

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water that 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 these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife; Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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, urban stormwater runoff, and residential uses; Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems; Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Community Participation

You are invited to participate in our evening council meetings to present your interests regarding your drinking water. We meet the first and third Mondays of each month, beginning at 7:00 p.m., at Verona Town Hall, 600 Bloomfield Avenue, Verona, NJ.

Township of Verona
10 Commerce Court
Verona, NJ 07044

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ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2018

Presented By
Township of Verona

PWS ID#: 0720001

Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2018. 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. 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.

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. We are responsible for providing high-quality drinking water, but we 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, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at (800) 426-4791 or at www.epa.gov/safewater/lead.



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 Felville 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

The NJDEP has not completed a Source Water Assessment Report and Summary for the Verona Well Water System, but assessments have been completed for the PVWC and NJDWSC systems. These reports are available at 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 contaminant categories, ranging from LOW to HIGH.

WATER SYSTEM	PATHOGENS	NUTRIENTS	PESTICIDES	VOC	IOC	RADIONUCLIDES	RADON	DISINFECTION BP
PVWC	High	High	Medium-Low	Medium	High	Low	Low	High
NJDWSC	High	High	Medium-Low	Medium	High	Low	Low	High

Definitions

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

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

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

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

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

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just 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.

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 concentration 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 4th 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

REGULATED SUBSTANCES ¹											
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	Township of Verona Water Department		Passaic Valley Water Commission (PVWC)		North Jersey District Water Supply Commission (NJWSC)		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Alpha Emitters (pCi/L)	2017	15	0	5.812	5.057–6.566	NA	NA	NA	NA	No	Erosion of natural deposits
Arsenic (ppb)	2018	5	0	<1.0	<1.0–3.0	NA	NA	NA	NA	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2017	2	2	0.376	0.290–0.463	<0.1 ²	NA ²	0.0145 ²	NA ²	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2018	[4]	[4]	0.60	0.14–2.00	NA	NA	NA	NA	No	Water additive used to control microbes
Chromium (ppb)	2017	100	100	5.38	4.64–6.13	0.60 ³	ND–0.60 ³	NA	NA	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	2017	4	4	ND	NA	0.080 ²	ND–0.080 ²	ND ²	NA ²	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs] (ppb)	2018	60	NA	18.38	ND–27.5	NA	NA	NA	NA	No	By-product of drinking water disinfection
Nickel (ppb)	2017	100	NA	9.84	9.67–10	2.39 ²	ND–2.39 ²	ND ²	NA ²	No	Pollution from mining and refining operations; Natural occurrence in soil
Nitrate (ppm)	2018	10	10	1.90	1.84–1.96	3.26	<0.1–3.26	0.351	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	2017	50	50	8.58	7.17–10.0	<2.0 ²	ND–<2.0 ²	ND ²	NA ²	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
TTHMs [Total Trihalomethanes] (ppb)	2018	80	NA	26.16	ND–67.7	NA	NA	NA	NA	No	By-product of drinking water disinfection
Total Organic Carbon (% removal)	2018	TT	NA	NA	NA	64.5	49.0–80.0	NA	NA	No	Naturally present in the environment
Total Organic Carbon* (removal ratio)	2018	TT	NA	NA	NA	NA	NA	1.1	1.0–1.3	No	Naturally present in the environment
Turbidity ⁵ (NTU)	2018	TT	NA	NA	NA	0.36	0.021–0.36	0.41	0.06–0.41	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2018	TT = 95% of samples meet the limit	NA	NA	NA	99.97	NA	99.9	NA	No	Soil runoff

SECONDARY SUBSTANCES											
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	RUL	MCLG	Township of Verona Water Department		Passaic Valley Water Commission (PVWC)		North Jersey District Water Supply Commission (NJWSC)		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
ABS/L.A.S. (ppm)	2017	500	NA	ND	NA	0.15 ²	ND–0.15 ²	ND ²	NA ²	No	Common major components of synthetic detergents
Aluminum (ppb)	2017	200	NA	ND	NA	19.5 ²	ND–39 ²	60 ²	NA ²	No	Erosion of natural deposits; Residual from some surface water treatment processes
Chloride (ppm)	2017	250	NA	184.5	176–193	130 ²	65–194 ²	71 ²	NA ²	No	Runoff/leaching from natural deposits
Color (Units)	2017	10	NA	ND	NA	NA ²	NA ²	2 ²	NA ²	No	Naturally occurring organic materials
Corrosivity (Units)	2017	Non-corrosive	NA	0.174	-0.466–0.119	NA	NA	NA	NA	No	Natural or industrially influenced balance of hydrogen, carbon, and oxygen in the water; Affected by temperature and other factors
Hardness [as CaCO ₃] ⁶ (ppm)	2017	250	NA	391.5	361–422	127 ²	92–160 ²	52 ²	NA ²	No	Naturally occurring
Iron (ppb)	2018	300	NA	ND	NA	<100	NA	12	NA	No	Leaching from natural deposits; Industrial wastes
Manganese (ppb)	2018	50	NA	ND	NA	<50	NA	2.0	NA	No	Leaching from natural deposits
Odor (TON)	2017	3	NA	ND	NA	8 ²	5–10 ²	ND ²	NA ²	No	Naturally occurring organic materials
pH (Units)	2017	6.5–8.5	NA	7.56	7.32–7.81	8.0 ²	7.7–8.4 ²	8.0 ²	NA ²	No	Naturally occurring
Sodium ⁷ (ppm)	2017	50	NA	32.2	22.4–42.0	84.73 ²	48–162 ²	40 ²	NA ²	No	Naturally occurring
Sulfate (ppm)	2017	250	NA	25.7	17.9–33.5	60.5 ²	42–68 ²	8 ²	NA ²	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids (ppm)	2017	500	NA	696	673–719	400 ²	246–498 ²	177 ²	NA ²	No	Runoff/leaching from natural deposits
Zinc (ppm)	2017	5	NA	ND	NA	<0.05 ²	NA ²	0.016 ²	NA ²	No	Runoff/leaching from natural deposits; Industrial wastes

UNREGULATED SUBSTANCES					
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Township of Verona Water Department		Passaic Valley Water Commission (PVWC)	
		AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH
Bromoform (ppb)	2018	0.14	ND–1.17	NA	NA
Chlorate (ppb)	2018	54.5	ND–109	475	102–475

¹ Under a waiver granted on December 30, 1998, by the State of New Jersey Department of Environmental Protection, our system does not have to monitor for synthetic organic chemicals/pesticides because several years of testing have indicated that these substances do not occur in our source water. The SDWA regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, volatile organic chemicals, and synthetic organic chemicals. Our system received monitoring waivers for synthetic organic chemicals and asbestos.

² Sampled in 2018.

³ Sampled in 2016.

⁴ The value reported under Amount Detected for TOC is the lowest ratio between the percentage of TOC actually removed to the percentage of TOC required to be removed. A value of greater than 1 indicates that the water system is in compliance with TOC removal requirements. A value of less than 1 indicates a violation of the TOC removal requirements.

⁵ Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of water quality and the effectiveness of disinfectants. The turbidity rule requires that 95% or more of the monthly samples must be less than or equal to 0.3 NTU (no sample may exceed 1 NTU).

⁶ These values reflect the hardness at the production wells. Lower hardness values exist at the faucet due to blending of well water with lower hardness surface water purchased from PVWC.

⁷ 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, 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.