

# Verona Township Water Department

## Quality on Tap Report Annual Drinking Water Quality Report Township of Verona Water System For the Year 2020, Results from the Year 2019

**PWSID # 0720001**

### **Our Mission Continues**

We are once again pleased to present to you this year's Annual Drinking Water Quality Report covering all testing performed between January 1 and December 31, 2019. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please remember that we are always available should you ever have any questions or concerns about your water. For more information about this report and other questions regarding your drinking water, please contact Jeff Sonntag at the Verona Water Department (973) 857-4843 or at [jsonntag@veronanj.org](mailto:jsonntag@veronanj.org). You may also call the U.S. EPA Bureau of Safe Drinking Water Hotline at (800) 426-4791 or the New Jersey Department of Environmental Protection (NJDEP), Bureau of Safe Drinking Water, at (609)292-5550.

### **What Is the Source of Our Drinking Water?**

Our water is derived from two different water supplies: groundwater wells that the Township of Verona owns and operates, and treated surface water purchased from the Passaic Valley Water Commission (PVWC). The well water is withdrawn from the Feltville aquifer via two deep rock wells located in Verona. The water from PVWC comes from the Wanaque Reservoir, owned and operated by the North Jersey District Water Supply Commission (NJDWSC) and located in Wanaque, New Jersey. PVWC can also provide water from their Little Falls Treatment plant located in Totowa, New Jersey, that utilizes water from the Passaic River and/or the Pompton River. All water sources are treated to produce safe drinking water that satisfies all state and federal standards. In addition to these water supplies, we have emergency water connections with both Essex Fells and the New Jersey American Water Company, which are capable of providing drinking water to Verona in the event of an interruption in our normal water services.

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

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can, also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants which can be naturally occurring or be the result of oil and gas production and mining activities.
- Total Coliform. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present.
- Nitrate in Drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.
- Nitrite. Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.
- Arsenic –your drinking water meets EPA’s standard for arsenic. Only a small amount of Arsenic was detected in your system. EPA’s standard balances the current understanding of arsenic’s possible health effects against the cost of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems (40 CFR 141.154(b)(1)). Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer (40 CFR 141.154(f) and 141.153(d)(6)).

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.

## Source Water Assessment

The New Jersey Department of Environmental Protection (NJDEP) has prepared Source Water Assessment Reports and Summaries for most public water systems. Source Water Assessments and information on the Source Water Assessment Program can be obtained by logging onto NJDEP's source water assessment web site at [www.state.nj.us/dep/swap](http://www.state.nj.us/dep/swap) or by contacting NJDEP's Bureau of Safe Drinking Water at (609) 292-5550. The NJDEP has not completed a Source Water Assessment Report and Summary for Verona Water System, but assessments have been completed for the PVWC and NJDWSC systems. These reports are available at [www.state.nj.us/dep/swap](http://www.state.nj.us/dep/swap) or by contacting the NJDEP, Bureau of Safe Drinking Water at (609) 292-5550. Each report lists the susceptibility ratings for eight contaminate categories, ranging from LOW to HIGH.

## Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. Also, the water we deliver must meet specific health standards. Here, we show only those substances that were detected in our water. (A complete list of all our analytical results is available upon request.) Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels. The state recommends monitoring for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

We participated in the 4<sup>th</sup> stage of the U.S. EPA's Unregulated Contaminate Monitoring Rule (UCMR4) program by performing additional tests on our drinking water. UCMR4 sampling benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data are available to the public, so please feel free to contact us if you are interested in obtaining this information. If you would like more information on the U.S. EPA's Unregulated Contaminate Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

**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).**

REGULATED SUBSTANCES							
				Township of Verona Water Department			
SUBSTANCE (Unit of Measure)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW- HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2017	15	0	5.812	5.057 – 6.566	No	Erosion of natural deposits
Arsenic (ppb)	2019	5	0	1.42	<1.0 – 1.42	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production waste
Barium (ppm)	2017	2	2	0.376	0.290 – 0.463	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2019	[4]	[4]	0.54	0.09 – 1.48	No	Water additive used to control microbes
Chromium (ppb)	2017	100	100	5.38	4.64 – 6.13	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	2017	4	4	ND	NA	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs] (ppb)	2019	60	NA	14.11	5.97 – 21.7	No	By-product of drinking water disinfection
Nickel (ppb)	2017	100	NA	9.84	9.67 – 10	No	Pollution from mining and refining operations; Natural occurrence in soil
Lead (ppb)	2019	15	15	< 2	< 2	*Yes	Corrosion of household plumbing systems, erosion of natural deposits
Copper (ppb)	2019	1.3	1.3	0.515	0.016 - 0.515	*Yes	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Selenium (ppb)	2017	50	50	8.58	7.17-10.0	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Nitrate (ppm)	2019	10	10	<0.2	<0.2	*Yes	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2019	80	NA	33.20	7.25 – 69.7	No	By-product of drinking water disinfection

**\* Verona Water Department Violations, please note that while there were a few violations noted in the table above, the violations issued were due to laboratory error and paperwork. There were not violations due to a sample exceeding an action level. Please see list of system violations below.**

**Violation # 7485 – The system results were in compliance and well within range, however the laboratory failed to report results on the New Jersey state drinking water website. The system has worked with the lab to bring the system back in compliance with the NJDEP.**

**Violation # 7894 – The system received a violation for submitting the Consumer Confidence Report (CCR) late. Report was submitted and system is now back in compliance with NJDEP.**

**Violation # 7895 – While all system results collected were well within range, the system failed to collect the required number of samples, due to lack of resident cooperation. The system was required to collect 30 samples but only collected 28. The system has since completed all proper documentation required by the NJDEP and is back in compliance.**

**Violation # 7896 – System did not provide resident participants in the lead and copper testing with timely results. The system has since completed all proper documentation required by the NJDEP and is back in compliance.**

UNREGULATED SUBSTANCES			
		Township of Verona Water Department	
SUBSTANCE (Unit of Measure)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Bromoform (ppb)	2019	0.428	<0.0817-2.90

SECONDARY SUBSTANCES							
				Township of Verona Water Department			
SUBSTANCE (Unit of Measure)	YEAR SAMPLED	RUL	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW- HIGH	VIOLATION	TYPICAL SOURCE
ABS/L.A.S. (ppm)	2017	500	NA	ND	NA	No	Common major components of synthetic detergents
Aluminum (ppb)	2017	200	NA	ND	NA	No	Erosion of natural deposits; Residual from some surface water treatment process
Chloride (ppm)	2017	250	NA	184.5	176-193	No	Runoff/ leaching from natural deposits
Color (units)	2017	10	NA	ND	NA	No	Natural occurring organic materials
Corrosivity (uits)	2017	Non-corrosive	NA	0.174	-0.466-0.119	No	Naturally or industrially influenced balance of hydrogen, carbon, and oxygen in the water; Affected by temperature and other factors
Hardness [as CaCO <sub>3</sub> ] <sup>6</sup> (ppm)	2017	250	NA	391.5	361-422	No	Naturally occurring
Iron (ppb)	2019	300	NA	ND	NA	No	Leaching from natural deposits; Industrial wastes
Manganese (ppb)	2019	50	NA	ND	NA	No	Leaching from natural deposits
Odor (TON)	2017	3	NA	ND	NA	No	Naturally occurring organic materials
pH (Units)	2017	6.5-8.5	NA	7.56	7.32-7.81	No	Naturally occurring
Sodium <sup>7</sup> (ppm)	2017	50	NA	32.2	22.4-42.0	No	Naturally occurring
Sulfate (ppm)	2017	250	NA	25.7	17.9-33.5	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids (ppm)	2017	500	NA	696	673 - 719	No	Runoff/leaching from natural deposits
Zinc (ppm)	2017	5	NA	ND	NA	No	Runoff/leaching from natural deposits; Industrial wastes

<b>UCMR4</b>		<b>Township of Verona Water Department</b>	
<b>SUBSTANCE (Unit of Measure)</b>	<b>YEAR SAMPLED</b>	<b>AMOUNT DETECTED</b>	<b>RANGE LOW-HIGH</b>
<b>Germanium, Total</b> (ppb)	2018	ND	NA
<b>Manganese, Total</b> (ppb)	2018	1.9	1.9
<b>Total Microsystins</b> (ppb)	2018	ND	NA
<b>Semivolatiles</b> (ppb)	2018	ND	NA
<b>Anatoxin-a</b> (ppb)	2018	ND	NA
<b>Cylindrospermopsin</b> (ppb)	2018	ND	NA
<b>Butylated hydroxyanisole (BHA)</b> (ppb)	2018	ND	NA
<b>O-toluidine</b> (ppb)	2018	ND	NA
<b>Quinoline</b> (ppb)	2018	ND	NA
<b>2-Propen-1-ol (allyl Alcohol)</b> (ppb)	2018	ND	NA
<b>1-Butanol</b> (ppb)	2018	ND	NA
<b>2-Methoxyethanol</b> (ppb)	2018	ND	NA
<b>MonoChloroAcetic Acid</b> (ppb)	2018	ND	NA
<b>MonoBromoAcetic Acid</b> (ppb)	2018	0.4	<0.3 – 0.4
<b>DiChloroAcetic Acid</b> (ppb)	2018	16.9	10.4 – 16.9
<b>TriChloroAcetic Acid</b> (ppb)	2018	16.6	12.2 – 16.6
<b>BromoChloroAcetic Acid</b> (ppb)	2018	3.8	2.4 – 3.8
<b>BromoDiChloroAcetic Acid</b> (ppb)	2018	3.3	2.7 – 3.3
<b>DiBromoAcetic Acid</b> (ppb)	2018	0.9	0.4 – 0.9
<b>ChloroDiBromoAcetic Acid</b> (ppb)	2018	0.9	0.4 – 0.9
<b>TriBromoAcetic Acid</b> (ppb)	2018	ND	NA
<b>HAA5 Group</b> (ppb)	2018	32.4	26.2 – 32.4
<b>HAA6Br Group</b> (ppb)	2018	9.3	5.9 – 9.3
<b>HAA9 Group</b> (ppb)	2018	39.1	31.7 – 39.1

What does this mean?

We have learned through our monitoring and testing that some contaminants have been detected. As you can see by the tables above our system had no violations for exceeding their Maximum Contaminant Levels. We are proud that the Verona Water Department drinking water meets or exceeds all Federal and State safety requirements.

## Lead in Home Plumbing

Elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. **The Verona Township Water Department** 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 at (800) 426-4791 or at <http://www.epa.gov/safewater/lead>.”



Special considerations regarding children, pregnant women, nursing mothers, and others:

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

Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

We at **The Verona Township Water Department** work hard to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future. Please call our office if you have questions.

## DEFINITIONS

In the following table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

**90<sup>th</sup> %ile:** The levels reported for lead and copper represent the 90<sup>th</sup> percentile of the total number of sites tested. The 90<sup>th</sup> percentile is equal to or greater than 90% of our lead and copper detections.

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

**LRAA (Location Running Annual Average):** The average of sample analytical results for samples taken at a particular monitoring location during previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as the highest LRAAs.

**MCL (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.

**MCLG (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 allows 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 control of microbial contaminates.

**MRDLG (Maximum Residual Disinfectant Level 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.

**NA:** Not Applicable

**ND (Not Detected):** Indicates that the substance was found by laboratory analysis.**NTU (Nephelometric Turbidity Units) :** Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is not noticeable to the average person.

**pCi/L (picocuries per liter):** A measure of radioactivity.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**removal ratio:** A ratio between the percentage of a substance actually removed to the percentage of the substance required to be removed.

**RUL (Recommended Upper Limit):** These standards are developed to protect aesthetic qualities of drinking water and are not health based.

**TON (Threshold Odor Number):** A measure of odor in water.

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

**The following pages have been provided by The Passaic Valley Water Commission because Verona Water Department Water System purchases a portion of their water from them.**

**PASSIC VALLEY WATER COMMISSION (PVWC) PWS ID NJ1605002 – 2019 WATER QUALITY DATA**

				Water Treatment Plant Results		
PRIMARY CONTAMINATES	Compliance Achieved	MCLG	MCL	PVWC Little Falls WTP PWS ID NJ1605002	NJDWSC Wanaque WTP PWS ID NJ1613001	TYPICAL SOURCE
<b>TURBIDITY AND TOTAL ORGANIC CARBON</b>				<b>Highest Result (Range of Results)</b>	<b>Highest Result (Average)</b>	
Turbidity, NTU*	PVWC=Yes NJDWSC=No	NA	TT=1	0.34 (0.017 – 0.34)	2.1 <sup>^</sup> (0.09 average)	Soil runoff.
	Yes	NA	TT= Percentage of samples <0.3 NTU (min 95% required)	<b>Lowest Monthly Percentage of Samples Meeting the Turbidity Limits</b>		
				100%	98.6%	
<p><b>*NJDWSC incurred a Combined Filter Effluent Turbidity violation in May 2019. There is nothing you need to do. You weren't being supplied with water from NJDWSC at the time of the turbidity violation. Turbidity has not health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.</b></p>						
<p><b>*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.</b></p>						
Total Organic Carbon, %	Yes	NA	TT = % removal; or removal ratio	<b>Percent (%) Removal</b>	<b>Removal Ratio</b>	Naturally present in the environment.
				58 – 100 (25–50 Required)	1.1 (RAA) 1.0 – 1.3	
<b>INORGANIC CONTAMINANTS</b>				<b>Highest Result (Range of Results)</b>	<b>Highest Result</b>	
Barium, ppm	Yes	2	2	Less than 0.10	0.0069	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Fluoride, ppm	Yes	4	4	0.050 (ND-0.050)	ND	Erosion of natural deposits.
Nickel, ppb	NA	NA	NA	2.53 (ND-2.53)	ND	Erosion of natural deposits.
Nitrate, ppm	Yes	10	10	2.81 (ND-2.81)	0.155	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 monitoring waiver for synthetic organic chemicals for the 2017 – 2019 monitoring period by NJDEP. PVWC received a monitoring waiver for all of the synthetic organic contaminants except for the contaminant Di(2-Ethylexy) Phthalate 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 PVWC system (PWS ID 1605002), and 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 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 water.

Intake Susceptibility Ratings	Pathogens	Nutrients	Pesticides	Volatile Organic Compounds	Inorganic Contaminants	Radio-nuclides	Radon	Dis-infection Byproduct Precursors
PVWC 4 Surface Water	4-High	4-High	1-Medium, 3-Low	4-Medium	4-High	4-Low	4-Low	4-High
NJDWSC 5 Surface Water	5-High	5-High	2-Medium 3-Low	5-Medium	5-High	5-Low	5-Low	5-High

### 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, immune-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immune-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.

PVWC conducted special source water *Cryptosporidium* and *Giardia* monitoring in 2019. The data collected in 2019 is presented in the table below.

### SOURCE WATER PATHOGEN MONITORING

Contaminant	PVWC Plant Intake	Typical Source
<i>Cryptosporidium</i> , Oocysts/L	0 – 0.57	Microbial pathogens found in surface waters throughout the United States.
<i>Giardia</i> , Cysts/L	0 – 1.23	

### UNREGULATED CONTAMINANTS FOR WHICH EPA REQUIRES MONITORING

Contaminant	PVWC Intake Average (Range of Results)	PVWC Little Falls WTP Average (Range of Results)
Bromide, ppb	44 (33 – 69)	
Total Organic Carbon, mg/L	6 (4 – 7)	
Manganese (Total), ppb		8 (2 – 14)

Unregulated contaminants are those for which EPA requires monitoring but 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.

### SECONDARY PARAMETERS – TREATMENT PLANT EFFLUENT

	PVWC	NJDWSC
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Contaminant	N.J. Recommended Upper Limit (RUL)	Little Falls WTP PWSID NJ1605002		Wanaque WTP PWSID NJ1613001	
		Range of Results	RUL Achieved	Result	RUL Achieved
ABS/LAS, PPB	500	ND - 60	Yes	ND	Yes
Alkalinity, ppm	NA	28 - 80	NA	40	NA
Aluminum, ppb	200	20 - 42	Yes	28	Yes
Chloride, ppm	250	48 - 161	Yes	44	Yes
Color, CU	10	Less than 5	Yes	2	Yes
Hardness (as CaCO3), ppm	250	58 - 172	Yes	43	Yes
Hardness (as CaCO3)1 grains/gallon	15	3 - 10	Yes	3	Yes
Iron, ppb	300	Less than 100	Yes	17	Yes
Manganese, ppb	50	ND - 211	No	18	Yes
Odor, TON	3	2 - 9	No	ND	Yes
pH	6.5 to 8.5 (Optimal Range)	8.1 – 8.4	Yes	8.09	Yes
Sodium, ppm	50	28 - 115	No*	23	Yes
Sulfate, ppm	250	9 - 82	Yes	6	Yes
Total Dissolved Solids, ppm	500	190 - 561	No	118	Yes
Zinc, ppb	5,000	Less than 40	Yes	10	Yes

**\*PVWC's FINISHED WATER EXCEEDS SODIUM RUL**

PVWC's finished water was above New Jersey's Recommended Upper Limit (RUL) of 50 ppm for sodium in 2019. Possible sources of sodium include natural 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.

**ADDITIONAL PVWC TREATMENT PLANT MONITORING RESULTS**

Detected Contaminates, ppb	Little Falls WTP Effluent Range of Results	
Chlorate	(35 – 413)	Test results presented in this table were collected in 2019 as part of a study to determine the general occurrence of these contaminants. PVWC continues to participate in, and support these types of regulatory and research efforts to maintain a position of leadership in drinking water supply.
1, 4-Dioxane	(ND – 0.09)	
Perfluoronbutanesulfonic acid (PFBS)	(ND – 0.0021)	
Perfluoroheptanoic acid (PFHpA)	(ND – 0.0027)	
Perfluorohexanesulfonic acid (PFHxS)	(ND – 0.0029)	There are currently no EPA drinking water standards in effect for these contaminants although EPA has established health advisory levels for some of these to

		provide an estimate of acceptable drinking water levels based on health effects information.
<b>Perfluorohexanoic acid (PFHxA)</b>	<b>(ND – 0.0054)</b>	
<b>Perfluorooctanesulfonic acid (PFOS)</b>	<b>(ND – 0.0086)</b>	EPA has published Health Advisory levels for Perfluorooctanoic acid, (PFOA) and Perfluorooctanesulfonic acid, (PFOS), of 0.070 parts per billion (ppb) combined.
<b>Perfluorooctanoic acid (PFOA)</b>	<b>(0.0039 – 0.010)</b>	Health advisory levels are non-enforceable and non-regulatory and provide technical information to state agencies and other public health technologies associated with drinking water contamination.  <b>The results observed in 2019 were below health advisory levels.</b>

## DEFINITIONS of TERMS and ACRONYMS

**ABS/LAS:** Alkylbenzene Fulfonate and Linear Alkylbenzene Sulfonate (surfactants)

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

**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 Goal; 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 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 water.

**MRDL: Maximum Residual Disinfectant Level;** the highest level of a disinfectant allowed in drinking water. There is a 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 INFORMATION RESOURCES

EPA Drinking Water website: [www.epa.gov/safewater](http://www.epa.gov/safewater)

NJDEP Water Supply website: [www.nj.gov/dep/watersupply](http://www.nj.gov/dep/watersupply)

American Water Works Association (AWWA) website: [www.awwa.org](http://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](http://www.njawwa.org)