

# Verona Township Water Department

## Quality on Tap Report Annual Drinking Water Quality Report Township of Verona Water System For the Year 2023, Results from the Year 2022

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, 2022. 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 The well water is withdrawn from the Feltville aquifer via two deep rock wells located in Verona.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.

### Source Water Assessment

Source Water Assessments (SWA) were completed at the end of December 2004 for all community water systems. Water systems are required (40 C.F.R. 141.153(b)(2)) to notify their customers how they can obtain the information in these reports, and to provide a summary of the results for the system's source(s). Federal regulations also recommend the systems provide a summary of potential sources of contamination. The New Jersey Department of Environmental

Protection (NJDEP) has completed and issued the Source Water Assessment Report and Summary for this public water system, which is available at <http://www.nj.gov/dep/watersupply/swap/index.html> , or by contacting the NJDEP, Bureau of Safe Drinking Water at 609-292-5550 or [watersupply@dep.nj.gov](mailto:watersupply@dep.nj.gov) . This document is available from the website at <http://www.nj.gov/dep/watersupply/swap/index.html> . A list of the potential contaminant sources utilized in the report can be obtained from the SWA Report available online at [watersupply@dep.nj.gov](mailto:watersupply@dep.nj.gov) . Assessments have been completed for the PVWC and NJDWSC systems. These reports are available at <http://www.nj.gov/dep/watersupply/swap/index.html> 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.

## Educational Information

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).

***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)***

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 projection, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can, also come from gas stations, urban storm water runoff, and septic systems.

- Radioactive contaminants which can be naturally occurring or be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.
- 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)).
- PFOA – Perfluorooctanoic Acid, your water detected levels over the limit for PFOA, compliance is determined by a running annual average. The typical or likely source per NJAC 7:10-5.2(b)4 stated in table below.

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.

## 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.

REGULATED SUBSTANCES							
				Township of Verona Water Department			
SUBSTANCE (Unit of Measure)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOWHIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2017	15	0	5.812	5.057 – 6.566	No	Erosion of natural deposits
Arsenic (ppb)	2020	5	0	0.002	0.0015 – 0.0021	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production waste
Barium (ppm)	2020	2	2	0.312	0.268 – 0.356	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2020	[4]	[4]	0.48	0.40 – 0.60	No	Water additive used to control microbes
Chromium (ppb)	2020	100	100	0.002	<0.0005 – 0.0034	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	2020	4	4	ND <0.2	NA	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories

<b>Haloacetic Acids [HAAs] (ppb)</b>	2022	60	NA	32.7	13.9 – 55.3	No	By-product of drinking water disinfection
<b>Nickel (ppb)</b>	2020	100	NA	0.0046	0.00450.0047	No	Pollution from mining and refining operations; Natural occurrence in soil
<b>Lead (ppb)</b>	2022	15	15	< 2	0	No	Corrosion of household plumbing systems, erosion of natural deposits
<b>Copper (ppb)</b>	2022	1.3	1.3	0.0905	0.0875 -	No	Corrosion of household

					0.0935		plumbing systems; erosion of natural deposits; leaching from wood preservatives
<b>Selenium (ppb)</b>	2020	50	50	<0.006	NA	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
<b>Nitrate (ppm)</b>	2021	10	10	1.8	10	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
<b>TTHMs [Total Trihalomethanes] (ppb)</b>	2022	80	NA	61.8	17.1 – 76.3	No	By-product of drinking water disinfection

<b>PFNA (ng/l)</b> Perfluorononanoic Acid	2021	13	6.5	<2	NA	No	These chemicals were used in the production of non-stick, stain repellent and chemically inert coatings. Compounds were also used to make firefighting foam, stain-resistant clothing, and food packaging.
<b>PFOA (ng/l)</b> Perfluorooctanoic Acid	2021	14	7	28	20.4 – 35.1	*Yes	These chemicals were used in the production of non-stick, stain repellent and chemically inert coatings. Compounds were also used to make firefighting foam, stain-resistant clothing, and food packaging.
<b>PFOS(ng/l)</b> Perfluorooctanesulfonic Acid	2021	13	6.5	10	7.61 – 13.9	No	These chemicals were used in the production of non-stick, stain repellent and chemically inert coatings. Compounds were also used to make firefighting foam, stain-resistant clothing, and food packaging.
<b>EDB &amp; DBCP (ug/l)</b>	2021	0.2	NA	<0.008	<0.007 – <0.008	No	Synthetic organic compounds. DBCP was used primarily as soil fumigant for many crops like on soybeans, cotton, pineapples, and orchards.
<b>VOCs</b>	2021			<0.386	<0.05 - <0.386	No	VOC's include the burning of fuels such as gas, wood and kerosene and tobacco products. VOCs can also come from personal care products such as perfume and hair spray, cleaning agents, dry

							cleaning fluid, paints, lacquers, varnishes, hobby supplies and from copying and printing machines.
<b>1,2,3 Tri-chloropropane</b> (ug/l)	2021	0.03	NA	<0.004	<0.004 – <0.00402	No	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards

UNREGULATED SUBSTANCES			
		Township of Verona Water Department	
SUBSTANCE (Unit of Measure)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Bromoform (ppb)	2021	0.72	<0.161-2

SECONDARY SUBSTANCES							
				Township of Verona Water Department			
SUBSTANCE (Unit of Measure)	YEAR SAMPLED	RUL	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOWHIGH	VIOLATION	TYPICAL SOURCE
ABS/L.A.S. (ppm)	2017	500	NA	ND	NA	No	Common major components of synthetic detergents
Aluminum (ppb)	2020	200	NA	<0.01	NA	No	Erosion of natural deposits; Residual from some surface water treatment process
Chloride (ppm)	2020	250	NA	194	187-201	No	Runoff/ leaching from natural deposits
Color (units)	2020	10	NA	<2	NA	No	Natural occurring organic materials

<b>Corrosivity</b> (uits)	2020	Non-corrosive	NA	0.208	-0.107-0.308	No	Naturally or industrially influenced balance of hydrogen, carbon, and oxygen in the water; Affected by temperature and other factors
<b>Hardness [as CaCO<sub>3</sub>]<sup>6</sup></b> (ppm)	2020	250	NA	400	376-424	No	Naturally occurring
<b>Iron</b> (ppb)	2022	300	<0.2	ND	NA	No	Leaching from natural deposits; Industrial wastes
<b>Manganese</b> (ppb)	2022	50	<0.01	ND	NA	No	Leaching from natural deposits
<b>Odor</b> (TON)	2020	3	<1	ND	NA	No	Naturally occurring organic materials
<b>pH</b> (Units)	2020	6.5-8.5	NA	7.52	7.217.82	No	Naturally occurring
<b>Sodium<sup>7</sup></b> (ppm)	2020	50	NA	40.4	29.950.9	No	Naturally occurring
<b>Sulfate</b> (ppm)	2020	250	NA	35.45	25.445.5	No	Runoff/leaching from natural deposits; Industrial wastes
<b>Total Dissolved Solids</b> (ppm)	2020	500	NA	618.5	609 - 628	No	Runoff/leaching from natural deposits
<b>Zinc</b> (ppm)	2020	5	NA	0.012	<0.01 – 0.0147	No	Runoff/leaching from natural deposits; Industrial wastes

We participated in the 4<sup>th</sup> stage of the U.S. EPA’s Unregulated Contaminant 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 Contaminant Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

<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 (ppb)</b>	2018	39.1	31.7 – 39.1
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## Violation of Monitoring and/or Reporting Compliance Data

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.

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 which you will see an explanation of below. The system also received several monitoring and paperwork violations. We are proud that the Verona Water Department drinking water meets or exceeds all Federal and State safety requirements.

### Monitoring Violation#2023-7965

During 1/01/2023 – 3/31/2023, the system was required to sample in February 2023 but sample was not taken until March of 2023. System is working with NJDEP to bring system back into compliance. Please see public notice included with this report.

### Monitoring Violation#2023-9651

During 7/01/2022 – 12/31/2022, the system was required to test certain water quality parameters specifically pH, orthophosphate and alkalinity at the distribution system. System is working with NJDEP to bring system back into compliance. Please see public notice included with this report.

### Monitoring Violation#2023-7946

During 7/01/2022 – 9/30/2022, the system was required to send out a CCR Report. Report was sent out late but system submitted to NJDEP and is back in compliance.

### Monitoring Violation#2023-7953 & 2022-7930

During 7/23/2022 – 1/13/2023 and 1/23/22 – 7/22/2022, the system was required to submit required LSL (Lead Service Line) documentation. Report was sent out late but system submitted to NJDEP and is back in compliance.

**\* Verona Water Department Violations, please note that while there were a few violations noted in the table above, the violations issued were due to paperwork.**

**The only violation exceeding an action level is the on-going 2021 violation # 7906 for Perfluorooctanoic Acid (PFOA).**

## IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

### Monitoring and Reporting Requirements Not Met for Verona Water System – PWSID NJ0720001

We are required to report monitoring results of 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. During monitoring period for the 01/01/2023 – 03/31/2023 for your water system we failed to monitor and report Stage 2 TTHM-HAA5 results. Our water system is required to sample in February and the system sampled in March as required by the state.

Our system failed to notify the state drinking water program as required by the State of NJ within 24 hours. Although public health was not impacted, as our customers, you have a right to know what happened and what we did to correct the situation.

#### **What should I do?**

There is nothing you need to do at this time. You do not need to boil your water or take other actions.

#### **What is being done?**

While we did not notify the state as quickly as we should have, we have taken measures to make sure this does not happen in the future.

For more information, please contact Township Manager, Joe O D'Arco at (973) 857-4767 or [townshipmanager@veronanj.org](mailto:townshipmanager@veronanj.org).

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

This notice is being sent to you by Verona Water Department. PWSID #: NJ0720001  
Date distributed: Sent as part of the Verona Water Department CCR Report

## IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

### Monitoring and Reporting Requirements Not Met for Verona Water System – PWSID NJ0720001

We are required to report monitoring results of 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. During monitoring period for the 07/01/2022 – 12/31/2022 for your water system we failed to monitor and report Water Quality Parameter results specifically pH, Orthophosphate and Alkalinity at the distribution system results as required by the state.

Our system failed to notify the state drinking water program as required by the State of NJ within 24 hours. Although public health was not impacted, as our customers, you have a right to know what happened and what we did to correct the situation.

#### **What should I do?**

There is nothing you need to do at this time. You do not need to boil your water or take other actions.

#### **What is being done?**

While we did not notify the state as quickly as we should have, we have taken measures to make sure this does not happen in the future.

For more information, please contact Township Manager, Joe O D'Arco at (973) 857-4767 or [townshipmanager@veronanj.org](mailto:townshipmanager@veronanj.org).

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

This notice is being sent to you by Verona Water Department. PWSID #: NJ0720001  
Date distributed: Sent as part of the Verona Water Department CCR Report

## Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. **The 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>. However, for those served by a lead service line, flushing times may vary based on the length of the service line and plumbing configuration in your home. If your home is set back further from the street a longer flushing time may be needed. To conserve water, other household water usage activities such as showering, washing clothes, and running the dishwasher are effective methods of flushing out water from a service line.



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 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. 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.**

2022 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 the North Jersey District Water Supply Commission (NJDWSC) (PWS ID 1613001) can be found online at the NJDEP's source water assessment website- <http://www.nj.gov/dep/watersupply/swap/index.html> or by contacting NJDEP's Bureau of Safe Drinking Water at 609-292-5550 or [watersupply@dep.nj.gov](mailto:watersupply@dep.nj.gov).

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								
Sources	Pathogens	Nutrients	Pesticides	Volatile Organic Compounds	Inorganic Contaminants	Radionuclides	Radon	Disinfection Byproduct Precursors
PVWC Surface Water (4 intakes)	(4) High	(4) High	(1) Medium (3) Low	(4) Medium	(4) High	(4) Low	(4) Low	(4) High
NJDWSC (5 intakes)	(5) High	(5) High	(2) Medium (3) Low	(5) Medium	(5) High	(5) Low	(5) Low	(5) High

2022 Water Quality Results- Table of Detected Contaminants						
Regulated Contaminant (units)	Goal (MCLG)	Highest Level Allowed (MCL)	PVWC Little Falls-WTP PWSID NJ1605002	NJDWSC Wanaque-WTP PWSID NJ1613001	Source of Substance	Violation?
<b>Treated Drinking Water at the Treatment Plant</b>						
Turbidity (NTU)	NA	Treatment Technique (TT) = 1 NTU	Highest Level Detected and Range (Low-High)		Soil run-off	No
			0.13 (0.02 -0.13)	0.4 (0.03-0.4)		
	NA	TT= % of samples <0.3 NTU (min 95%)	Lowest Monthly Percentage of Samples Meeting Turbidity Limits			
			100%	99.98%		

*Turbidity is a measure of the cloudiness of the water and is monitored as an indicator of water quality. High turbidity can limit the effectiveness of disinfectants.*

Contaminant	MCL	TT=% removal or Removal Ratio	% Removal	Removal Ratio	Source	No
			46.7-72.6 (25 - 45 required)	(0.9-1.4)		
Total Organic Carbon (%)	NA				Naturally present in the environment.	No
Barium (ppm)	2	2	0.016-0.027	0.00654	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.	No
Fluoride (ppm)	4	4	<0.05-0.05	ND	Erosion of natural deposits.	No
Nickel (ppb)	NA	NA	2.01-2.76	ND	Erosion of natural deposits.	No
Nitrate (ppm)	10	10	1.45 (0.71-2.76)	ND	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.	No
Radium (pCi/L)	0	5	ND (2014 Data)	ND (2014 Data)	Erosion of Natural Deposits	No
Perfluorooctanesulfonic acid [PFOS] (ppt)	0	13*	5.37 highest running annual average (3.8-9.2)	3.63**	Metal plating and finishing, discharge from industrial facilities, aqueous film-forming (firefighting) foam	No
Perfluorooctanoic acid [PFOA] (ppt)	0	14*	8.38 highest running annual average (5.7-12.8)	4.38**	Metal plating and finishing, discharge from industrial facilities, aqueous film-forming (firefighting) foam	No

*\*MCL created by the state of New Jersey. Currently there is no Federal MCL for perfluorinated compounds  
\*\* These values taken from NJ Drinking Water Watch*

NA - not applicable, ND - not detected

### ***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.

Source Water Pathogen Monitoring		
Contaminant	Results for PVWC Plant Intake	Typical Source
<i>Cryptosporidium</i> (Oocysts/L)	ND - 0.28	Microbial pathogens found in surface waters throughout the United States.
<i>Giardia</i> (Cysts/L)	ND - 1.64	

PVWC regularly samples source water for *Cryptosporidium* and *Giardia*. The data collected in 2022 is presented in the table above.

<b>2022 Water Quality Results- Table of Detected Secondary Parameters</b>					
Contaminant	NJ Recommended Upper Limit (RUL)	PWVC Little Falls-WTP PWSID NJ1605002		NJDWSC Wanaque-WTP PWSID NJ1613001	
		Range of Results	RUL Achieved?	Result	RUL Achieved?
<b>Treated Drinking Water at the Entry Point to the Distribution System</b>					
Alkylbenzene Sulfonate [ABS]/Linear Alkylbenzene Sulfonate [LAS] (ppb)	500	110-220	Yes	<50	Yes
Alkalinity (ppm)	NA	48-82.5	NA	35.0	NA
Aluminum (ppb)	200	17.4-29.3	Yes	26.4	Yes
Chloride (ppm)	250	101.8-158.2	Yes	42.8	Yes
Color (color units)	10	<5	Yes	5.0	Yes
Copper (ppm)	<1	0.00087-0.00742	Yes	0.0141	Yes
Hardness, CaCO <sub>3</sub> (ppm)	250	90-168	Yes	49.0	Yes
Iron (ppb)	300	<100	Yes	<200	Yes
Manganese (ppb)*	50	9.2-18.8	Yes	3.39	Yes
Odor (Threshold Odor Number)	3	6-80	No	<1	Yes
pH	6.5 to 8.5 (optimum range)	7.77-8.24	Yes	8.05	Yes
Sodium (ppm)	50	62.8-135.6	No**	28.6	Yes
Sulfate (ppm)	250	37.8-89.3	Yes	5.96	Yes
Total Dissolved Solids (ppm)	500	262.5-487.5	Yes	126	Yes
Zinc (ppb)	5000	2.7-26	Yes	<10	Yes

\*\*PWVC's finished water was above New Jersey's Recommended Upper Limit (RUL). 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.

\*The recommended upper limit for manganese is based on staining of laundry. Manganese is an essential nutrient, and toxicity is not expected from high levels which would not be encountered in drinking water.

<b>Testing For Emerging Contaminants</b>		
Contaminant	PVWC Little Falls-WTP PWSID NJ1605002	<i>Test results presented in this table were collected in 2022 to monitor the occurrence of emerging contaminants. There are currently no EPA drinking water standards for these contaminants.</i>
	Results	
<b>Treated Drinking Water at the Entry Point to the Distribution System</b>		
Chlorate (ppb)	1476-343.8	
1,4-Dioxane (ppb)	<0.07-0.093	
Perfluorobutanesulfonic acid [PFBS] (ppt)	<1.76-2.4	PVWC monitors for the presence of perfluorochemicals in source water and finished drinking water monthly.
Perfluoroheptanoic acid [PFHp/A] (ppt)	1.88-3.5	
Perfluorohexanesulfonic acid [PFHxS] (ppt)	1.95-3.56	
Perfluorohexanoic acid [PFHxA] (ppt)	2.59-8.99	

### **ADDITIONAL INFORMATIONAL 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)