

North Castle Water District No.4

Annual Water Supply Report for 2011

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? Absolutely!

Last year, as in years past, your tap water met all U.S. Environmental Protection Agency (EPA) and state drinking water Health standards. North Castle vigilantly safeguards its water supplies and once again we are proud to report that our System has never violated a maximum contaminant level or any other water quality standard.

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 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.

Monitoring and reporting violations

There have been no reporting or monitoring violations during 2011.

Explanation of reasons for variance/exemption

The district is not operating under any variance or exemption.

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 Measurement | MCLG | Regulatory Limit (MCL, TT, or AL) | Likely Source of Contamination |
| Microbiological Contaminants | | | | | | | |
| Total Coliform | No | 1/11-12/11 | 0 Positive samples | N/A | 0 | MCL= 2 or more Positive samples | Naturally present in the environment |
| Disinfection Byproducts | | | | | | | |
| Total Trihalomethanes ³ (TTHMs chloroform bromodichloromethane dibromodichloromethane & bromoform) | No | 7/7/11 | 4.74 -16.1 | µg/l | N/A | MCL=80 | B 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 | 7/7/11 | 2.36 - 4.01 | µg/l | N/A | MCL = 60 | By-product of drinking water chlorination needed to kill harmful organisms |

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| 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 | 7/28/11 | 7.77- 13 ⁴ | pCi/L | 0 | MCL=15 | Erosion of natural deposits |
| Combined radium -226 and 228 | No | 7/28/11 | -.07- 0.95 ⁴ | pCi/L | 0 | MCL=5 | Erosion of natural deposits |
| Uranium | No | 7/28/11 | 1.05 – 7.53 ⁴ | µg/l | 0 | MCL=30 | Erosion of natural deposits |
| Inorganic Contaminants | | | | | | | |
| Barium | No | 7/12/11 | 0.269 (0.141- 0.269) | Mg/l | 2 | MCL=2 | Discharge of drilling wastes, discharge from metal refineries; erosion of natural deposits |
| Color | No | 7/12/11 | 48 (<mrl-48) | Units | N/a | MCL=15 | Large quantities of organic chemicals, inadequate treatment, high disinfection demand & the potential for production of excess amounts of disinfection by-products such as trihalomethanes, the presence of metals such as copper, iron & manganese; Natural color may be caused by decaying leaves, plants & organic soil matter. |
| Chromium | No | 7/12/11 | 5.6 (5.5-5.6) | µg/l | 100 | MCL=100 | Discharge from steel & pulp mills; Erosion of natural deposits |
| Chloride | No | 7/12/11 | 105 (104 – 105) | Mg/l | N/a | MCL=250 | Naturally occurring or indicative of road salt contamination. |
| Nickel | No | 7/12/11 | 2.9 (2.4 – 2.9) | µg/l | N/a | N/a | Discharge from metal refining and chemical production |
| Nitrate | No | 7/12/11 | 0.656 (.095-0.656) | Mg/l | 10 | MCL=10 | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| Manganese | No | 7/12/11 | 362 (<mrl– 362) | µg/l | N/a | MCL= 300Ug/l | Naturally occurring |
| Selenium | No | 7/12/11 | 1.5 (<mrl-1.5) | µg/l | 50 | MCL=50 | Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines |
| Sulfate | No | 7/12/11 | 24.6 (<mrl– 24.6) | Mg/l | N/a | MCL=250 | Naturally occurring |
| Sodium | No | 7/12/11 | 50.4 (40.1 – 50.4) | 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 | 7/12/11 | 0.0089 (0.007 - 0.0089) | Mg/l | N/a | MCL=5 | Naturally occurring; mining waste |
| LEAD & COPPER | | | | | | | |
| Copper | No | 6/30/2011-7/27/2011 | .335 ¹ (.0441-.426) | Mg/l | 1.3 | AL=1.3 | Corrosion of Galvanized pipes; erosion of natural deposits |
| Lead | No | 6/30/2011-7/27/2011 | 4.9 ² (<1.0 - 6.0) | µg/l | 15 | AL=15 | Corrosion of household plumbing systems; Erosion of natural deposits |

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 exceeded at one of the sites tested.

3- Distribution system sample 4- Range for all six (6) wells collected

The previous table demonstrates that we have had no violations. We are proud to report that your drinking water meets or exceeds all Federal and State requirements. 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 during 2011. Due to previous sample results being below the action level, we are on a reduced monitoring program set by the state (every three years). We will sample again for lead during 2014.

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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