 30 samples for the month of January, 2020. This resulted in a series of monitoring and reporting violations including the following:
- coliform and associated E.Coli monitoring and reporting
- monthly chlorine residual monitoring and reporting, and quarterly chlorine residual reporting
Without collecting the proper number of samples, we can not be sure of the quality of your drinking water throughout the entire distribution system. Edison returned to compliance in February, 2020 for monthly monitoring and reporting requirements, and in May, 2020 for quarterly disinfectant residual calculations and reporting requirements.

Terms and Abbreviations

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

LRAA: Locational Running Annual Average.

MCL (Maximum Contaminant Level): 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.

MCLG (Maximum Contaminant Level Goal): 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.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for the control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Goal): 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.

N/A: Not applicable.

ND: Below a reportable detected level (Non Detect)

pCi/L: Picocuries per liter, a measure of the radioactivity in water.

ppm (parts per million): Comparable to one minute in two years or 1 cent in $10,000.00.

ppb (parts per billion): Comparable to one minute in two thousand years or 1 cent in $10,000,000.00.

ppt (parts per trillion): Comparable to one minute in two million years or 1 cent in $10,000,000,000.00

RAA: Running Annual Average.

RUL (Recommended Upper Limit): A non-enforceable recommendation limit.

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

Health/Educational Information All 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 EPA Safe Drinking Water Hotline at: 800.426.4791. MCLs are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Special Consideration 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 cases of lead and nitrate, effects on infants and children are the health endpoints upon which standards are based.

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. Edison Water 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.

Please share this information with all the 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.