

North Castle Water District No.4

Annual Water Supply Report for 2021

Public Water Supply Id # 5922909

Introduction

To comply with State and Federal regulations, the Town of North Castle Water District No.4 is issuing an annual report describing the quality of your drinking water. The purpose of the report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. This report provides an overview of last year's water quality. Included are details of where your water comes from, what it contains, and how it compares to State standards. Last year, we tested your tap water for 100's of contaminants and only found 1 of those contaminants at a higher level than the state allows. As we told you at the time our water temporarily exceeded a drinking water standard and we are in the process of rectifying the situation. We have retained a consultant who has proposed a method of treatment and submitted a report to the County Health Department. Once conceptually approved, we will proceed with design and implementation. This report provides an overview of last year's water quality. Included are details of where your water comes from, what it contains, and how it compares to State standards.

Where does my water come from?

All water consumed in North Castle Water District No.4 was pumped from a combination of six (6) wells. Two are located within the Town Park on the former IBM property, two are located within the Whippoorwill Ridge subdivision, and two are located on School Street. The water supply at each source is chlorinated, the supply at the School Street location is also filtered for iron removal and the town park wells receive treatment for manganese removal prior to system distribution. Water District No. 4 serves approximately 1225 people through 459 service connections. Also, Water District No. 4 sells water to North Castle Water District No. 5 which serves 350 people through 117 service connections.

The NYS DOH has completed a source water assessment for this system, based on available information. Possible and actual threats to this drinking water source were evaluated. The state source water assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how easily contaminants can move through the subsurface to the wells. The susceptibility rating is an estimate of the potential for contamination of the source water, it does not mean that the water delivered to consumers is, or will become contaminated. See section "Are there contaminants in our drinking water?" for a list of the contaminants that have been detected, if any. The source water assessments provide resource managers with additional information for protecting source waters into the future.

As mentioned before, our water is derived from 6 wells. The source water assessment has rated these wells as having a medium-high to high susceptibility to microbial contamination, a high susceptibility to nitrates, and a medium-high susceptibility to pesticides, industrial solvents, and other industrial contaminants. These ratings are due primarily to the close proximity of permitted discharge facilities (industrial/commercial facilities that discharge wastewater into the environment and are regulated by the state and/or federal government) to all of the wells. A hazardous waste site within the assessment area of all wells, and due to low intensity residential activities in the assessment areas, such as fertilizing lawns. In addition, both whippoorwill ridge wells draw from fractured bedrock and the overlying soils are not known to provide adequate protection from potential contamination, both IBM wells draw greater than 100 gallons per minute (gpm) from an unconfined aquifer. One School St. well (#1C) draws from an unconfined aquifer of unknown hydraulic conductivity and the other School St. well (#1A) draws greater than 100 gpm from an unconfined aquifer. While the source water assessment rates our wells as being susceptible to microbials, please note that our water is disinfected to ensure that the finished water delivered into your home meets New York State's drinking water standards for microbial contamination. A copy of the assessment, including a map of the assessment area, can be obtained by contacting us, as noted below.

EDUCATIONAL INFORMATION

The safe drinking water act requires that the following information be included in this notice.

Are there contaminants in my drinking water?

In general, 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 can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations, which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's 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 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 (800-426-4791).

Water Quality Data Table

North Castle Water District No.4 is required by the State Sanitary Code, Subpart 5-1, to monitor raw water and treated water quality by collecting and analyzing samples for various contaminants. Raw water samples are collected annually for organic and inorganic contaminants. Treated water is also sampled annually for inorganic contaminants.

The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead & copper, volatile organic compounds, total trihalomethanes, and synthetic organic compounds. Although the samples illustrated are only a few of the many constituents we have sampled for, some of which have had detects. The EPA has determined that your drinking water is safe at these levels.

Table of Detected Contaminants							
Contaminant	Violation Yes/No	Date of Sample	Level Detected (Maximum Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination
Disinfection Byproducts							
Total Trihalomethanes ³ (TTHMs chloroform bromodichloromethane dibromodichloromethane & bromoform)	No	7/23/21	14.84 ⁵ 7.458 – 14.84	µg/l	N/A	MCL=80	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
Haloacetic Acids ³ (mono-,di-,& trichloroacetic acid,& mono-&di-bromoacetic acid)	No	7/23/21	5.6 ⁵ 3.94-5.6	µg/l	N/A	MCL = 60	By-product of drinking water chlorination needed to kill harmful organisms
Table of Detected Contaminants							
Contaminant	Violation Yes/No	Date of Sample	Level Detected (Maximum Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination
Radiological Contaminants							
Gross alpha activity including radium – 226 but excluding radon and uranium)	No	7/14/16	0.65- 6.74 ⁴	pCi/L	0	MCL=15	Erosion of natural deposits
Combined radium - 226 and 228	No	7/14/16	0.78- 1.25 ⁴	pCi/L	0	MCL=5	Erosion of natural deposits
Gross Beta Activity	No	7/14/16	5.75 – 7.73	pCi/L	0	MCL=50*	Decay of Natural deposits
Uranium	No	7/14/16	1.3 – 8.9 ⁴	µg/l	0	MCL=30	Erosion of natural deposits
Inorganic Contaminants							
Barium	No	8/3/2021	0.333 (0.170- 0.333)	Mg/l	2	MCL=2	Discharge of drilling wastes, discharge from metal refineries; erosion of natural deposits
Chloride	No	8/3/2021	193 (159- 193)	Mg/l	N/a	MCL=250	Naturally occurring or indicative of road salt contamination
Cyanide	No	8/3/2021	0.007 (ND-0.007)	Mg/l	0.2	MCL=0.2	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories
Iron	No	8/3/2021	86.2 (<mrl-86.2)	µg/l	N/a	MCL=300	Naturally occurring
Nickel	No	8/3/2021	2.4 (2.4 – 2.4)	µg/l	N/a	N/a	Discharge from metal refining and chemical production

Nitrate	No	8/3/2021	1.54 (0.129-1.54)	Mg/l	10	MCL=10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Manganese	No	Qrtly ⁶	322 (<mrl – 322)	µg/l	N/a	MCL=300Ug/l	Naturally occurring
Perfluorooctanoic acid (PFOA)	Yes	Qrtly ⁷	12 ⁸	ng/l	10	n/a	Released into the environment from widespread use in commercial and industrial applications
Perfluorooctane sulfonic acid (PFOS)	No	Qrtly ⁷	9.83	ng/l	10	n/a	Released into the environment from widespread use in commercial and industrial applications
Perfluorobutanoic Acid (PFBA)	No	Qrtly ⁷	4.77	ng/l	n/a	n/a	Released into the environment from widespread use in commercial and industrial applications
Perfluoropentanoic Acid (PFPeA)	No	Qrtly ⁷	7.3	ng/l	n/a	n/a	
Perfluorobutanesulfonic Acid (PFBS)	No	Qrtly ⁷	3.7	ng/l	n/a	n/a	
Perfluorohexanoic Acid (PFHxA)	No	Qrtly ⁷	6.94	ng/l	n/a	n/a	
Perfluoropentanesulfonic Acid (PFPeS)	No	Qrtly ⁷	1.1	ng/l	n/a	n/a	
Perfluoroheptanoic Acid (PFHpA)	No	Qrtly ⁷	3.64	ng/l	n/a	n/a	
Perfluorohexanesulfonic Acid (PFHxS)	No	Qrtly ⁷	10.8	ng/l	n/a	n/a	
Perfluorononanoic Acid (PFNA)	No	Qrtly ⁷	1.13	ng/l	n/a	n/a	
9,Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	No	Qrtly ⁷	1.09	ng/l	n/a	n/a	
Perfluoroundecanoic Acid (PFUnA)	No	Qrtly ⁷	0.642	ng/l	n/a	n/a	
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	No	Qrtly ⁷	0.868	ng/l	n/a	n/a	Released into the environment from widespread use in commercial and industrial applications
Perfluorododecanoic Acid (PFDoA)	No	Qrtly ⁷	0.755	ng/l	n/a	n/a	
Sulfate	No	8/3/2021	32.5 (27.7-32.5)	Mg/l	N/a	MCL=250	Naturally occurring
Sodium	No	8/3/2021	66.9 (39.1 – 66.9)	Mg/l	N/a	Water containing more than 20mg/l should not be used by people with severely restricted sodium diets. Water containing more than 270mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.	Naturally occurring; Road Salt; Water softeners; Animal waste
Zinc	No	8/3/2021	0.0069 (Nd - 0.0069)	Mg/l	N/a	MCL=5	Naturally occurring; mining waste
LEAD & COPPER							
Copper	No	6/1- 9/30/21	.533 ¹	Mg/l	1.3	AL=1.3	Corrosion of Galvanized pipes; erosion of natural

10 samples			(.847-.557)				deposits
Lead	No	6/1- 9/30/21	1.6 ²	µg/l	0	AL=15	Corrosion of household plumbing systems; Erosion of natural deposits
10 samples			(<1 – 2.8)				

KEY:ppb: = parts per billion, or micrograms per liter (µg/l) **NA:** =Not applicable **ND:** =Not detected **NR:** = Not reported **MNR:** = Monitoring not required, but recommended. **ppm:** =parts per million, or milligrams per liter (mg/l) **# of monthly positive samples:** = Number of samples taken monthly that were found to be positive
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. **MRL:** =Method Reporting level-Lowest level of a particular contaminant that the lab can report for a specific analysis. **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.
pCi/L:=picocuries per liter -- A measure of the radioactivity in water **AL:** =Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. **ng/l**= parts per trillion

MRDL =Maximum Residual Disinfectant Level: The highest level of a disinfectant in drinking water. There is convincing evidence that the 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 contamination

1-The level presented represents the 90th percentile of the 10 sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the copper values detected at your water system.

2-The level presented represents the 90th percentile of the 10 sites tested. The action level for lead was not exceeded at any of the sites tested.

3- Distribution system samples 3 sites 4- Range for all six (6) wells collected * The State considers 50 pCi/L a level of concern for beta particles

5. – This level represents the highest locational running annual average calculated from data collected. 6. IBM Entry Point 7. All supply wells 8. Sch.St well1

What does this information mean?

The table shows that our system uncovered some problems in 2021 and our water system violated a drinking water standard. The violation issue is the exceedance of the MCL for PFOA. The sample results are analyzed quarterly if the result is over the MCL a confirmation sample is collected to verify the result. The potential health effects of PFOA's as previously reported PFOA can cause a range of health effects when studied in animals at high exposure levels. The most consistent findings were effects on the liver and immune system and impaired fetal growth and development. Studies of high-level exposures to PFOA in people provide evidence that some of the health effects seen in animals may also occur in humans. The United States Environmental Protection Agency considers PFOA as having suggestive evidence for causing cancer based on studies of lifetime exposure to high levels of PFOA in animals. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State. As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead & copper, volatile organic compounds, total trihalomethanes, and synthetic organic compounds. Although the samples illustrated are only a few of the many constituents we have sampled for, some of which have had detects. The EPA has determined that your drinking water is safe at these levels.

What does this mean?

PFOA caused a range of health effects when studied in animals at high exposure levels. The most consistent findings were effects on the liver and immune system and impaired fetal growth and development. Studies of high-level exposures to PFOA in people provide evidence that some of the health effects seen in animals may also occur in humans. The United States Environmental Protection Agency considers PFOA as having suggestive evidence for causing cancer based on studies of lifetime exposure to high levels of PFOA in animals.

What should I do?

- There is nothing you need to do. You do not need to boil your water or take other corrective actions. However, if you have specific health concerns, consult your doctor.
- If you have a severely compromised immune system, have an infant, are pregnant, or are elderly, you may be at increased risk and should seek advice from your health care providers about drinking this water.

What is being done?

We are working on resolving this issue, we have hired a consultant who has provided a method to remove PFOA from the system and has submitted the concept in a report to the health department. We anticipate resolving the problem within the upcoming year. For more information, please contact North Castle Water Department at 273-3000 x55 or the Westchester County Department of Health (DOH) at 914-813-5000. Additional information is available on the Town Web Site.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

HARD vs. SOFT WATER

The hardness of water relates to the amount of calcium, magnesium and sometimes iron in the water. The more minerals present, the harder the water. Soft water may contain sodium and other minerals or chemicals; however, it contains very little calcium, magnesium or iron.

Many people prefer soft water because it makes soap lather better, gets clothes cleaner and leaves less of a ring around the tub. Some municipalities and individuals remove calcium and magnesium, both essential nutrients, and add sodium in an ion-exchange process to soften water, the harder the water, the more sodium that must be added in exchange for calcium and magnesium ions to soften the water. This process has drawbacks from a nutritional standpoint.

Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. *North Castle* is 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 (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

Sampling for lead was last performed at 10 sites during 2021. Due to 2021 sample results being below the action level, we will be on a reduced monitoring program set by the state. We will sample again for lead during 2022.

Is our water system meeting other rules that govern operations?

During 2021, our system had MCL violations related to quarterly PFOA's samples collected from one of our supply wells. PFOA caused a range of health effects when studied in animals at high exposure levels. The most consistent findings were effects on the liver and immune system and impaired fetal growth and development. Studies of high-level exposures to PFOA in people provide evidence that some of the health effects seen in animals may also occur in humans. The United States Environmental Protection Agency considers PFOA as having suggestive evidence for causing cancer based on studies of lifetime exposure to high levels of PFOA in animals.

Monitoring Requirements Not Met

In addition we had a monitoring violation during the second quarter where an iron sample was not collected. We became aware July 29, 2021 that our system failed to collect an Iron sample. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we are doing to correct this situation. *We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the second quarter of 2021 we did not collect an Iron sample for quarterly monitoring period and therefore cannot be sure of the quality of your drinking water during that time.*

What is being done?

Our sampling program has been revised to insure that a required parameter is not missed or excluded from our sampling plan and schedule.

Do I need to take special precautions?

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/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

What should I do?

There is nothing you need to do at this time. You may continue to drink the water. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Fluoridation

The water supplied in Water District No.4 is not Fluoridated!

IMPORTANT WATER CONSERVATION NOTICE

The need to conserve water during times of drought is obvious to all. It is just as important to use water wisely when the supply is plentiful. However, with the ever-increasing installation of automatic irrigation systems, it is mandatory that we begin a water conservation program relative to irrigation. Most systems have automatic programmable timers, in addition to which we will require that rain sensors be installed, so as to avoid needless watering. The following irrigation practices will be enforced for all irrigation. Homes with even numbered addresses will water even numbered days, and homes with odd numbered addresses will water on odd numbered days. These restrictions shall apply all year, even during non-drought periods. Your cooperation in this matter will be appreciated!

You can play a role in conserving water by being conscious of the amount of water your household is using, and by looking for ways to use less whenever possible. Conservation tips include:

- ◆ Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- ◆ Closely monitor your automatic irrigation system, for leaks and overwatering
- ◆ Turn off the tap when brushing your teeth.
- ◆ Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- ◆ Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.

For more information contact:

OR

Westchester County Department of Health

**North Castle Water District No. 4
15 Business Park Drive
Armonk, New York 10504**



914-813-5000

**Attn: Sal Misiti
Director of Water & Sewer Operations
watersewer@northcastleny.com
Phone: 914-273-3000—ext.55
Fax: 914-273-3075**

www.northcastleny.com