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, 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.

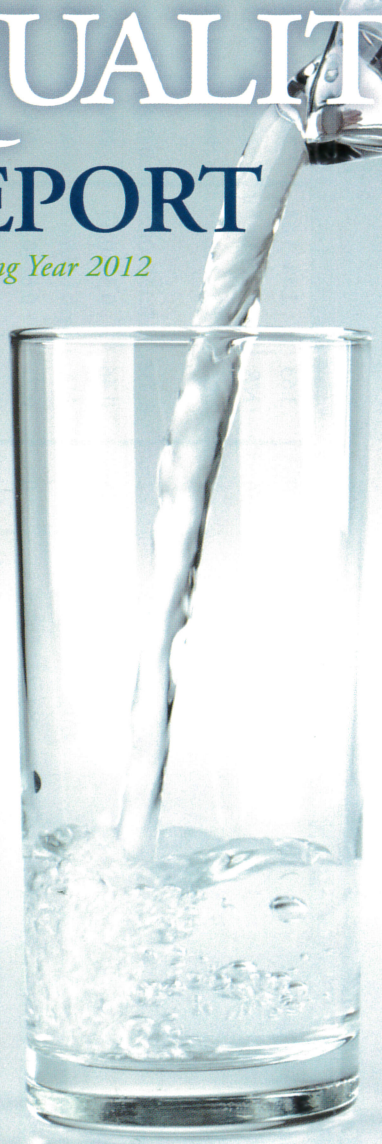
For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Township of Verona
10 Commerce Court
Verona, NJ 07044

Annual

WATER QUALITY REPORT

Reporting Year 2012



Presented By _____

Township of Verona

PWS ID#: 0720001

There When You Need Us

We are once again proud to present our annual water quality report, covering all testing performed between January 1 and December 31, 2012. 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 to assist you, should you ever have any questions or concerns about your water.

Mayor and Council, Township of Verona

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.

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.

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) 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 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, ranging from LOW to HIGH, for eight contaminant categories.

Pathogens	Nutrients	Pesticides	VOC	IOC	Radionucleides	Radon	Disinfection	BP
PVWC	HIGH	HIGH	MED–LOW	MEDIUM	HIGH	LOW	LOW	HIGH
NJDWSC	HIGH	HIGH	MED–LOW	MEDIUM	HIGH	LOW	LOW	HIGH

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 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.

Cryptosporidium Testing

Cryptosporidium is a microbial parasite found in surface water throughout the United States. 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, immuno-compromised people 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 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 Passaic River.

REGULATED SUBSTANCES[1]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	Township of Verona Water Department AMOUNT DETECTED	Township of Verona Water Department RANGE LOW-HIGH	PVWC AMOUNT DETECTED	PVWC RANGE LOW-HIGH	NJDWSC AMOUNT DETECTED	NJDWSC RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2011	15	0	3.63	2.48–3.63	NA	NA	NA	NA	No	Erosion of natural deposits
Antimony (ppb)	2012	6	6	NA	NA	2.21	ND–2.21	NA	NA	No	Discharge from petroleum refineries; Fire retardants; Ceramics; Electronics; Solder
Arsenic (ppb)	2011	5	0	2	2–2	NA	NA	NA	NA	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2011	2	2	0.358	0.176–0.358	0.026[2]	0.016–0.026[2]	0.0063[2]	NA[2]	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2012	[4]	[4]	0.46	0.32–0.59	NA	NA	NA	NA	No	Water additive used to control microbes
Chromium (ppb)	2012	100	100	NA	NA	0.78	ND–0.78	NA	NA	No	Discharge from steel and pulp mills; Erosion of natural deposits
Combined Radium (pCi/L)	2011	5	0	0.71	0.61–0.71	NA	NA	NA	NA	No	Erosion of natural deposits
Fluoride (ppm)	2012	4	4	NA	NA	0.12	0.066–0.12	NA	NA	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA]–Stage 2 DDBP (ppb)	2012	60	NA	24	13–37	NA	NA	NA	NA	No	By-product of drinking water disinfection
Nickel (ppb)	2011	100	NA	3	2–3	3.83[2]	2.49–3.83[2]	NA	NA	No	Pollution from mining and refining operations; Natural occurrence in soil
Nitrate (ppm)	2012	10	10	1.96	1.75–2.16	3.21	1.13–3.21	NA	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	2012	50	50	NA	NA	0.67	ND–0.67	NA	NA	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
TTHMs [Total Trihalomethanes]–Stage 2 DDBP (ppb)	2012	80	NA	44	21–70	NA	NA	NA	NA	No	By-product of drinking water disinfection
Total Organic Carbon (% removal)	2012	TT	NA	NA	NA	55	38–75	40	32–46	No	Naturally present in the environment
Turbidity[3] (NTU)	2012	TT=< 1 NTU	NA	NA	NA	0.25	0.01–0.25	0.27	NA	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2012	TT=95% of samples < 0.3 NTU	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

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2012	1.3	1.3	0.163	0/31	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	RUL	MCLG	Township of Verona Water Department AMOUNT DETECTED	Township of Verona Water Department RANGE LOW-HIGH	PVWC AMOUNT DETECTED	PVWC RANGE LOW-HIGH	NJDWSC AMOUNT DETECTED	NJDWSC RANGE LOW-HIGH	EXCEEDANCE	TYPICAL SOURCE
ABS/L.A.S. (ppm)	2012	500	NA	NA	NA	NA	ND–0.11	NA	NA	No	NA
Aluminum (ppb)	2012	200	NA	NA	NA	NA	13–42	70	NA	No	Erosion of natural deposits; Residual from some surface water treatment processes
Chloride (ppm)	2011	250	NA	240	116–240	NA[2]	66–123[2]	28.2[2]	NA[2]	No	Runoff/leaching from natural deposits
Color (Units)	2012	10	NA	NA	NA	NA	ND–1	3	NA	No	Naturally occurring organic materials
Copper (ppm)	2011	1.0	NA	0.055	ND–0.055	NA	NA	NA	NA	No	Corrosion of household plumbing systems; Erosion of natural deposits
Corrosivity (Units)	2011	Non-corrosive	NA	0.39	-0.27–0.39	Non-corrosive[2]	NA[2]	Non-corrosive[2]	NA[2]	No	Natural or industrially influenced balance of hydrogen, carbon, and oxygen in the water; Affected by temperature and other factors
Hardness[4] **[as CaCO3]** (ppm)	2011	250	NA	392	332–392	NA[2]	118–174[2]	39.7[2]	NA[2]	Yes	Naturally occurring
Iron (ppb)	2012	300	NA	270	270–270	NA	ND–110	228	NA	No	Leaching from natural deposits; Industrial wastes
Manganese (ppb)	2012	50	NA	30	30–30	NA	6–13	2.3	NA	No	Leaching from natural deposits
Odor[5] (TON)	2012	3	NA	NA	NA	5	NA	1	NA	Yes	Naturally occurring organic materials
pH (Units)	2011	6.5–8.5	NA	7.7	6.9–7.7	NA[2]	8.0–8.3[2]	8.16	NA	No	Naturally occurring
Sodium[5,6] (ppm)	2012	50	NA	32	26–38	NA	54–116	16.8	NA	Yes	Naturally occurring
Sulfate (ppm)	2011	250	NA	72	32–72	NA[2]	59–91[2]	6.2[2]	NA[2]	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids (ppm)	2011	500	NA	662	556–767	NA[2]	246–459[2]	137[2]	NA[2]	Yes	Runoff/leaching from natural deposits
Zinc (ppm)	2011	5	NA	0.029	0.021–0.029	NA[2]	0.003–0.025[2]	0.006[2]	NA[2]	No	Runoff/leaching from natural deposits; Industrial wastes

[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 2012.

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

[4] This value represents a source water value, and blending of this water with PVWC water will lower this value at the consumer's tap.

[5] These values represent PVWC water quality, and blending of this water with Verona well water will lower these values at the consumer's tap.

[6] 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.

NJ0003306

Sampling Results

During the past year, we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The table to the left shows only those contaminants that were detected in the water. The state requires us to monitor for certain substances less 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. 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 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.

Definitions

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

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.