Annual Drinking Water Quality Report

North Caldwell Hilltop System

For the Year 2022, Results from the Year 2021

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.

If you are a landlord, you must distribute this Drinking Water Quality Report to every tenant as soon as practicable, but no later than three business days after receipt. Delivery must be done by hand, mail, or email, and by posting the information in a prominent location at the entrance of each rental premises, pursuant to section #3 of NJ P.L. 2021, c.82 (C.58:12A-12.4 et seq.).

This water is supplied by the Township of Verona via a two 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 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. These Assessments are included in this report.

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. As you can see by the tables, we had no violations. We are proud that your drinking water meets or exceeds all Federal and State safety requirements. The tables show the results of our monitoring for the period of January 1st to December 31st, 2021. The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

North Caldwell Hilltop Water System 2021 Test Results
PWS ID #NJ0715002

Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants:						
Copper Result at 90th Percentile Test results Yr. 2020	N	0.12 No samples exceeded the action level	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead Result at 90th Percentile Test results Yr. 2020	N	ND No samples exceeded the action level	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Disinfection Byproducts:						
TTHM Total Trihalomethanes	N	Range = 45 - 69 Highest LRAA = 61	ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids	N	Range = 5 - 24 Highest LRAA = 22	ppb	N/A	60	By-product of drinking water disinfection

Regulated Disinfectants	Level Detected	MRDL	MRDLG
Chlorine: water additive used to control microbes.	Range = 0.2 – 0.3 ppm Average = 0.2 ppm	4.0 ppm	4.0 ppm

Essex Fells Hilltop Water System 2021 Test Results PWS ID #NJ0706002

Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source of Contamination
Disinfection Byproducts:						
TTHM Total Trihalomethanes	N	Range = 45 - 80 Highest LRAA = 65	ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids	N	Range = 30 - 57 Highest LRAA = 44	ppb	N/A	60	By-product of drinking water disinfection

Regulated Disinfectants	Level Detected	MRDL	MRDLG
Chlorine: water additive used to control microbes	Range = 0.5 – 1.3 ppm Average = 0.9 ppm	4.0 ppm	4.0 ppm

For Total Halocetic Acids (HAA5s) and Total Trihalomethanes (TTHMs), which are disinfection byproducts, compliance is based on a Locational Running Annual Average (LRAA), calculated at each monitoring location. The LRAA calculation is based on four completed quarters of monitoring results.

CRYPTOSPORIDIUM

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 percent 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 viable or 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 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 spread through means other than drinking water. Passaic Valley Water Commission (PVWC) conducted special source water *Cryptosporidium* and *Giardia* monitoring in 2020.

SOURCE WATER PATHOGEN MONITORING

Contaminant	PVWC Plant Intake	Typical Source
Cryptosporidium, Oocysts/L	Range = 0.0 – 0.09	Microbial pathogens found in surface waters throughout the United States.
Giardia, Cysts/L	Range = 0.0 – 0.83	

Passaic Valley Water Commission (PVWC) is a major supplier of drinking water in Northern New Jersey. PVWC's main facility is the Little Falls Water Treatment Plant located in Totowa, NJ. Water diverted from the Passaic and Pompton Rivers is treated, filtered and disinfected at the plant. Treated water is then mixed with treated water from the North Jersey District Water Supply Commission's Wanaque Reservoir treatment plant.

North Jersey District Water Supply Commission (NJDWSC) 2021 Test Results PWS ID #NJ1613001

Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants						
Turbidity	N	Highest Measurement 0.5 Range = 0.01 – 0.5 99.99 % < 0.3	NTU	0	TT 0.3 NTU % 0f the NTU	Soil runoff
Total Organic Carbon (%)	N	Removal Ratio 0.9 – 1.4 RAA = 1.1	%	NA	TT = % removal	Naturally present in the environment
Inorganic Contaminants:						
Barium	N	0.0095	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Nitrate (as Nitrogen)	N	0.26	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Passaic Valley Water Commission 2021 Test Results PWS ID# NJ1605002

Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants:						
Turbidity	N	Highest Measurement = 0.275 Range = 0.029 – 0.275 100 % samples < 0.3	NTU	0	TT = % of monthly samples <0.3 NTU	Soil runoff
Total Organic Carbon (%)	N	Range = 51 - 82 100 % (25 – 50 % required)		NA	TT = % removal	Naturally present in the environment
Inorganic Contaminants:						
Barium	N	Range = 0.014 – 0.023 Highest detect = 0.023	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Nitrate (as Nitrogen)	N	Range = 0.51 – 1.68 Highest detect = 1.68	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nickel	N	Range = 1.48 – 2.80 Highest detect = 2.80	ppb	N/A	N/A	Erosion of natural deposits
Disinfection Byproducts:						
Bromate	N	Range = ND – 16.7 Highest detect = 16.7 Highest RAA = 0.94	ppb	N/A	10	By-product of drinking water disinfection
PFAS Per- and Polyfluoroalkyl Substances:						
PFOA Perfluorooctane Acid	N	Range = 5.5 – 11.0 Highest detect = 11.0 Highest Average = 7.9	ppt	N/A	14	Used in the manufacture of fluoropolymers
PFOS Perfluorooctane Sulfonic Acid	N	Range = 3.4 – 6.6 Highest detect = 6.6 Highest Average = 4.9	ppt	N/A	13	Used in the manufacture of fluoropolymers

Secondary Contaminant	Level Detected	Units of Measurement	RUL
Sodium	Range = 42 - 97	ppm	50

The Passaic Valley Water Commission exceeded the Recommended Upper Limit for sodium. 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 (RUL) may be of concern to individuals on a sodium restricted diet.

Sources of Lead in Drinking Water

The North Caldwell Hilltop System, the Passaic Valley Water Commission and the North Jersey District Water Supply Commission are responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. Although most lead exposure occurs from inhaling dust or from contaminated soil, or when children eat paint chips, the U.S. Environmental Protection Agency (USEPA) estimates that 10 to 20 percent of human exposure to lead may come from lead in drinking water. Infants who consume mostly mixed formula can receive 40 percent to 60 percent of their exposure to lead from drinking water. Lead is rarely found in the source of your drinking water but enters tap water through corrosion, or wearing away, of materials containing lead in the water distribution system and household plumbing materials. These materials include lead-based solder used to join copper pipes, brass, and chrome-brass faucets, and in some cases, service lines made of or lined with lead. New brass faucets, fittings, and valves, including those advertised as "lead-free", may still contain a small percentage of lead, and contribute lead to drinking water. The law currently allows end-use brass fixtures, such as faucets, with up to 0.25 percent lead to be labeled as "lead free". However, prior to January 4, 2014, "lead free" allowed up to 8 percent lead content of the wetted surfaces of plumbing products including those labeled National Sanitation Foundation (NSF) certified. Visit the NSF website at www.nsf.org to learn more about lead-containing plumbing fixtures. Consumers should be aware of this when choosing fixtures and take appropriate precautions. When water stands in lead service lines, lead pipes, or plumbing systems containing lead for several hours or more, the lead may dissolve into your drinking water. This means the first water drawn from the tap in the morning, or later in the afternoon if the water has not been used all day, can contain fairly high levels of lead.

Steps You Can Take to Reduce Exposure to Lead in Drinking Water

For a full list of steps visit: https://www.state.nj.us/dep/watersupply/dwc-lead-consumer.html

Run the cold water to flush out lead. Let the water run from the tap before using it for drinking or cooking any time the water in the faucet has gone unused for more than six hours. The longer the water resides in plumbing the more lead it may contain. Flushing the tap means running the cold-water faucet. Let the water run from the cold-water tap based on the length of the lead service line and the plumbing configuration in your home. In other words, the larger the home or building and the greater the distance to the water main (in the street), the more water it will take to flush properly. Although toilet flushing or showering flushes water through a portion of the plumbing system, you still need to flush the water in each faucet before using it for drinking or cooking. Flushing tap water is a simple and inexpensive measure you can take to protect your health. It usually uses less than one gallon of water.

Use cold, flushed water for cooking and preparing baby formula. Because lead from lead-containing plumbing materials and pipes can dissolve into hot water more easily than cold water, never drink, cook, or prepare beverages including baby formula using hot water from the tap. If you have not had your water sampled or if you know, it is recommended that bottled or filtered water be used for drinking and preparing baby formula. If you need hot water, draw water from the cold tap and then heat it.

Do not boil water to remove lead. Boiling water will not reduce lead; however, it is still safe to wash dishes and do laundry. Lead will not soak into dishware or most clothes.

Use alternative sources or treatment of water. You may want to consider purchasing bottled water or a water filter. Read the package to be sure the filter is approved to reduce lead or contact NSF International at 800-NSF-8010 or www.nsf.org for information on performance standards for water filters.

Determine if you have interior lead plumbing or solder. If your home/building was constructed prior to 1987, it is important to determine if interior lead solder or lead pipes are present. You can check yourself, hire a licensed plumber, or check with your landlord.

Replace plumbing fixtures and service lines containing lead. Replace brass faucets, fittings, and valves that do not meet the current definition of "lead free" from 2014 (as explained above). Visit the NSF website at www.nsf.org to learn more about lead-containing plumbing fixtures.

Remove and clean aerators/screens on plumbing fixtures. Over time, particles and sediment can collect in the aerator screen. Regularly remove and clean aerators screens located at the tip of faucets and remove any particles.

Test your water for lead. Please call 973-228-6414 to find out how to get your water tested for lead. Testing is essential because you cannot see, taste, or smell lead in drinking water**.**

Get your child tested. Contact your local health department or healthcare provider to find out how you can get your child tested for lead if you are concerned about lead exposure. New Jersey law requires that children be tested for lead in their blood at both 1 and 2 years of age and before they are 6 years old if they have never been tested before or if they have been exposed to a known source of lead.

Have an electrician check your wiring. If grounding wires from the electrical system are attached to your pipes, corrosion may be greater. Check with a licensed electrician or your local electrical code to determine if your wiring can be grounded elsewhere. DO NOT attempt to change the wiring yourself because improper grounding can cause electrical shock and fire hazards.

Water softeners and reverse osmosis units will remove lead from water but can also make the water more corrosive to lead solder and plumbing by removing certain minerals; therefore, the installation of these treatment units at the point of entry into homes with lead plumbing should only be done under supervision of a qualified water treatment professional.

Health Effects of Lead

Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones, and it can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development. Contact your local health department or healthcare provider to find out how you can get your child tested for lead if you are concerned about lead exposure. You can find out more about how to get your child tested and how to pay for it at https://www.state.nj.us/health/childhoodlead/testing.shtml.

In July 2021, P.L.2021, Ch.183 (Law) was enacted, requiring all community water systems to replace lead service lines in their service area within 10 years. Under the law, the North Caldwell Hilltop System is required to notify customers, non-paying consumers, and any off-site owner of a property (e.g., landlord) when it is known they are served by a lead service line*. Our service line inventory is available upon request.

What are PFOA and PFOS?
Perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) are per- and polyfluoroalkyl substances (PFAS), previously referred to as perfluorinated compounds, or PFCs, that are man-made and used in industrial and commercial applications. PFOA was used as a processing aid in the manufacture of fluoropolymers used in non-stick cookware and other products, as well as other commercial and industrial uses based on its resistance to harsh chemicals and high temperatures. PFOS is used in metal plating and finishing as well as in various commercial products. PFOS was previously used as a major ingredient in aqueous film forming foams for firefighting and training, and PFOA and PFOS are found in consumer products such as stain resistant coatings for upholstery and carpets, water resistant outdoor clothing, and grease proof food packaging. Although the use of PFOA and PFOS has decreased substantially, contamination is expected to continue indefinitely because these substances are extremely persistent in the environment and are soluble and mobile in water. More information can be found at:
https://www.state.nj.us/dep/wms/bears/docs/2019-4-15-FAQs_PFOS-PFOA-websites-OLA%204-24-19SDM-(003).pdf

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.

SOURCE WATER ASSESSMENT
NJDEP has prepared Source Water Assessment reports and summaries for all public water systems. The Source Water Assessment for the PVWC system (PWS ID 1605002), and NJDWSC system (PWS ID 1613001) can be obtained by accessing NJDEP's source water assessment web site at http://www.nj.gov/dep/watersupply/swap/index.html or by contacting NJDEP's Bureau of Safe Drinking Water at 609-292-5550. If a system is rated highly susceptible for a contamination category, it does not mean a customer is – or will be – consuming contaminated water. The rating reflects the potential for contamination of a source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any of those contaminants are detected at frequencies and concentrations above allowable levels. The source water assessments performed on the intakes for each system list the following susceptibility ratings for a variety of contaminants that may be present in source waters:

Intake Susceptibility Ratings	Pathogens	Nutrients	Pesticides	Volatile Organic Compounds	Inorganic Contaminants	Radionuclides	Radon	Disinfection Byproduct Precursors
PVWC 4 Surface Water	4-High	4-High	1-Medium 3-Low	4-Medium	4-High	4-Low	4-Low	4-High
NJDWSC 5 Surface Water	5-High	5-High	2-Medium 3-Low	5-Medium	5-High	5-Low	5-Low	5-High

Pathogens: Disease-causing organisms such as bacteria and viruses. Common sources are animal and human fecal wastes.

Nutrients: Compounds, minerals and elements that aid growth, that are both naturally occurring and man-made. Examples include nitrogen and phosphorus.

Volatile Organic Compounds: Man-made chemicals used as solvents, degreasers, and gasoline components. Examples include benzene, methyl tertiary butyl ether (MTBE), and vinyl chloride.

Pesticides: Man-made chemicals used to control pests, weeds and fungus. Common sources include land application and manufacturing centers of pesticides. Examples include herbicides such as atrazine, and insecticides such as chlordane.

Inorganics: Mineral-based compounds that are both naturally occurring and man-made. Examples include arsenic, asbestos, copper, lead, and nitrate.

Radionuclides: Radioactive substances that are both naturally occurring and man-made. Examples include radium and uranium.

Radon: Colorless, odorless, cancer-causing gas that occurs naturally in the environment. For more information go to http://www.nj.gov/dep/rpp/radon/index.htm or call (800) 648-0394.

Disinfection Byproduct Precursors: A common source is naturally occurring organic matter in surface water. Disinfection byproducts are formed when the disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (for example leaves) present in surface water.

DEFINITIONS:

In the "Test Results" tables 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.
Parts per trillion (ppt) or nanogram per liter - one part per trillion corresponds to one minute in 20,000 years, or a single penny in $100,000,000
Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.
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 Level 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
Total Organic Carbon (TOC) - We are required to remove a certain percentage of (TOC) from our drinking water on a monthly basis. Total Organic Carbon has no adverse health effects. However, TOC provides a medium for the formation of disinfection byproducts.
Turbidity – A measure of the particulate matter or "cloudiness" of the water. High turbidity can hinder the effectiveness of disinfectants.

Consumer Confidence Report:

Public community water systems must comply with the Consumer Confidence Rule, which requires community water systems to prepare a Consumer Confidence Report (CCR) annually containing the previous year's drinking water monitoring data, and post to both their residents and New Jersey Department of Environmental Protection (NJDEP) by July 1st and CCR Certification Form to NJDEP by October 1st of each year. For the Year 2021 we inadvertently submitted this water system's CCR late to NJDEP.

For additional information: If you have any questions about this report or concerning your water utility, please call Michael Grasso at 973-228-6414. If you want to learn more, please attend any of our regularly scheduled Borough Council meetings at Borough Hall on Gould Avenue. Meetings are held on the third Tuesday of each month at 8:00 p.m.