

CONSUMER CONFIDENCE REPORT

Montville Township Water Department

PWSID# NJ1421003

Reporting Period - January 1, 2018 to December 31, 2018

The Montville Township Water Department offices are located in the Montville Township Municipal Building, 195 Changebridge Road. Questions concerning this report should be directed to Mr. John Perry, Director, at (973) 331-3330. The Montville Township Committee holds regular business meetings on the second and fourth Tuesday of every month at 8:00 PM at the Montville Township Municipal Building. Additional information on the water system can be found on the Internet at www.montvillenj.org. Included in this report are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and State standards. As always, we are committed to providing you with the highest quality drinking water and service. Please do not hesitate to contact us at any time.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-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.

Water for the Montville system is derived from the Township's two (2) Indian Lane Wells, from the Jersey City reservoir via pumping facilities located on River Road, and from Passaic Valley Water Commission (PVWC) via the Lincoln Park water system. Approximately 90% of the water delivered to Montville customers derived from the Township's Indian Lane Wells. Water from Jersey City and PVWC is pumped into the system as needed to meet daily supply demands in peak season. Water from Jersey City and PVWC is treated, potable water. Included in this report are copies of the Consumer Confidence Reports for Jersey City and PVWC.

Source Water Assessments: The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment Report and Summary for the Montville water system, which is available for review at www.state.nj.us/dep/swap or by contacting NJDEP's Bureau of Safe Drinking Water at (609) 292-5550. Montville monitors its

water sources for regulated contaminants in accordance with NJDEP requirements.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline 1-(800) 426-4791.

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 before we treat it include:

Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wild life.

Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

Pesticides and herbicides, which may come from a variety of sources such as agriculture and residential uses.

Radioactive contaminants, which are naturally occurring.

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas station, urban stormwater runoff, and septic systems.

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. We treat our water according to EPA's regulations. Food and Drug Administrations (FDA) establish limits of contaminants in bottled water, which must provide the same protection for public health.

Water Quality Data

The table below lists all the drinking water contaminants that we detected during the 2018 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing performed between January 1, 2018 and December 31, 2018.

Terms & abbreviations used below:

Maximum Contaminant Level (MCL): 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 (MCLG): the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's 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 contamination

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.

Primary Contaminants: substances that are health-related. Water suppliers must meet all primary drinking water standards.

Secondary Contaminants: 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.

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

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

n/a: not applicable; **nd:** not detectable at testing limit; **ppb** parts per billion or micrograms per liter; **NTU:** nephelometric turbidity unit; **TON:** threshold odor numbe**ppm:** parts per million or milligrams per liter; **CU:** color unit; **pCi/l:** picocuries per liter (a measure of radiation).

Contaminants (units)	MCL	MCLG	Montville Water	Range of Detections	Sample Date	Violation Y or N	Typical Source of Contaminant
Microbiological Contaminants							
Total Coliform Bacteria	1	0	0	0	2018	N	Naturally present in the environment
Fecal coliform and E. coli	0	0	0	0	2018	N	Human and animal fecal waste
Secondary Contaminants							
Aluminum (ppb)	200	200	n/d	<0.15	5/9/2017	N	Naturally occurring element
Chloride (ppm)	250	250	65	61 - 69	5/9/2017	N	Erosion from natural deposits; Discharge of human and animal wastes; Discharge from industry
Color (Color Units)	10	10	n/d	<3	5/9/2017	N	Physical characteristic
Corrosivity	+/- 1.0	+/- 1.0	-0.29	-.25 to -.33	5/9/2017	N	Physical characteristic
Hardness (ppm)	250	250	285	284 - 286	5/9/2017	N	Naturally occurring minerals
Iron (ppb)	300	300	n/d	<0.2	6/19/2018	N	Naturally occurring element
Manganese (ppb)	50	50	11.7	11.7	6/19/2018	N	Naturally occurring element
Odor (Threshold Number)	3	3	n/d	<1	5/9/2017	N	Physical characteristic
pH (Standard Units)	6.5 - 8.5	6.5 - 8.5	7.64	7.59 - 7.69	5/9/2017	N	Physical characteristic
Silver (ppb)	100	100	n/d	<0.08	5/9/2017	N	Naturally occurring element
Total Dissolved Solids (ppm)	500	500	461	422 - 500	5/9/2017	N	Erosion of natural mineral deposits
Zinc (ppm)	5	5	0	n/d	5/9/2017	N	Naturally occurring element

Water Quality Data

Contaminants (units)	MCL	MCLG	Montville Water	Range of Detections	Sample Date	Violation Y or N	Typical Source of Contaminant
Lead and Copper							
Lead (ppb)	AL=15	15	3.4	n/d - 20.5	9/1/2017	N	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	AL=1.3	1.3	0.32	0.045 - 0.625	9/1/2017	N	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Inorganic Contaminants							
Antimony (ppb)	6	6	n/d	<3	5/9/2017	N	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic (ppb)	5	n/a	1.93	1.56 - 2.3	5/9/2017	N	Erosion from natural deposits; Runoff from orchards; Runoff from glass and electronics productions wastes
Barium (ppm)	2	2	0.20	0.15 - 0.259	5/9/2017	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Beryllium (ppb)	4	4	0.057	0.047-0.067	5/9/2017	N	Discharge of metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries
Cadmium (ppb)	5	5	n/d	<0.063	5/9/2017	N	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints
Chromium (ppb)	100	100	1.14	n/d - 1.14	5/9/2017	N	Erosion of natural deposits
Cyanide (ppb)	200	200	n/d	<5	5/9/2017	N	Discharge from steel /metal factories; Discharge from plastic and fertilizer factories
Fluoride (ppm)	4	4	n/d	<0.25	5/9/2017	N	Erosion from natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer
Mercury (ppb)	2	2	n/d	<0.05	5/9/2017	N	Discharge from steel /metal factories; Discharge from plastic and fertilizer factories
Nickel (ppb)	100	100	1.35	n/d - 2.7	5/9/2017	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrate (ppm)	10	10	0.545	<0.5 - 0.59	5/9/2017	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	50	50	0.74	n/d - 1.48	5/9/2017	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Sulfate (ppm)	250	250	63.4	58.4 - 68.4	5/9/2017	N	Discharge from petroleum and metal refineries; Erosion of natural deposits
Thallium (ppb)	2	0.5	n/d	<0.31	5/9/2017	N	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories
Sodium (ppm)	50	50	27	22.0 - 31.3	5/9/2017	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Radioactive Contaminants							
Gross Alpha (pCi/l)	15	0	n/d	<3	7/18/2017	N	Erosion of natural deposits
Combined Radium 226/228 (pCi/l)	5	0	n/d	<1	7/18/2017	N	Erosion of natural deposits

Water Quality Data

Contaminants (units)	MCL	MCLG	Montville Water	Range of Detections	Sample Date	Violation Y or N	Typical Source of Contaminant
Unregulated Contaminants							
Bromodichloromethane (ppb)	-	-	5.56	<0.48 to 9.13	Quarterly 2018	NO MCL's AT THIS TIME	
Chloroform (ppb)	-	-	10.59	3.32 to 26.8	Quarterly 2018		
Dibromochloromethane (ppb)	-	-	3.52	1.08 to 6.55	Quarterly 2018		
Regulated Disinfectants							
TTHMs [Total trihalomethanes] (ppb)	80	n/a	14.77 Highest LRAA at Site #4	5.2 to 36.1	2018	N	By-product of drinking water chlorination
HAA5 [Five Haloacetic Acids] (ppb)	60	n/a	19.9 Highest LRAA at Site #4	0.0 to 27	2018	N	By-product of drinking water chlorination
Chlorine (ppm) 2018	Levels Detected - Average & Highest			MRDL		MRDLG	
	0.41		1.07		4.0 ppm		4.0 ppm

Water Quality Data

Regarding hardness. The hardness figure of 284 ppm exceeds the State's Recommended Upper Limit goal of 250 ppm. Hardness is a measure of the amount of non-toxic dissolved minerals in the water, and is a natural characteristic of all waters. The level of hardness is determined at the wellhead, however, water delivered to your tap, in most cases, has lower hardness due to blending of water from the Jersey City supply. Elevated hardness is not a health hazard.

Regarding the manganese test results, the average manganese level of 114 ppb exceeds the State's maximum goal of 50 ppb. Manganese is a naturally occurring element in most well waters. The recommended upper limit for manganese is based on staining of laundry, and toxicity is not expected from levels which would be encountered in drinking water.

Regarding chemical contaminants and health related standards. Montville Township is proud of the fact that our water complies with all drinking water standards for chemical contaminants as set by the State of New Jersey and the U.S. EPA.

Regarding Asbestos, Nitrite and Synthetic Organic Compounds. As permitted under the Safe Drinking Water Act, the State of New Jersey has issued waivers to Montville for testing of asbestos, nitrite and synthetic organic compounds. These waivers were given after careful review of prior negative testing and consideration of factors which indicate low susceptibility to these types of contaminants.

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 reproduction 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 a infant, you should ask advise from your health care provider.

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. Montville 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.



**your
water quality
information**

consumer confidence report

 **suez**

issued june 2019

SUEZ | Jersey City Operations

PWSID # NJ0906001

This report contains important information about your drinking water.
Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo ó hable con alguien que lo entienda bien.

 **suez**

our commitment to you



John Hroncich
Project Manager,
Jersey City Operations

Dear Customer,

In 2018, the Jersey City Municipal Utility Authority (JCMUA) extended their successful 22-year maintenance and operations agreement with SUEZ, for an additional nine years. Under the new agreement SUEZ will begin the process of installing an automated meter infrastructure system that will help customers detect leaks in real time, improve billing accuracy and enhance system reliability. Together, the JCMUA and SUEZ, provide you with water that meets — and often surpasses — all the health and safety standards set by the United States Environmental Protection Agency (EPA) and the New Jersey Department of Environmental Protection (NJDEP).

We regularly test water samples to be sure that your water meets the safety standards. All the test results are on file with the NJDEP, the agency that monitors and regulates drinking water quality in our state. The EPA and the NJDEP establish these regulations. They also require water suppliers to provide a Consumer Confidence Report (CCR) to customers on an annual basis. This CCR contains important information about your drinking water. Please read it carefully and feel free to call us at 800.575.4433 if you have any questions.

In addition, you can write to us at 69 DeVoe Place, Hackensack, NJ 07601. You can also call the EPA Safe Drinking Water Hotline at 800.426.4791 with water-related questions. If you have specific questions about your water as it relates to your personal health, we suggest that you contact your health care provider. For more information about SUEZ, visit our website www.mysuezwater.com.

Sincerely,

A handwritten signature in black ink that reads "John A. Hroncich". The signature is written in a cursive, slightly slanted style.

John Hroncich
Project Manager, Jersey City Operations

about your water supply

Your water comes from the Jersey City Reservoir at Boonton, as well as the Split Rock Reservoir in Rockaway Township. The source for this water is a 120 square mile watershed that drains into these two reservoirs. Combined, these two reservoirs can store 11.3 billion gallons of water.

The Jersey City Water Treatment Plant purifies about 50 million gallons of water a day on average and can treat up to 80 million gallons a day during peak periods. Purified water moves by gravity through 23 miles of aqueduct and 300 miles of water mains. From time to time you may receive water from the North Jersey District Water Supply Commission, the Passaic Valley Water Commission or the City of Newark when routine maintenance is performed on the plant, aqueduct and mains. We strive to provide our customers with a safe, sure supply of water 24 hours a day, 365 days a year.

about the treatment process

We strive to provide you with drinking water that meets or surpasses all federal and state standards. Your water is purified at the Jersey City Water Treatment Plant in Boonton.

We use coagulants and filter the water to remove impurities and microscopic particles. A small amount of chlorine is then added to disinfect the water. Finally, we apply corrosion control chemicals to reduce the chance of lead and copper dissolving in the water from household plumbing.

To further ensure the safety of your water, we monitor it before, during and after the treatment process. For example, we routinely test the water at the rivers, lakes, and streams that supply drinking water. We also sample and test treated water to be sure that it remains pure as it travels to your home.

lead and your drinking water

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. Jersey City 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>.

drinking water quality

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 infections by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 800.426.4791. The table below shows how the quality of your drinking water in 2018 compared to the standards set by the NJDEP.

primary standards - directly related to the safety of drinking water.

Inorganic Chemicals	Units	MCLG	MCL	Highest Result*	Range of Results**	Violation	Likely Source
Barium	ppm	2	2	0.0188	NA	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium (total)	ppb	100	100	0.0784	NA	No	Discharge from steel and pulp mills; erosion of natural deposits
Nickel	ppm	NA	monitor	0.0929	NA	No	Erosion of natural deposits
Nitrate as N	ppm	10	10	0.41	0.19 - 0.41	No	Runoff from fertilizer usage; leaching from septic tanks, sewage; erosion of natural deposits
Total Nitrate and Nitrite	ppm	10	10	0.41	0.19 - 0.41	No	Runoff from fertilizer usage; leaching from septic tanks, sewage; erosion of natural deposits
Disinfection & Disinfection By-Products	Units	MCLG	MCL	Highest Result LRAA	Range of Results**	Violation	Likely Source
Total trihalomethanes (TTHMs)	ppb	NA	80	65.9	27.1 - 102.6	No	By-product of drinking water disinfection
Haloacetic Acids (HAA5)	ppb	NA	60	33.0	16.4 - 53.4	No	By-product of drinking water disinfection
Disinfectant Residual	Units	MRODLG	MRDL	Highest Result RAA	Range of Results**	Violation	Likely Source
Chlorine as Cl ₂	ppm	4	4	0.91	0.18 - 1.70	No	Water additive to control microbes
Lead and Copper	Units	MCLG	AL	90th Percentile	Samples >AL	Violation	Likely Source
Lead	ppb	0	15	6.7	3	No	Lead service lines, corrosion of household plumbing including fittings and fixtures; erosion of natural deposits
Copper	ppm	1.3	1.3	0.114	0	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead and Copper - Water Quality Parameters	Units	Required Minimum Level		Minimum Level Detected			
<i>Treatment Plant</i>							
pH	SU	7.0		7.0			
Alkalinity	mg/L as CaCO ₃	NA		NA			
Orthophosphate	mg/L as Total P	0.1		0.64			
<i>Distribution System</i>							
pH	SU	7.0		7.04			
Alkalinity	mg/L as CaCO ₃	NA		NA			
Orthophosphate	mg/L as Total P	0.1		0.12			
Radionuclides (2014)	Units	MCLG	MCL	Highest Result RAA	Range of Results**	Violation	Likely Source
Combined Radium 226+228	pCi/L	0	5	0.14	NA - 0.14	No	Erosion of natural deposits
Surface Water/θWUDI Systems	Units	MCLG	MCL	Range of Detections	%>0.3	Violation	Likely Source
Turbidity	NTU	NA	5%>0.3	0.08 - 0.24	0.0%	No	Soil runoff
Microbiological	Units	MCLG	MCL	Min	Max	Violation	Likely Source
Total Coliforms	% positive	0	5%	0%	3%	Yes	Naturally present in the environment
Boonton WTP POE (TP001002)		MCLG	MCL	Lowest Ratio (RAA)	Range of Ratio (Monthly Ratio)	Violation	
TOC Removal Ratio (RAA)		NA	RAA≥1.0	1.05	1.00 - 1.20	No	

*Highest results are based upon the highest single sample.

**The Range of Results represent the lowest and highest detection during the monitoring year.

RAA = Running Annual Average

LRAA = Locational Running Annual Average is the yearly average of all the results at each specific sampling site in the distribution system.

POE = Point of Entry

secondary standards - water quality parameters related to the aesthetic quality of drinking water.

Substance	Units	NJ RUL	Min	Max	RUL Exceeded?	Likely Source
Alkalinity	ppm	NA	33	78	No	Natural mineral
Aluminum	ppb	200	ND	300	Yes	Naturally occurring element
Calcium	ppm	NA	13.5	24.4	No	Naturally occurring element
Chloride	ppm	250	70	129	No	Naturally occurring element
Color	CU	10	ND	3	No	Naturally occurring organic matter
Conductivity	umhos	NA	308	561	No	Naturally occurring element
Corrosivity (2017)	NA	Non-Corrosive	-1.33	NA	No	Naturally occurring element road salt
Hardness (as CaCO3)	ppm	250	60	97	No	Naturally occurring element
Iron	ppb	300	ND	80	No	Naturally occurring element, leaching from metal pipes
Manganese	ppb	50	ND	20	No	Naturally occurring element, leaching from metal pipes
pH	ppm	6.5 - 8.5	6.92	8.12	No	Natural property of water
Sodium**	ppm	50	36	71	Yes	Naturally occurring element
Sulfate	ppm	250	NA	9.1	No	Naturally occurring element
Total Dissolved Solids	ppm	500	141	319	No	Minerals and salts dissolved in the water
Zinc	ppm	5	ND	0.02	No	Naturally occurring element

Note on exceedences: 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. These contaminants are not considered to present a risk to human health.

** For healthy individuals, the sodium intake from water is not important because a much greater intake of sodium takes place from salt in the diet. However, sodium levels above the RUL may be of concern to individuals on a sodium restricted diet. Highest result is based on the Running Annual Average (RAA), due to multiple samples collected for sodium during 2018.

unregulated substances - for which the epa requires monitoring.

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 and DEP in determining the occurrence of unregulated contaminants in drinking water and whether regulation is warranted.

Substance (2015)	Units	MRL	Min	MAX	Violation	Likely Source
Chlorate	ppb	20	64	160	No	Agricultural defoliant or desiccant; disinfection by-product; used in production of chlorine dioxide
Chromium	ppb	0.2	ND	0.31	No	Naturally occurring element
Chromium-6	ppb	0.03	ND	0.09	No	Naturally occurring element
Strontium	ppb	0.3	87	100	No	Naturally occurring element
Vanadium	ppb	0.2	ND	0.22	No	Naturally occurring element

Additional information about unregulated contaminants can be found at the following link, courtesy of American Water Works Association: <https://drinktapp.org/Water-Info/Whats-in-My-Water/Unregulated-Contaminant-Monitoring-Rule-UCMR>

Monitoring Violation

Explanation: On August 1, 2018, the SUEZ Jersey City project was notified by the SUEZ Haworth Laboratory that the distribution system routine coliform bacteria samples collected during the month of July numbered 146, which is four short of the required 150 routine samples. The NJDEP was advised of the sample deficiency and confirmed that the short number of samples is a monitoring violation.

Steps Taken to Correct Violation: Steps were taken by SUEZ to correct the process and validate sample collection process each day and adjust schedule when samples are not collected as initially scheduled. This will include manual verification and comparison with lab provided updates.

Health Effects: This violation had no health effects to the general population.

definitions

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

CU: Color unit.

Maximum Contaminant Level (MCL): 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 (MCLG): 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 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 disinfectant to control microbial contamination.

NA: Not applicable.

ND: Not detected.

NJ RUL: New Jersey Recommended Upper Limit

NTU: Nephelometric Turbidity Unit.

ppb Parts per billion: The equivalent of one second in 32 years.

ppm Parts per million: The equivalent of one second in 12 days

pCi/L Picocuries per liter: The equivalent of one second in 32 million years.

Primary Standards: Federal drinking water regulations for substances that are health-related. Water suppliers must meet all primary drinking water standards.

Secondary Standards: Federal drinking water measurements for substances that do not have an impact on health. These reflect aesthetic qualities such as taste, odor and appearance. Secondary standards are recommendations, not mandates.

TON: Threshold Odor Number.

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

source water assessment program

Under the Federal Safe Drinking Water Act, all states were required to establish a Source Water Assessment Program (SWAP). New Jersey's SWAP Plan incorporates the following four fundamental steps:

1. Determine the source water assessment area of each ground and surface water source of public drinking water.
2. Inventory the potential contamination sources within the source water assessment area.
3. Determine the public water system source's susceptibility to regulated contaminants. It is important to note, if a drinking water source's susceptibility is high, it does not necessarily mean the drinking water is contaminated. The rating reflects the potential for contamination of source water, not the existence of contamination.
4. Incorporate public education and participation.

In 2004, source water assessment reports were completed by NJDEP for all Community and Noncommunity Water Systems in New Jersey. The source water assessment reports and supporting documentation are available at <http://www.state.nj.us/dep/swap/index.html> or by contacting the NJDEP's Bureau of Safe Drinking Water at 609.292.5550.



Supplement Source of Supply Data

During 2018 the JCMUA and SUEZ performed emergency repairs during which time interconnections with Passaic Valley Water Commission and Newark were opened to maintain an adequate supply, pressure and water quality.

During years when maintenance is not being performed Jersey City has sufficient source of supply from the Boonton Reservoir and Plant to provide water supply for Jersey City and Hoboken. Jersey City also sells water to Parsippany and Montville.

PRIMARY STANDARDS - Directly related to the safety of drinking water

INORGANIC CHEMICALS	Units	MCLG	MCL	PVWC Results	Newark Results	Violation	Major Sources in Drinking Water
Arsenic	ppb	0	5	-	< 0.5	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	ppm	2	2	< 0.10	0.008	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	ppm	4	4	0.008	< 0.1	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Mercury (inorganic)	ppb	2	2	-	< 0.2	No	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
Nickel	ppm	NA	NA	0.00239	-	No	Erosion of Natural Deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland
Nitrate as N	ppm	10	10	3.26	< .01	No	Runoff from fertilizer usage; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	ppb	50	50	< 2	-	No	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
DISINFECTION & DISINFECTION BY-PRODUCTS	Units	MCLG	MCL	PVWC Results	Newark Results	Violation	Major Sources in Drinking Water
Total trihalomethanes (TTHMs)	ppb	NA	80	35.5 - 75.5	-	No	By-product of drinking water disinfection
Haloacetic Acids (HAA5)	ppb	NA	60	17.33 - 26.05	-	No	By-product of drinking water disinfection
RADIONUCLIDES	Units	MCLG	MCL	Level Found PVWC	Level Found Newark	Violation	Major Sources in Drinking Water
Combined Radium 226+228	pCi/L	0	5	-	1.5	No	Erosion of natural deposits
TOC REMOVAL RATIO RAA		MCLG	MCL	PVWC Results	Newark Results	Violation	Major Sources in Drinking Water
TOC Removal		NA	TT	1.1 (1 - 1.3)	-	No	Naturally present in the environment
TURBIDITY	Units	MCLG	MCL	Level Found PVWC	Level Found Newark	Violation	Major Sources in Drinking Water
Turbidity	NTU	NA	5%>0.3	-	0.05 - 0.65	No	Soil runoff

SECONDARY STANDARDS - Water quality parameters related to the aesthetic quality of drinking water

	Units	NJ RUL	PVWC Result	Newark Result	Major Sources in Drinking Water
Alkalinity	ppm	NA	70	25.3	A characteristic of water caused by carbonate and bicarbonates
Aluminum	ppm	0.2	0.07	0.083	Naturally occurring element
Chloride	ppm	250	194	39	Naturally occurring element
Color	CU	10	ND	2	Naturally occurring organic matter
Foaming Agents	ppm	0.5	0.15	-	Surfactants from detergents and cleansers
Hardness (as CaCO3)	ppm	250	186	51.4	Naturally occurring element
Iron	ppm	0.3	ND	0.017	Naturally occurring element, leaching from metal pipes
Manganese	ppm	0.05	<0.05	0.017	Naturally occurring element, leaching from metal pipes
Odor	TON	3	10	1	Naturally occurring element
pH	ppm	6.5 - 8.5	8.4	7.02	Natural property of water
Sodium	ppm	50	162*	23.2	Naturally occurring element
Sulfate	ppm	250	68	10.3	Naturally occurring element
Total Dissolved Solids	ppm	500	498	108	Minerals and salts dissolved in the water
Zinc	ppm	5	0.05	< 0.2	Naturally occurring element

* PVWC's finished water was above New Jersey's Recommended Upper Limit (RUL) of 50 ppm for sodium in 2018. Possible sources of sodium include natural soil runoff, roadway salt runoff, upstream wastewater treatment plants, and a contribution coming from chemicals used in the water treatment process. For healthy individuals the sodium intake from water is not important, because a much greater intake of sodium takes place from salt in the diet. However, sodium levels above the recommended upper limit may be a concern to individuals on a sodium-restricted diet. If you have any concerns please contact your health care provider.

UNREGULATED SUBSTANCES - for which EPA requires monitoring

Substance	Units	MRL	PVWC Result	Newark Result	Major Sources in Drinking Water
Chlorate	ppb	20	102 - 475	-	Agricultural defoliant or desiccant; disinfection by-product; used in production of chlorine dioxide
PFBS	ppb	0.09	0.002 - 0.0051	-	Used in products to make them stain, grease, heat and water resistant
PFHpA	ppb	0.01	0.0021 - 0.0049	-	Used in products to make them stain, grease, heat and water resistant
PFHxS	ppb	0.03	0.0025 - 0.0053	-	Used in products to make them stain, grease, heat and water resistant
PFNA	ppb	0.02	ND - 0.0021	-	Used in products to make them stain, grease, heat and water resistant
PFOA	ppb	0.02	0.0072 - 0.0021	-	Used in manufacturer of fluoropolymers, firefighting foams, cleaners, cosmetics, greases, lubricants, paints, polishes, adhesives and photographic films
PFOS	ppb	0.04	0.0049 - 0.012	-	Used in firefighting foam, circuit board etching, cleaners, floor polish, and pesticides

Supplement Source of Supply Data (continued from page 7)

CRYPTOSPORIDIUM - 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 percent removal. Our monitoring indicates the presence of these organisms in our source water. Current test methods do not allow us to determine if the organisms are viable or capable of causing disease. 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 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 spread through means other than drinking water.

Contaminant Name	PYWC Result Source Water	Newark Result Source Water	Major Sources in Drinking Water
Cryptosporidium, # Cysts/L (2017)	0.87 - 0.878	*	Naturally present in the environment
Giardia, # Cysts/L (2017)	0.091 - 2.47	*	Naturally present in the environment

tap water or 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 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.

The more you conserve, the more you save!

By installing more efficient water fixtures and repairing leaks, you can reduce indoor water use by up to 25 percent and help save money on water and energy bills. The more you conserve, the more you save!

For more information, please visit the following websites:
www.epa.gov/watersense
www.mysuezwater.com

eBilling

To register for eBilling visit www.mysuezwater.com/my-account/paperless-billing or call customer service at 800.422.5987.

important information

Please pass this information along to those who speak Spanish, Portuguese, Korean, Gujarti or Arabic:

- Este informe contiene información muy importante sobre su agua potable. Tradúzcalo ó hable con alguien que lo entienda bien.
- Este reporte contem informações importantes sobre a sua água de beber. Traduza-o ou fale com alguém que o compreenda.
- 아래의 보고는 귀하 드시는 수속에 대한 중요한 정보 포함하여 있습니다. 번역을 하신다 하시면 이 글을 알고 이해하시면 불파 하는 감사하는 것입니다.
- এই প্রতিবেদনটি আপনার পানীয় জলের গুরুত্বপূর্ণ তথ্য নিয়ে। আপনি যদি বাংলায় জানতে চান তবে অনুগ্রহ করে আমাদের সাথে যোগাযোগ করুন।
- المعلومات في هذا التقرير تحتوي على معلومات مهمة عن مياه الشرب التي تشربها. من فضلك اذا لم تفهم هذه المعلومات اطلب من مترجمنا ذلك.

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In keeping with our commitment to the environment, this report was printed on paper containing at least 10% post-consumer fiber.

PASSAIC VALLEY WATER COMMISSION (PVWC) PWS ID NJ1605002 - 2018 WATER QUALITY DATA

				Water Treatment Plant Results			
PRIMARY CONTAMINANTS	Compliance Achieved	MCLG	MCL	NJDWSC Wanaque WTP PWS ID NJ1613001		TYPICAL SOURCE	
TURBIDITY AND TOTAL ORGANIC CARBON				Highest Result (Average)			
Turbidity, NTU*	Yes	NA	TT = 1	0.41 (0.06)		Soil runoff.	
	Yes	NA	TT = percentage of samples <0.3 NTU (min 95% required)	Lowest Monthly Percentage of Samples Meeting the Turbidity Limits			
				99.9%			
* Turbidity is a measure of the cloudiness of the water, and is monitored as an indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.							
Total Organic Carbon, %	Yes	NA	TT = removal ratio	Removal Ratio		Naturally present in the environment.	
				1.1 (RAA) 1.0 - 1.3			
INORGANIC CONTAMINANTS				Highest Result			
Barium, ppm	Yes	2	2	0.0145		Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.	
Nitrate, ppm	Yes	10	10	0.351		Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	

WAIVER INFORMATION

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. NJDWSC was granted a monitoring waiver for synthetic organic chemicals for the 2017-2019 monitoring period.

SOURCE WATER ASSESSMENT

NJDEP has prepared Source Water Assessment reports and summaries for all public water systems. The Source Water Assessment for the NJDWSC system (PWS ID 1613001) can be obtained by accessing NJDEP's source water assessment web site at <http://www.nj.gov/dep/watersupply/swap/index.html> or by contacting NJDEP's Bureau of Safe Drinking Water at 609-292-5550. If a system is rated highly susceptible for a contamination category, it does not mean a customer is – or will be – consuming contaminated water. The rating reflects the potential for contamination of a source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any of those contaminants are detected at frequencies and concentrations above allowable levels. The source water assessments performed on the intakes for each system list the following susceptibility ratings for a variety of contaminants that may be present in source waters:

Intake Susceptibility Ratings	Pathogens	Nutrients	Pesticides	Volatile Organic Compounds	Inorganic Contaminants	Radionuclides	Radon	Disinfection Byproduct Precursors
NJDWSC 5 Surface Water	5-High	5-High	2-Medium, 3-Low	5-Medium	5-High	5-Low	5-Low	5-High

SECONDARY PARAMETERS – TREATMENT PLANT EFFLUENT

Contaminant	N.J. Recommended Upper Limit (RUL)	NJDWSC - Wanaque WTP PWSID NJ1613001	
		Result	RUL Achieved
Alkalinity, ppm	NA	38	NA
Aluminum, ppb	200	60	Yes
Chloride, ppm	250	71	Yes
Color, CU	10	2	Yes
Corrosivity	Non-Corrosive	Non-Corrosive	Yes
Hardness (as CaCO ₃), ppm	250	52	Yes
Hardness (as CaCO ₃), grains/gallon	15	3	Yes

Iron, ppb	300	12	Yes
Manganese, ppb	50	2	Yes
pH	6.5 to 8.5 (optimum range)	8.0	Yes
Sodium, ppm	50	40	Yes
Sulfate, ppm	250	8	Yes
Total Dissolved Solids, ppm	500	177	Yes
Zinc, ppb	5,000	16	Yes

DEFINITIONS of TERMS and ACRONYMS

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

CDC: United States Centers for Disease Control and Prevention

CU: Color unit

Disinfection By-product Precursors: A common source is naturally-occurring organic material in surface water. Disinfection by-products are formed when the disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (DBP precursors) present in surface water.

EPA: United States Environmental Protection Agency

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.

Microbial Contaminants/Pathogens: Disease-causing organisms such as bacteria, protozoa, and viruses, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife. Common sources are animal and human fecal wastes. These contaminants may be present in source water.

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 control of microbial contaminants.

MRDLG: Maximum Residual Disinfectant Level Goal; 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.

NA: Not applicable

ND: Not detected above the minimum reporting level.

NJDEP: New Jersey Department of Environmental Protection

NJDWSC: North Jersey District Water Supply Commission

NTU: Nephelometric Turbidity Unit

Nutrients: Compounds, minerals and elements that aid growth, which can be either naturally occurring or man-made. Examples include nitrogen and phosphorus.

ppb: parts per billion (approximately equal to micrograms per liter)

ppm: parts per million (approximately equal to milligrams per liter)

PWS ID: Public Water System Identification

PVWC: Passaic Valley Water Commission

RAA: Running Annual Average

Radon: Colorless, odorless, cancer-causing gas that occurs naturally in the environment.

RUL: Recommended Upper Limit; the highest level of a constituent of drinking water that is recommended in order to protect aesthetic quality.

RUL Achieved: A "YES" entry indicates the State-recommended upper limit was not exceeded. A "NO" entry indicates the State-recommended upper limit was exceeded.

TON: Threshold Odor Number

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

WTP: Water Treatment Plant

ADDITIONAL INFORMATIONAL RESOURCES

EPA Drinking Water website: www.epa.gov/safewater

NJDEP Water Supply website: www.nj.gov/dep/watersupply

American Water Works Association (AWWA) website: www.awwa.org

EPA Safe Drinking Water Hotline: 800-426-4791

NJDEP Bureau of Safe Drinking Water: 609-292-5550

AWWA New Jersey Section website: www.njawwa.org