

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 drinking 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 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.

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ANNUAL WATER REPORT

*Water testing
performed in 2010*

QUALITY

Presented By _____
Township of Verona

PWS ID#: 0720001

Sampling Results

During the past year we have analyzed numerous water samples to determine if pollutants are present in our drinking water system under many different contaminant categories. Most of the parameters tested indicate no presence, or nondetectable levels; these would be too numerous to list here. Therefore, this table represents only the contaminants that were found to be present (detected) in our drinking water. Also included are the established safe drinking water limits for each contaminant. It is important to remember that, just because a contaminant is present, it does not mean that the water is not safe to drink, provided that the safe drinking water limits are satisfied.

The state requires us to monitor 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 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		PVWC		NJDWSC		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Alpha Emitters (pCi/L)	2008	15	0	3.42	ND-3.42	NA	NA	NA	NA	No	Erosion of natural deposits
Arsenic (ppb)	2010	5	0	NA	NA	NA	NA	0.28	NA	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2008	2	2	0.30	0.18-0.30	0.028 ²	0.009-0.028 ²	0.0087 ²	NA ²	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2010	[4]	[4]	0.34	0.05-1.17	NA	NA	NA	NA	No	Water additive used to control microbes
Chromium (ppb)	2010	100	100	NA	NA	2	ND-2	NA	NA	No	Discharge from steel and pulp mills; Erosion of natural deposits
Haloacetic Acids [HAAs] (ppb)	2010	60	NA	19.0	ND-19.0	NA	NA	NA	NA	No	By-product of drinking water disinfection
Nickel (ppb)	2010	100	NA	NA	NA	5	2-5	NA	NA	No	Pollution from mining and refining operations; Natural occurrence in soil
Nitrate (ppm)	2010	10	10	2.11	1.72-2.11	3.63	0.54-3.63	0.21	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2010	80	NA	56.1	ND-56.1	NA	NA	NA	NA	No	By-product of drinking water disinfection
Total Organic Carbon (% removal)	2010	TT	NA	NA	NA	60	47-78	40	17-45	No	Naturally present in the environment
Turbidity ³ (NTU)	2010	TT	NA	NA	NA	0.25	0.14-0.25	0.52	NA	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2010	TT	NA	NA	NA	100	NA	100	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

Definitions

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

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

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH% TILE)	SITES ABOVE AL/ TOTAL SITES	EXCEEDANCE	TYPICAL SOURCE
Copper (ppm)	2010	1.3	1.3	0.264	0/62	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2010	15	0	3	2/62	Yes	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES (TOWNSHIP OF VERONA WATER DEPARTMENT)

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	RUL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2008	250	NA	110	87–110	No	Runoff/leaching from natural deposits
Corrosivity (Units)	2008	Noncorrosive	NA	0.64	0.05–0.64	No	Natural or industrially influenced balance of hydrogen, carbon and oxygen in the water; Affected by temperature and other factors
Hardness [as CaCO ₃] (ppm)	2008	250	NA	324	252–324	No	Naturally occurring
pH (Units)	2008	6.5–8.5	NA	8.0	7.5–8.0	No	Naturally occurring
Sulfate (ppm)	2008	250	NA	58	23–58	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids (ppm)	2008	500	NA	301	279–301	No	Runoff/leaching from natural deposits

part substance per million parts water (or milligrams per liter).

RUL (Recommended Upper Limit): The highest level of a contaminant recommended in drinking water. RULs are set to protect the odor, taste, and appearance of drinking water.

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

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 2010.

³ Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system. The turbidity rule requires that 95% or more of the monthly samples must be less than or equal to 0.3 NTU (and no sample may exceed 1 NTU).

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.

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

Why do I get this report each year?

Community water system operators are required by Federal law to provide their customers an annual water quality report. The report helps people make informed choices about the water they drink. It lets people know what contaminants, if any, are in their drinking water and how these contaminants may affect their health. It also gives the system operators a chance to tell customers what it takes to deliver safe drinking water.

Why does my water sometimes look “milky”?

The “milky” look is caused by tiny air bubbles in the water. The water in the pipes coming into your home or business is under pressure, so gasses (the air) are dissolved and trapped in the pressurized water as it flows into your glass. As the air bubbles rise in the glass, they break free at the surface, thus clearing up the water. Although the milky appearance might be disconcerting, the air bubbles won't affect the quality or taste of the water.

How much water is used during a typical shower?

The Federal Energy Policy Act set a nationwide regulation that limits shower heads to a maximum flow of 2.5 gallons per minute (GPM). Shower heads made before 1980 are rated at 5 GPM. Since the average shower is estimated to last 8.2 minutes, the old shower heads use 41 gallons of water while the newer, low-flow shower heads use only about 21 gallons.

Is it okay to use hot water from the tap for cooking and drinking?

No, ALWAYS use cold water. Hot water is more likely to contain rust, copper, and lead from household plumbing and water heaters. These substances can dissolve into hot water faster than they do into cold water, especially when the faucet has not been used for an extended period of time.

How many contaminants are regulated in drinking water?

The U.S. EPA regulates over 80 contaminants in drinking water. Some states may choose to regulate additional contaminants or to set stricter standards, but all states must have standards at least as stringent as the U.S. EPA's.

Quality First

The Township of Verona is proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2010. We are committed to delivering the best-quality drinking water possible to all of our water users and remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community education. It is our goal to provide safe, high-quality drinking water to you and your family.

Please review the information contained within this report, and we encourage you to share your thoughts with us.

Mayor and Council, Township of Verona



Where Does My Water Come From?

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 Feltsville 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) located in Wanaque, New Jersey. PVWC can also provide water from their Little Falls treatment plant located in Totowa, New Jersey, which 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.

Community Participation

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

Information on Sodium and Lead

In 2011, the sodium RUL (50 ppm) was exceeded at one of our ground water well locations. Historically, our ground water has a sodium level of approximately 20 ppm, but our 2011 first quarter monitoring resulted in a sodium value of 54 ppm at one well location. This elevated value could be attributed to the salt applied during the winter in the control of snow and icy road conditions. Quarterly testing at this location will be conducted to monitor the sodium levels in our well water.

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.

In 2010, it was determined that Verona household water systems could contribute to the lead content in drinking water. Some of the homes tested under the 2009 Lead and Copper Monitoring Program experienced lead levels in drinking water over the established safe levels. Public education materials were distributed to all Verona water customers on this lead issue with information on lead in drinking water and its associated health effects, where residents can have their water tested, and what steps the Township of Verona will take to reduce the potential for lead in 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. The Township of Verona is 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 or at www.epa.gov/safewater/lead.

Testing For *Cryptosporidium*

Cryptosporidium is a microbial parasite found in surface water throughout the U.S. Although filtration removes *Cryptosporidium*, the most commonly used filtration methods cannot guarantee 100 percent removal. Monitoring of source water and/or finished water indicates the presence of these organisms. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immunocompromised people are at greater risk of developing life-threatening illness. We encourage immunocompromised individuals to consult their doctors regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water.

Source water monitoring by PVWC has detected the presence of *Cryptosporidium* in both the Pompton River and the Passaic River.

Violation Information

Lead and copper monitoring in 2009 generated an exceedance of the Lead Action Level at the 90th Percentile. As required, additional lead and copper testing has been conducted in 2010 and planned for 2011, public education information has been distributed to all Verona water customers, and a review of the Corrosion Control program has been conducted. If you did not receive the education materials or if you have any questions regarding lead in drinking water, please contact the Verona Water Department at (973) 857-4843.

Infants and children who drink water containing lead in excess of the Action Level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Questions?

For more information about this report and other questions regarding your drinking water, please contact Tim Newton at the Verona Water Department, (973) 857-4843, or at tnewton@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.