

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;

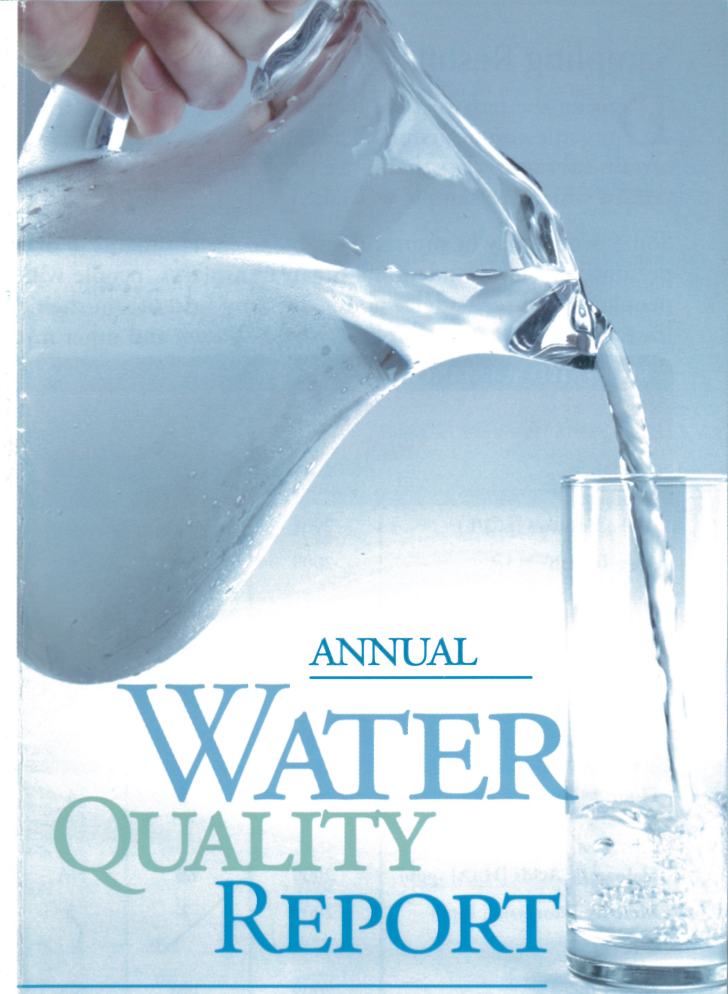
Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

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 QUALITY REPORT

Water testing performed in 2009

Presented By:
TOWNSHIP OF VERONA

PWS ID#: 0720001

Maintaining High Standards

We are proud to present our annual water quality report. This report covers all testing performed between January 1 and December 31, 2009. It is our mission to provide safe, high-quality drinking water to all of our customers. In doing this, we are constantly reviewing our water system to see how and where improvements can be made to better accomplish our goal. We encourage you to share your thoughts with us on the information contained in this report. Should you ever have any questions, we are always available to assist you.

Where Does My Water Come From?

Our water is derived mainly from two water supplies, the Township of Verona groundwater wells and from treated surface water purchased from the Passaic Valley Water Commission (PVWC). Drinking water from PVWC is either produced at the PVWC Little Falls Plant in Totowa, New Jersey, or produced at the North Jersey District Water Supply Commission (NJDWSC), located in Wanaque, New Jersey. Both of these water treatment plants treat, filter, and disinfect the water to produce drinking water that satisfies both state and federal standards. This water is then pumped to the Township of Verona where it enters our water distribution system along with the Verona-produced well water. In addition to these water sources, we have emergency water connections with both Essex Fells and the New Jersey American Water Company. These connections can be activated 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 7:30 PM at Verona Town Hall, 600 Bloomfield Avenue, Verona, NJ.

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

About Our Violation

In March 2009 we were notified of a deficiency in our TTHM and HAA5 monitoring program. From April 2004 to March 2005 our monitoring program should have included three monitoring sites. During that time period our monitoring program consisted of two monitoring sites. As of June 2005, the necessary corrections to our TTHM and HAA5 Monitoring Program were implemented. We do not believe that this monitoring violation had any impact on public health and safety. The TTHM and HAA5 values from the added third monitoring location are very similar to the data of the two existing monitoring sites.

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

Questions?

For more information about this report and other questions regarding your drinking water, please call Tim Newton at the Verona Water Department (973) 857-4844. 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.



Sampling Results

During the past year we have performed hundreds of water sample analyses in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were actually detected in the water during our 2009 water testing. The state allows 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. 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				Township of Verona Water Department		PVWC		NJDWSC		VIOLATION	TYPICAL SOURCE
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	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)	2009	5	0	NA	NA	NA	NA	0.20	0.20-0.20	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	0.02 ²	0.02-0.02 ²	0.01 ²	0.01-0.01 ²	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2009	[4]	[4]	0.32	0.1-1.2	NA	NA	NA	NA	No	Water additive used to control microbes
Chromium (ppb)	2009	100	100	NA	NA	3	ND-3	NA	NA	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	2009	4	4	NA	NA	NA	NA	0.029	0.029-0.029	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] (ppb)	2009	60	NA	7	ND-15	28	4-28	36	31-36	No	By-product of drinking water disinfection
Mercury [inorganic] (ppb)	2009	2	2	NA	NA	NA	NA	0.038	0.038-0.038	No	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland
Nickel (ppb)	2009	100	NA	NA	NA	4	2-4	NA	NA	No	Pollution from mining and refining operations; natural occurrence in soil
Nitrate (ppm)	2009	10	10	1.92	1.86-1.92	2.29	0.65-2.29	0.21	0.21-0.21	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	2009	50	50	NA	NA	4	ND-4	NA	NA	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
TTHMs [Total Trihalomethanes] (ppb)	2009	80	NA	24	11-47	20	5-20	80	53-80	No	By-product of drinking water chlorination
Toluene (ppm)	2009	1	1	NA	NA	0.0002	ND-0.0002	NA	NA	No	Discharge from petroleum factories
Total Coliform Bacteria (# positive samples)	2009	1 positive monthly sample	0	1 ³	NA	NA	NA	NA	NA	No	Naturally present in the environment
Total Organic Carbon (% removal)	2009	TT	NA	NA	NA	66	49-79	35	25-46	No	Naturally present in the environment
Turbidity ⁴ (NTU)	2009	TT=1	NA	NA	NA	0.28	0.28-0.28	0.15	0.15-0.15	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2009	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

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH% TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
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Copper (ppm)	2009	1.3	1.3	0.403	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives				
Lead (ppb)	2009	15	0	4	2/30	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		PVWC		NJDWSC		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Aluminum (ppb)	2009	200	NA	NA	NA	NA	15–22	25	NA	No	Erosion of natural deposits; Residual from some surface water treatment processes
Chloride (ppm)	2008	250	NA	110	87–110	NA	85–141 ²	46 ²	NA	No	Runoff/leaching from natural deposits
Color (Units)	2009	10	NA	NA	NA	NA	NA	2	NA	No	Naturally-occurring organic materials
Copper (ppm)	2009	1.0	NA	NA	NA	NA	ND–0.002	NA	NA	No	Corrosion of household plumbing systems; Erosion of natural deposits
Corrosivity (Units)	2008	Non-corrosive	NA	0.64 ⁵	0.05–0.64 ⁵	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] (ppm)	2008	250	NA	324 ⁶	252–324 ⁶	NA	66–176 ²	59 ²	NA	No	Naturally occurring
Iron (ppb)	2009	300	NA	NA	NA	NA	ND–60	11	NA	No	Leaching from natural deposits; Industrial wastes
Manganese (ppm)	2009	50	NA	NA	NA	NA	0.005–0.02	0.0009	NA	No	Leaching from natural deposits
Sodium (ppm)	2008	50	NA	20	20–20	NA	55–177 ²	25 ²	NA	No	Naturally occurring
Sulfate (ppm)	2008	250	NA	58	23–58	NA	46–97 ²	11 ²	NA	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids (ppm)	2008	500	NA	301	279–301	NA	283–430 ²	131 ²	NA	No	Runoff/leaching from natural deposits
Zinc (ppm)	2009	5	NA	NA	NA	NA	ND–0.016	0.009	NA	No	Runoff/leaching from natural deposits; Industrial wastes
pH (Units)	2008	6.5–8.5	NA	8.0	7.5–8.0	NA	8.0–8.5 ²	8.0 ²	NA	No	Naturally occurring

INITIAL DISTRIBUTION SYSTEM EVALUATION

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Haloacetic Acids [HAA]–IDSE Results (ppb)	2008	19.7	8.4–29.9	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–IDSE Results (ppb)	2008	25.1	8.9–40.4	By-product of drinking water disinfection

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.

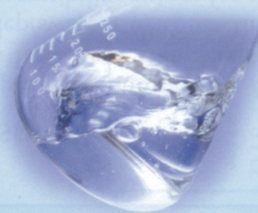
pCi/L (picocuries per liter): A measure of radioactivity.

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

ppm (parts per million): One 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 2009

³ Resampling of this site concluded that this was a site-specific problem and not attributed to the distribution system.

⁴ 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 (no sample may exceed 1 NTU).

⁵ Negative values represent corrosive; positive values represent non-corrosive.

⁶ These values represent the hardness level at each specific well.

⁷ We were required by the U.S. EPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE) and is intended to identify locations in our distribution system that have elevated disinfection by-product concentrations. Disinfection by-products (e.g., HAAs and TTHMs) result from continuous disinfection of drinking water and form when disinfectants combine with organic matter that naturally occurs in the source water.