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 Mondays of each month beginning at 7:00 p.m. at Verona Town Hall, 600 Bloomfield Avenue, Verona, NJ.

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 2011

Presented By
Township of Verona

PWS ID#: 0720001

Meeting the Challenge

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2011. 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 share with us your thoughts or concerns about the information in this report. After all, well-informed customers are our best allies.

Mayor and Council, Township of Verona

LT2 Rule

The U.S. EPA has created the Long-Term 2 Enhanced Surface Water Treatment Rule (LT2) for the sole purpose of reducing illness linked with the contaminant *Cryptosporidium* and other disease-causing microorganisms in drinking water. The rule will bolster existing regulations and provide a higher level of protection of your drinking water supply.

Passaic Valley Water Commission sampling of their water source has shown the following:

- *Cryptosporidium*: (0 - 0.2 Oocysts/L)
- *Giardia lamblia*: (0 - 0.9 Oocysts/L)
- *E. coli*: (16.1 - >2419.6 CFU/100mL)

It is important to note that these results are from their raw water source only and not from the treated drinking water supplied to Verona. For more information, contact the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

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 Pompton 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.

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 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, 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.

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 or at www.epa.gov/safewater/lead.

Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains.

Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen, disinfectant levels, and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use and avoid using hot water, to prevent sediment accumulation in your hot water tank.

Please contact us if you have any questions or if you would like more information on our water main flushing schedule.

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	Passaic Valley Water Commission (PVWC): AMOUNT DETECTED	Passaic Valley Water Commission (PVWC): RANGE LOW-HIGH	North Jersey District Water Supply Commission (NJDWSC): AMOUNT DETECTED	North Jersey District Water Supply Commission (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
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	0.023	0.013–0.023	0.011	0.011–0.011	No	Discharge of drilling wastes; Discharge from metal refineries; 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)	2011	4	4	NA	NA	0.34	0.08–0.34	NA	NA	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs] (ppb)	2011	60	NA	21.5	ND–21.5	10	4–10	42	24–42	No	By-product of drinking water disinfection
Nickel (ppb)	2011	100	NA	3	2–3	2.9	2.0–2.9	NA	NA	No	Pollution from mining and refining operations; Natural occurrence in soil
Nitrate (ppm)	2011	10	10	1.99	1.64–1.99	2.56	0.52–2.56	0.26	0.26–0.26	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	2011	50	50	NA	NA	0.65	ND–0.65	NA	NA	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
TTHMs [Total Trihalomethanes] (ppb)	2011	80	NA	61.67	20.57–61.67	18	4–18	94	36–94	No	By-product of drinking water disinfection
Total Organic Carbon (% removal)	2011	TT	NA	NA	NA	53	42–92	30	30–52	No	Naturally present in the environment
Turbidity[2] (NTU)	2011	TT	NA	NA	NA	0.39	0.05–0.39	0.44	0.06–0.44	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2011	TT	NA	NA	NA	99.9	NA	99.9	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)	2011	1.3	1.3	0.293	0/60	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2011	15	0	4	3/60	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	Passaic Valley Water Commission (PVWC): AMOUNT DETECTED	Passaic Valley Water Commission (PVWC): RANGE LOW-HIGH	North Jersey District Water Supply Commission (NJDWSC): AMOUNT DETECTED	North Jersey District Water Supply Commission (NJDWSC): RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Aluminum (ppb)	2011	200	NA	NA	NA	27	10–27	31	31–31	No	Erosion of natural deposits; Residual from some surface water treatment processes
Chloride (ppm)	2011	250	NA	240	116–240	186	49–186	52	52–52	No	Runoff/leaching from natural deposits
Color (Units)	2011	10	NA	NA	NA	1	ND–1	3	3–3	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	Noncorrosive	NA	0.39	-0.27–0.39	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 CaCO3][3] (ppm)	2011	250	NA	392	332–392	118	74–118	65	65–65	No	Naturally occurring
Iron (ppb)	2011	300	NA	NA	NA	NA	NA	23	23–23	No	Leaching from natural deposits; Industrial wastes
Manganese (ppb)	2011	50	NA	9	ND–9	9	2–9	3	3–3	No	Leaching from natural deposits
Odor (TON)	2011	3	NA	NA	NA	5	4–5	1	1–1	No	Naturally occurring organic materials
pH (Units)	2011	6.5–8.5	NA	7.7	6.9–7.7	8.3	8.1–8.3	7.7	7.7–7.7	No	Naturally occurring
Sodium[4] (ppm)	2011	50	NA	36.4	20.1–54	187	42–187	28	28–28	No	Naturally occurring
Sulfate (ppm)	2011	250	NA	72	32–72	81	41–81	20	20–20	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids (ppm)	2011	500	NA	662[5]	556–767[5]	461	182–461	142	142–142	No	Runoff/leaching from natural deposits
Zinc (ppm)	2011	5	NA	0.029	0.021–0.029	0.0064	0.0018–0.0064	0.005	0.005–0.005	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] 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% or more of the monthly samples must be less than or equal to 0.3 NTU (and that no sample may exceed 1 NTU).

[3] These are hardness values at the specific well locations. Distribution system water hardness is lower due to daily water blending with purchased water from the Passaic Valley Water Commission.

[4] 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.

[5] These values reflect the TDS at the specific well locations. Actual water distribution TDS values are lower due to daily water blending with water supplied by the Passaic Valley Water Commission.

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Sampling Results

Water samples are regularly collected from both the well production locations and throughout the water system in Verona. We tested for many types of contaminants throughout the year, but only those contaminants that were found to be present in the water are listed here. 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. 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.

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.

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.

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.