

# Annual Drinking Water Quality Report

## North Caldwell Hilltop System

**For the Year 2011, Results from the Year 2010**

We are pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water.

This water is supplied by the Township of Verona via the 0.20 million gallon water storage tank located on the Hilltop property, which is solely comprised of water purchased from the Passaic Valley Water Commission (PVWC) and the North Jersey District Water Supply Commission (NJDWSC). The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment Report and Summary for these public water systems, which are available at [WWW.state.nj.us/dep/swap](http://WWW.state.nj.us/dep/swap) or by contacting NJDEP's Bureau of Safe Drinking Water at (609) 292-5550. You may also contact your public water system to obtain information regarding these Source Water Assessments.

**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 can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).**

We have learned through our monitoring and testing that some contaminants have been detected. The tables show the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2010.

Hilltop Water System 2010 Test Results						
Contaminant	Violati on Y/N	Level Detected	Units of Measur em ent	MCL G	MCL	Likely Source of Contamination
<b>Volatile Organic Contaminants / Disinfection Byproducts</b>						
Copper Test results yr. 2010	N	ND No samples exceeded the action level	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead Test results Yr. 2010	N	1.7 No samples exceeded the action level	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
<b>Regulated Disinfectants</b>		<b>Level Detected</b>		<b>MRDL</b>		<b>MRDLG</b>
Chlorine		Average = 0.2		4.0 ppm		4.0 ppm

Passaic Valley Water Commission 2010 Test Results						
Contaminant	Violati on Y/N	Level Detected	Units of Measur em ent	MCLG	MCL	Likely Source of Contamination
<b>Microbiological Contaminants</b>						
Turbidity	N	Highest Measurement = 0.26 Range = 0.14 - 0.26 100% samples < 0.3	NTU	0	TT = % of monthly samples < 0.3 NTU	Soil runoff
Total Organic Carbon (%)	N	60 % (25-45% required) Range = 47 - 78%		NA	TT = % removal	Naturally present in the environment
<b>Inorganic Contaminants:</b>						
Nitrate (as Nitrogen)	N	Range = 0.9 - 2.3 Highest detect = 2.3	Ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Barium	N	Range = 0.009 - 0.028 Highest detect = 0.028	Ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium	N	Range = ND - 2 Highest detect = 2	Ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Nitrate (as Nitrogen)	N	Range = 0.54 - 3.63 Highest detect = 3.63	Ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Volatile Organic Contaminants / Disinfection Byproducts</b>						
TTHM Total Trihalomethanes	N	Range = 4 - 19	Ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids	N	Range = 3 - 7	Ppb	N/A	60	By-product of drinking water disinfection
<b>Secondary Contaminant</b>		<b>Level Detected</b>		<b>Units of Measurement</b>		<b>RUL</b>
Sodium		Range = 23 - 136		Ppm		50

The Passaic Valley Water Commission (PVWC) exceeded the Recommended Upper Limit for Sodium. For healthy individuals the sodium intake from water is not important, because a much greater of sodium takes place from salt in the diet. However sodium levels above the Recommended Upper Limit (RUL) may be of concern to individuals on a sodium restricted diet.

The PVWC incurred a monthly total Coliform Bacteria MCL violation in July 2010. Public Notification was completed within 30 days as required. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems. Subsequent testing for coliform bacteria was conducted and no additional coliform bacteria were found to be present.

North Jersey District Water Supply Commission (NJDWSC) 2010 Test Results						
Contaminant	Violati on Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source of Contamination
<b>Microbiological Contaminants</b>						
Turbidity	N	0.52 Highest Measurement 100 % < 0.3	NTU	0	TT 0.3 NTU % Of the NTU	Soil runoff
Total Organic Carbon (%)	N	40% (35% required) (Range 17 - 45%)		NA	TT = % removal	Naturally present in the environment
<b>Inorganic Contaminants:</b>						
Barium	N	0.009	Ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Arsenic	N	0.28	Ppb	n/a	5	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Nitrate (as Nitrogen)	N	0.2	Ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Volatile Organic Contaminants / Disinfection Byproducts</b>						
TTHM Total Trihalomethanes	N	Range = 26 - 66	Ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids	N	Range = 13 - 35	Ppb	N/A	60	By-product of drinking water disinfection

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

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. 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 contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

**Lead:** 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 Essex Fells Water Utility, the Passaic Valley Water Commission and the North Jersey District Water Supply Commission are responsible for providing high quality drinking water, but can not 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 second to 2 minutes before using water for drinking and 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 <http://www.epa.gov/safewater/lead>.

## **DEFINITIONS:**

In the following table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

**Non-Detects (ND)** - laboratory analysis indicates that the contaminant.

**Parts per million (ppm)** or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

**Parts per billion (ppb)** or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

**Picocuries per liter (pCi/L)** - picocuries per liter is a measure of the radioactivity in water.

**Millirems per year (mrem/yr)** - measure of radiation absorbed by the body.

**Nephelometric Turbidity Unit (NTU)** - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**Organic Compounds** - Chemicals associated with carbon or living matter.

**Action Level** - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**Treatment Technique (TT)** - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

**Maximum Contaminant Level** - The "Maximum Allowed" (MCL) is 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.

**Maximum Contaminant Level Goal** -The "Goal"(MCLG) is 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.

**Secondary Contaminant**- Substances that do not have an impact on health. Secondary Contaminants affect aesthetic qualities such as odor, taste or appearance. Secondary standards are recommendations, not mandates.

**Recommended Upper Limit (RUL)** – Recommended maximum concentration of secondary contaminants. These reflect aesthetic qualities such as odor, taste or appearance. RUL's are recommendations, not mandates.

**Maximum Residual Disinfectant Level (MRDL)**: 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.

**Maximum Residual Disinfectant Goal (MRDLG)**: 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 contamination

### **Special considerations regarding children, pregnant women, nursing mothers, and others:**

Children may receive a slightly higher amount of a contaminant present in the water than do adults, on a body weight basis, because they may drink a greater amount of water per pound of body weight than do adults. For this reason, reproductive or developmental effects are used for calculating a drinking water standard if these effects occur at lower levels than other health effects of concern. If there is insufficient toxicity information for a chemical (for example, lack of data on reproductive or developmental effects), an extra uncertainty factor may be incorporated into the calculation of the drinking water standard, thus making the standard more stringent, to account for additional uncertainties regarding these effects. In the cases of lead and nitrate, effects on infants and children are the health endpoints upon which the standards are based.

**Cryptosporidium** is a microbial pathogen found in surface water throughout the United States. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100% removal. Our monitoring indicates the presence of these organisms in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at a 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.

**For additional information:** If you have any questions about this report or concerning your water utility, please contact Frank Zichelli at 973-228-6414 x107. If you want to learn more, please attend any of our regularly scheduled Borough Council meetings at Borough Hall on Gould Avenue. Meetings are generally held on the second and fourth Tuesday of each month at 7:30 p.m.