

North Castle Water District No.4

Annual Water Supply Report for 2019

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.

Is my drinking water safe?

Last year, WD4 had two (2) MCL violations and is described below.

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 1200 people through 350 service connections. Also, Water District No. 4 sells water to North Castle Water District No. 5 which serves 350 people through 117 service connections, and Water District No.7 which serves approximately 100 people through 22 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.

Explanation of reasons for variance/exemption

The district is not operating under any variance or exemption.

Monitoring and reporting violations

There was no monitoring or reporting violation during 2019.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Our water system recently violated a drinking water standard. Although this is not an emergency, as our customers, you have a right to know what happened, what you should do, and what we are doing to correct this situation.

We routinely monitor for the presence of drinking water contaminants. On 10/24/2019, we received notice that a sample collected on 8/5/19 along with a confirmation sample on 8/27/19 showed that our system exceeds the standard, the average results for Iron and Manganese were 0.154mg/l and .403mg/l respectively. The results exceeded the standard and required quarterly sampling of the entry point of the IBM well

facility. On 1/22/2020, we received notice that a sample collected on 12/10/19 and a confirmation sample on 1/10/20 showed that our system exceeds the standard, the average results for Iron and Manganese were 0.69mg/l and .334mg/l respectively. In addition this particular site is not the only entry point into the system, the others do not have this issue.

What does this mean?

This is not an emergency. If it had been, you would have been notified within 24 hours.

However, manganese is a common element in rocks, soil, water, plants, and animals. Manganese occurs naturally in water after dissolving from rocks and soil. Contamination of drinking water may occur if manganese gets into surface or groundwater after dissolving from rocks and soil. It may also occur if manganese gets into surface or groundwater after improper waste disposal in landfills or by facilities using manganese in the production of steel or other products. Manganese is an essential nutrient that is necessary to maintain good health. However, exposure to too much manganese can cause adverse health effects. There is some evidence from human studies that long-term exposure to manganese in drinking water is associated with nervous system effects in adults (e.g., weakness, stiff muscles and trembling of the hands) and children (learning and behavior). The results of these studies only suggest an effect because the possible influences of other factors were not adequately assessed. There is supporting evidence that manganese causes nervous system effects in humans from occupational studies of workers exposed to high levels of manganese in air, but the relevance of these studies to long term drinking water exposure is less clear because the exposures were quite elevated and by inhalation, not by ingestion.

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 a Health Department approved method of sequestering manganese which we are working on to correctly dose and we continue to monitor quarterly, we anticipate resolving the problem by the end of 2020.

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.

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.

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!

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).

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).

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.

Table of Detected Contaminants							
Contaminant	Violation Yes\No	Date of Sample	Level Detected (Maximum Range)	Unit Measure-ment	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination
Disinfection Byproducts							
Total Trihalomethanes ³ (TTHMs chloroform bromodichloromethane dibromodichloromethane & bromoform)	No	7/22/19	19.21 ⁵ 2.71 – 19.21	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	7/22/19	4.4 ⁵ 1.0-6.6	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 Measure-ment	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination
Total Coliform	No	7/22/19	1 Positive sample	N/A	0	TT= 2 or more Positive samples	Naturally present in the environment
Table of Detected Contaminants							
Contaminant	Violation Yes\No	Date of Sample	Level Detected (Maximum Range)	Unit Measure-ment	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	8/5/19	0.261 (0.171- 0.261)	Mg/l	2	MCL=2	Discharge of drilling wastes, discharge from metal refineries; erosion of natural deposits
Chromium	No	8/5/19	2.6 (2.0-2.6)	µg/l	100	MCL=100	Discharge from steel & pulp mills; Erosion of natural deposits
Chloride	No	8/5/19	167.0 (132 – 167)	Mg/l	N/a	MCL=250	Naturally occurring or indicative of road salt contamination.
Iron	No	12/10/19	196 (<mrl-196)	µg/l	N/a	MCL=300	Naturally occurring
Nickel	No	8/5/19	2.3 (2.1 – 2.3)	µg/l	N/a	N/a	Discharge from metal refining and chemical production
Nitrate	No	8/5/19	1.28 (0.145-1.28)	Mg/l	10	MCL=10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Manganese	YES	12/10/19	416 (<mrl – 416)	µg/l	N/a	MCL=300Ug/l	Naturally occurring
Sulfate	No	8/5/19	27.7 (27.1– 27.7)	Mg/l	N/a	MCL=250	Naturally occurring
Sodium	No	8/5/19	54.8 (44.8 – 54.8)	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	8/5/19	0.01 (0.003 - 0.01)	Mg/l	N/a	MCL=5	Naturally occurring; mining waste
LEAD & COPPER							
Copper	No	1/19- 6/19	.911 ¹ (.099-1.67)	Mg/l	1.3	AL=1.3	Corrosion of Galvanized pipes; erosion of natural deposits
20 samples							
Lead	No	1/19- 6/19	5.0 ² (<1 – 12.4)	µg/l	0	AL=15	Corrosion of household plumbing systems; Erosion of natural deposits
20 samples							
Copper	No	6/19- 12/19	.68 ¹ (.0101-1.34)	Mg/l	1.3	AL=1.3	Corrosion of Galvanized pipes; erosion of natural deposits
20 samples							
Lead	No	6/19- 12/19	1.9 ² (<1 – 6.6)	µg/l	0	AL=15	Corrosion of household plumbing systems; Erosion of natural deposits
20 samples							

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.

1-The level presented represents the 90th percentile of the 5 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 5 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.

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.

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 20 sites during the first six months and once again during the second half of 2019. Due to 2019 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 2020.

Fluoridation

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

For more information contact:

OR

Westchester County Department of Health

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914-813-5000

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