



WATER AUTHORITY OF GREAT NECK NORTH

waterauthorityofgreatnecknorth.com

Emergency 24-Hour Telephone (516) 482-0210

PUBLIC NOTICE

Annual Drinking Water Quality Report

For the Year Ending December 2021 ~ PWS ID# 2902841

This Annual Drinking Water Quality Report is furnished to the consumers of the Water Authority of Great Neck North pursuant to regulations in Part 5 of the New York State Sanitary Code, Section 5-1.72 and the 1996 Federal Safe Drinking Act Amendments, respectively. This report is designed to inform you about the water quality and services the Authority has delivered over the past year, and to give you other information regarding your water supply and conservation.

For Spanish-speaking consumers: Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

WATER SYSTEM INFORMATION

The Authority's office is located at 50 Watermill Lane, Great Neck, New York. The person in charge of operating the water system is the Superintendent of the Water Authority, Gregory Graziano, who can be reached by telephone at (516) 487-7973, extension 12, to answer questions about this report.

The Water Authority of Great Neck North has regularly scheduled Board of Directors meetings, usually on the third Monday of every month at 6 p.m., at the Water Authority's office. Please check the Authority's website for the specific dates and times.

The Nassau County Department of Health has jurisdiction over the water system of the Authority. The Department of Health is located at

200 County Seat Drive, Mineola, NY 11501, and representatives can be reached by telephone at (516) 227-9692.

The total population served is approximately 32,400 persons, residing in the incorporated Villages of Great Neck, Great Neck Estates, Kensington, Kings Point, Saddle Rock, and portions of Great Neck Plaza, Thomaston, and the unincorporated areas of the Town of North Hempstead. The Authority maintains 9,465 service connections in its service area of 7.5 square miles.

Total Pumpage Data (in gallons) for 2021:

- Total water pumped: 1,458,699,000
- Daily average of water treated and pumped: 3,996,436
- Highest single day: 8,042,000
- Total amount of water delivered to customers: 1,422,314,000
- Total water billed: 1,355,098,000
- Total water unbilled but accounted for: 36,386,000
- Total unaccounted for: 67,215,000
- Percent unaccounted for: 4.7%

Unaccounted for water includes water taken by unauthorized use of hydrants, filling road sweepers and tanker trucks. Additional unaccounted for water use includes fighting fires, fire training, main breaks, service leaks, flushing water mains and unknown leaks in mains and water services.

WHERE DOES OUR WATER COME FROM?

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, in some cases, radioactive material, 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 and the FDA's regulations establish limits that are similar but not as rigorous for contaminants in bottled water which must provide protection for public health. It should be noted that almost all bottled water contains substantially more microplastics than that of public water. Therefore it is recommended that consumers do a complete comparison.

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Water Authority of Great Neck North

BOARD OF DIRECTORS

Carol Frank, *Representative, Town of North Hempstead*

Jay Johnas, *Representative, Village of Great Neck*

Michael C. Kalnick, *Mayor, Village of Kings Point*

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Michael Smiley, *Representative, Village of Great Neck Estates*

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Ralph J. Kreitzman, *Vice Chairperson*

Robert J. Graziano, *Deputy Chairperson*

Gregory C. Graziano, *Superintendent*

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The Water Authority of Great Neck North's water supply consists of groundwater drawn from eight (8) operating wells located throughout its service area and three (3) operating wells located off the Great Neck peninsula. Well Nos. 2A, 9 and 10A are screened in the Magothy aquifer at depths ranging from 143 feet to 161 feet. Well Nos. 5, 6, 7, 8, and 11A are screened in the Lloyd aquifer at depths ranging from 286 feet to 464 feet. Well Nos. 12, 13, and 14 are screened in the Magothy aquifer at depths ranging from 345 feet to 417 feet. The Authority operates approximately 117 miles of water mains varying in size from 1" to 24" in diameter,

approximately 834 fire hydrants, and 2.5 million gallons storage capacity with 0.5 million gallons in 1 elevated storage tank and 2.0 million gallons in 2 ground storage tanks.

The District is 100% metered, and has an active cross connection control program in compliance with the State sanitary code. Quantities of water presently available exceed the existing and projected water demands of our customers and the overall water quality meets all State Health Department Standards. During 2021, our system did not experience any restriction of our water source.

SOURCE WATER ASSESSMENT

The NYSDOH with assistance from the local health department and the CDM consulting firm, 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 source water assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how rapidly contaminants can move through the subsurface to the wells. The susceptibility of a water supply well to contamination is dependent upon both the presence of potential sources of contamination within the well's contributing area and the likelihood that the contaminant can travel through the environment to reach the well. 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 any 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 the water supply into the future.

Drinking water is derived from 11 wells. The source water assessment has rated 4 of the wells as having a high to very high susceptibility to industrial solvents and a high susceptibility to nitrates, and 2 as having a medium high susceptibility to microbial contamination. The elevated susceptibility to industrial solvents is due primarily to point sources of contamination related to commercial/industrial facilities and related activities in the assessment area. The high susceptibility to nitrate and microbial contamination is attributable to unsewered residential land use and related practices in the assessment area, such as fertilizing lawns. While the source water assessment rates 2 of our wells as being susceptible to microbials, please note that our water is disinfected to ensure that the treated 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 at: WATER AUTHORITY OF GREAT NECK NORTH, 50 WATERMILL LANE, GREAT NECK NY, 11021, or phone us at (516) 487-7973.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER? (DETECTED CONTAMINANTS)

The Authority routinely monitors drinking water quality. It should be noted that all drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. Contamination of the groundwater supplying the Authority's wells has been detected in samples from some wells. All groundwater pumped to the distribution system from the operating Authority wells complies with New York State Department of Health standards for public drinking water supplies. 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 (800) 426-4791 or the Nassau County Department of Health at (516) 227-9692.

As required by the USEPA, the State sanitary code and the Nassau County Department of Health, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, and radiological and synthetic organic compounds. Information regarding the contaminants detected in this testing can be found within the table included as part of this annual report identified as the **2021 Table of Detected Contaminants**.

In 2021, 384 microbiological samples were tested with no reported

violations.

As you can see in the table, our system had no violations during 2021. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State Department of Health.

IOCs, also known as Inorganic Contaminants, are tested by collecting one sample and testing that sample for all the IOCs. IOCs are commonly found naturally in the earth's crust and fertilizers used on lawns. IOCs include: Ammonia, Antimony, Arsenic, Barium, Beryllium, Cadmium, Chloride, Chromium, Copper, Fluoride, Foaming Agents, Free Cyanide, Lead, Mercury, Selenium, Silver, Thallium, Iron, Manganese, Nickel, Nitrates, Nitrites, Sodium, Sulfate, and Zinc.

Prior to distribution, all water is treated with chlorine for bacteriological quality and with a polyphosphate, which is used to control iron and discoloration associated with old unlined cast iron water mains and services. All water is treated for pH control, either with sodium hydroxide or through the Air Stripping process.

The Water Authority does not add fluoride to the water supply.

Source water from Well Nos. 2A, 6, 8, 9, 12, 13, and 14 are treated by air stripping to remove volatile organic contaminants. All treatment is approved by and in strict accordance with New York State and Nassau County Department of Health standards.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2021, our system was in compliance with applicable State drinking water operating, monitoring, and reporting requirements. We monitor your drinking water for specific contaminants on a regular basis.

Results of regular monitoring are an indicator of whether or not your drinking water meets health standards.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Although our drinking water met or exceeded State and Federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immunocompromised 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 from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium, giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

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. The Water Authority of Great Neck North 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 running 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 (800-426-4791) or at www.epa.gov/safewater/lead.

WATER RATES

WATER RATES FOR 2021 ARE AS FOLLOWS:

Class 1: Residential Customers - Metered Water Service

BILLING FOR USAGE:

Bills will be rendered quarterly in arrears, calculated using the following usage levels and rates:

2021 RATE

*\$4.83 per CCF

MINIMUM CHARGE

In 2021, \$48.30 is the minimum charge for which the customer will be entitled to use 10 CCF of water in the three month period stated in the permit. Water in excess of such allowance will be billed at the rate above stated, and the bill will be due and payable when rendered. If the service is installed at anytime during a billing period, the minimum charge will be prorated.

*CCF = 100 cubic feet of water
100 CF = 750 gallons of water

A quarterly New Treatment Fee, as a result of New York State mandates, of \$23.37 is charged for the cost of developing and operating treatment systems for three contaminants of concern.

Class 2: Commercial Customers - Metered Water Service

Class 3: Major Governmental Customers - Metered Water Service

Class 4: Municipal Customers - Metered Water Service

Class 5: Apartment Customers - Metered Water Service

BILLING FOR USAGE: Bills will be rendered monthly or quarterly in arrears, calculated using the following usage levels, rates and minimum charges:

Meter Size	Monthly Allowance	Minimum Charge 2021
5/8 inch	4	\$19.32
3/4 inch	5	\$24.15
1 inch	9	\$43.47
1 1/4 inch	13	\$62.79
1 1/2 inch	17	\$82.11
2 inch	28	\$135.24
3 inch	53	\$255.99
4 Inch	88	\$425.04
6 Inch	173	\$835.59
8 Inch	280	\$1,352.40

RATE *In 2021, \$4.83 per CCF for quarterly or monthly usage for all water used in excess of the minimum charge. If the service is installed at any time during a billing period, the minimum charge is prorated.

*CCF = 100 cubic feet of water
100 CF = 750 gallons of water

Effective January 1, 2021 a monthly New Treatment Fee, as a result of New York State mandates, of \$7.79 is charged for the cost of developing and operating treatment systems for three contaminants of concern.

Class 6: Fire Protection Customers—Hydrants on public and private streets, and private property which are furnished, installed and maintained by the Authority:

Per hydrant: 2021
Per quarter \$138.60
Per annum \$554.40

Bills will be rendered quarterly in arrears and are due and payable when rendered. If hydrants are installed at any time during a billing period, the charge is prorated.

Class 7: Fire Suppression System Customers—Metered Water Service—Risers for hose connections and/or sprinkler heads:

Per Quarter 2021

Through 2" Fire Service Connection or less	\$ 92.98
More than 2" but not exceeding 3" Fire Service Connection	\$ 159.39
More than 3" but not exceeding 4" Fire Service Connection	\$ 236.67
More than 4" but not exceeding 6" Fire Service Connection	\$ 526.47
More than 6" but not exceeding 8" Fire Service Connection	\$ 950.30

Bills will be rendered quarterly in advance and are due and payable when rendered. If services are installed at any time during a billing period, the charge is prorated.

Class 8: Other Hydrant Use. Water drawn from hydrants for purposes other than fire protection and for purposes other than specified:

RATE *In 2021, \$4.83 per CCF.

MINIMUM CHARGE In 2021, \$154.56 minimum charge payable in advance for which the customer will be entitled to use 32 CCF of water in the six month period stated in the permit. Water in excess of such allowance is billed at the rate above stated, and the bill is due and payable when rendered.

*CCF = 100 cubic feet of water
100 CF = 750 gallons of water

FINANCIALS

A brief financial account of the Water Authority for 2021 is as follows:

- Total Operating Revenue: \$10,415,163
- Grant Income: \$3,157,926
- Operating and Maintenance Expenses: \$4,942,362
- Principal and Interest Expense on Bonds: \$1,837,247
- Capital System Improvement Funds funded by Operating Income: \$6,793,481

Note: These figures have not been audited by independent public accountants at the time of this report. Audited figures will be provided upon request.

SYSTEM IMPROVEMENTS

2021 Achievements

- Continued SCADA Computer System Upgrades.
- Continued Distribution System Valve Maintenance and Replacement Program.
- Continued Small Meter Replacement Program.
- Continued Large Meter Testing Program.
- Completed construction of Well 6—Raising Well Head above flood elevation, installing new 1,4-Dioxane treatment facility, as part of E.F.C. Projects.
- Completed design of Water Main Extension at Old Mill Road II/Clover Drive Subdivision.
- Completed construction of Bromley Lane Water Main Extension.
- Completed construction of Greenway Terrace Water Main Extension.
- Completed construction of Middle Neck Road Water Main Improvements.
- Completed construction of Well 8 E.F.C. Project.
- Completed design, bid and began construction of Watermill Lane PFOS, PFAS, 1,4-Dioxane Treatment/AOP Facility.
- Completed design of 190 West Shore Road Water Main Extension.
- Completed install and implementation of new security cameras at all remote sites.
- Began design of 2022 Watermain Improvement Project.

2022 Plans

In 2022, the Authority has plans for these major Capital Improvements:

- Complete SCADA Computer System Upgrades.
- Continue Distribution System Valve Maintenance and Replacement Program.
- Continue Hydrant Maintenance and Replacement Program.
- Continue Small Meter Replacement Program.
- Continue Large Meter Testing Program.
- Complete bid and construction of Water Main Extension at Old Mill Road II/Clover Drive Subdivision.
- Complete construction of Watermill Lane PFOS, PFAS, 1,4-Dioxane Treatment/AOP Facility.
- Complete bid and construction of 190 West Shore Road Water Main Extension.
- Complete design, bid and construction of 2022 Water Main Improvement Project.
- Begin design for 2023 Water Main Improvement Project.
- Begin design for Well 9, Aeration Plant and Administration Office Improvements.
- Complete bid and construction of Pheasant Run Water Main Extension.

CONSERVATION

The Water Authority of Great Neck North has continued to move forward with its Water Conservation program. The source of supply for the Authority lies within fragile fresh water aquifer systems lying beneath the peninsula. The aquifers are considered fragile due to their proximity to salt water, which surrounds the peninsula and other North Shore communities. Sustained overpumping of our wells could eventually lead to salt water intrusion and the loss of the water supply.

In recognition of this existing condition, the Board of Directors has adopted a plan of action to protect our resource. The plan consists of an aggressive conservation program coupled with a comprehensive well management plan. Under this plan, the Authority has constructed three (3) operating wells off the peninsula. While these wells will provide some relief for any salt water intrusion on the peninsula, it is imperative that the community continues to work with the Authority to conserve our existing supply.

Generally, the Authority has sufficient supply to avoid overpumping. However, during peak periods of the summer, lawn irrigation increases to a point that creates stress on the system. We ask that all our customers be cognizant of our conservation needs and to help in our efforts

with regard to this matter. Working together we will protect our water supply so that it can be enjoyed for generations.

Internal Conservation Operations

- Leak Detection Program — The entire distribution system is surveyed for leaks by an outside Leak Detection Specialist utilizing electro-sonic leak detection equipment and other sophisticated leak detection tools.
- Expedient leak repair — The Authority continues to attack all leaks as emergencies with repair work generally occurring within 24 hours of notification.
- 100% metered system — The Authority requires all services to be metered. Large meter accuracy is tested on an annual basis. Smaller meters are tested or replaced once every fifteen (15) years. If meter accuracy is questioned, the consumer is entitled to one accuracy test per year. All production meters (well meters) have been recently tested.
- Public Awareness Program — The Authority has continued to promote conservation throughout the peninsula.

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- **Water Use Audits & Retrofit Program** — This program was developed to help customers identify water saving opportunities within the home and to promote the use of low flow fixtures. The program is available free of charge to all of our customers. Please contact this office at (516) 487-7973 if you wish to participate.
- **Sprinkling regulations** — The Authority has limited lawn irrigation to three times per week and requires the installation and testing of moisture sensors or rain gauges for all automatic systems.
- **Xeriscape Garden** — The Authority, in conjunction with Nassau County, has constructed a Xeriscape garden to promote the use of drought-resistant plantings for landscape design.

Conservation Ordinance

The Authority has continued its Water Conservation Program as mandated by the Department of Environmental Conservation. This program implements and conforms to Nassau County Ordinance 248A 1987.

Residential Information

LAWN WATERING RESTRICTIONS:

- No watering between 10:00 AM and 4:00 PM.
- Odd numbered addresses may water on Monday, Wednesday and Friday. Even numbered addresses may water on Tuesday, Thursday and Sunday.
- Water lawns slowly and as infrequently as possible.
- Hoses are required to have nozzles that automatically shut off water when not in use.
- Washing of driveways and sidewalks is prohibited.
- Sprinkling is prohibited during periods of precipitation.

- Rain gauge or moisture sensor is required for all automatic lawn irrigation.
- No watering permitted between November 1 and April 15.

RESIDENTIAL WATER SAVING RECOMMENDATIONS

The conscientious use of water by our residents will greatly aid the Authority’s conservation efforts. The use of low flow fixtures can reduce domestic consumption by as much as 20%. Limiting lawn irrigation to twice a week can reduce water use by more than 30%.

How much water should I give my lawn?

Although the normal lawn needs 1-2 inches of water per week, the actual amount your property requires depends on these variables: amount of rain, type of soil, air temperature, type of grass, relative humidity, degree of sun/shade, amount of thatch. For example: If your lawn has soil with high clay content and is growing in the shade, it will need less than one growing in sandy soil with full sun.

Water loss from leaks can add up

1/32"	•	18,500 gallons
1/16"	•	74,000 gallons
1/8"	●	296,000 gallons
1/4"	●	1,181,500 gallons

@ 60 PSI – average household water pressure (water loss per quarterly billing cycle)

NEW FREE water conservation kits can now be picked up at the Authority’s offices in Great Neck.

DEFINITIONS

The definitions below may help you better understand the terms and abbreviations used on the 2021 Tables of Detected Contaminants.

Maximum Contaminant Level Goal (MCLG): 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.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible.

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. MRDLG’s do not reflect the benefits of the use of disinfectants to control microbial contamination.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Health Advisory Level (HAL): An estimate of acceptable drinking water levels for a chemical substance based on health effects information; a health advisory is not a legally enforceable Federal standard, but serves as technical guidance to assist Federal, State and local officials.

Non-Detects (ND): Laboratory analysis indicates that the constituent is not present.

Nephelometric Turbidity Unit (NTU): A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Milligrams per liter (mg/l): Corresponds to one part of liquid in one million parts of liquid (parts per million – ppm).

Micrograms per liter (ug/l): Corresponds to one part of liquid in one billion parts of liquid (parts per billion – ppb).

Nanograms per liter (ng/l): Corresponds to one part of liquid to one trillion parts of liquid (parts per trillion – ppt).

Picograms per liter (pg/l): Corresponds to one part of liquid to one quadrillion parts of liquid (parts per quadrillion – ppq).

Picocuries per liter (pCi/L): A measure of the radioactivity in water.

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

Million Fibers per Liter (MFL): A measure of the presence of asbestos fibers that are longer than 10 micrometers.

90th Percentile Value: The values reported for lead and copper represent the 90th percentile. 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 lead and copper values detected at your water system.

Unregulated Contaminant Monitoring Rule (UCMR 4): This is the fourth version of the UCMR sampling event required by the United States Environmental Protection Agency (USEPA) for Public Water System Suppliers. This sampling data serves as a primary source of occurrence and exposure information that the EPA uses to develop regulatory decisions.



Water Authority of Great Neck North 2021 Annual Drinking Water Quality Report

TABLE OF DETECTED CONTAMINANTS

Contaminant	Violation (Yes/No)	Date of Sample	Level Detected (Maximum) (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT, AL, HAL)	Likely Source of Contamination
Inorganic Contaminants							
Barium	No	10/29/21	0.060 0.010 to 0.060	mg/l	2	MCL = 2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Calcium	No	10/29/21	42.3 15.8 to 42.3	mg/l	n/a	n/a	Naturally occurring.
Chloride	No	12/1/21	95.2 6.6 to 95.2	mg/l	n/a	MCL = 250	Naturally occurring or indicative of road salt contamination.
Copper	No	4/28/21	0.045 ND to 0.045	mg/l	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Fluoride	No	10/20/21	0.10 ND to 0.10	mg/l	n/a	MCL = 2.2	Erosion of natural deposits; discharge from plastic and fertilizer factories.
Iron	No	10/29/21	190.0 ND to 190	ug/l	n/a	MCL = 300 ⁴	Naturally occurring.
Magnesium	No	10/29/21	22.8 8.3 to 22.8	mg/l	n/a	n/a	Naturally occurring.
Manganese	No	5/19/21	12 ND to 12	ug/l	n/a	MCL = 300 ⁴	Naturally occurring; indicative of landfill contamination.
Nickel	No	5/26/21	0.0021 ND to 0.0021	mg/l	n/a	n/a	Naturally occurring.
Sodium	No	5/26/21	30.8 6.0 to 30.8	mg/l	n/a	20 ² and 270 ³	Naturally occurring; road salt; water softeners; animal waste.
Sulfate	No	10/29/21	47.0 11.6 to 47.0	mg/l	n/a	MCL = 250	Naturally occurring.
Zinc	No	5/5/21	0.04 ND to 0.04	mg/l	n/a	MCL = 5	Naturally occurring; mining waste.
Inorganics – Nitrate and Nitrite							
Nitrate	No	10/29/21	3.5 0.15 to 3.5	mg/l	10	MCL = 10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Principal Organic Contaminants							
1,1-Dichloroethene	No	4/7/21	0.63 ND to 0.63	ug/l	n/a	MCL = 5	Discharge from industrial chemical factories.
Bromodichloromethane	No	12/8/21	0.77 ND to 0.77	ug/l	n/a	n/a ⁷	Byproduct of drinking water disinfection needed to kill harmful organisms. TTHMs are formed when source water contains organic matter.
Bromoform	No	10/29/21	4.8 ND to 4.8	ug/l	n/a	n/a ⁷	Byproduct of drinking water disinfection needed to kill harmful organisms. TTHMs are formed when source water contains organic matter.
Dibromochloromethane	No	12/8/21	2.1 ND to 2.1	ug/l	n/a	n/a ⁷	Byproduct of drinking water disinfection needed to kill harmful organisms. TTHMs are formed when source water contains organic matter.
Ethylbenzene	No	12/8/21	1.60 ND to 1.60	ug/l	n/a	MCL = 5	Discharge from petroleum refineries; leaks from gasoline tanks.
m&p-Xylene	No	12/8/21	4.40 ND to 4.40	ug/l	n/a	MCL = 5	Leaks from gasoline tanks; discharge from petroleum factories. Leaching of solvent from lining of potable water tanks.
o-Xylene	No	12/8/21	2.70 ND to 2.70	ug/l	n/a	MCL = 5	Leaks from gasoline tanks; discharge from petroleum factories. Leaching of solvent from lining of potable water tanks.
Tetrachloroethene	No	1/13/21	0.81 ND to 0.81	ug/l	n/a	MCL = 5	Discharge from factories and dry cleaners; waste sites and spills.
Other Organic Contaminants							
Dacthal (DCPA)	No	7/7/21	7.80 0.70 to 7.80	ug/l	n/a	MCL = 50	Released to the environment through its use and application as an agricultural herbicide used on a wide range of vegetable crops.
Synthetic Organic Contaminants							
1,4-Dioxane	No	4/7/21	0.54 ND to 0.54	ug/l	n/a	MCL = 1.0	Released into the environment from commercial and industrial sources and is associated with inactive and hazardous waste sites
Perfluorooctanesulfonic Acid (PFOS)	No	5/5/21	2.5 ND to 2.5	ng/l	n/a	MCL = 10.0	Released into the environment from widespread use in commercial and industrial applications.
Perfluorooctanoic Acid (PFOA)	No	5/5/21	8.1 ND to 8.1	ng/l	n/a	MCL = 10.0	Released into the environment from widespread use in commercial and industrial applications.
Disinfection Byproducts							
Total Trihalomethanes	No	12/8/21	1.3 ^{6,7} ND to 1.3	ug/l	n/a	MCL = 80	Byproduct of drinking water disinfection needed to kill harmful organisms. TTHMs are formed when source water contains organic matter.
Lead and Copper Sampling. Samples taken in 2019 (next sampling event 2022).							
Copper	No	Fall 2019 ¹	0.18 ¹ ND to 0.2	mg/l	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits.
Lead	No	Fall 2019 ¹	3.8 ¹ ND to 45.2 ⁹	ug/l	0	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits.
Contaminants Listed in the Unregulated Contaminant Monitoring Rule (UCMR 3)							
Perfluorohexanesulfonic Acid (PFHxS)	No	Sep-21	1.9 ND to 1.9	ng/l	n/a	MCL = 50,000	Released into the environment from widespread use in commercial and industrial applications.
Perfluoroheptanoic Acid (PFHpA)	No	Jan-21	2.4 ND to 2.4	ng/l	n/a	MCL = 50,000	Released into the environment from widespread use in commercial and industrial applications.

(cont. on page 7)

Contaminant	Violation (Yes/No)	Date of Sample	Level Detected (Maximum) (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT, AL, HAL)	Likely Source of Contamination
Contaminants Listed in the Unregulated Contaminant Monitoring Rule (UCMR 4)⁵							
Bromide	No	Oct-18	0.36 ND to 0.36	mg/l	n/a	n/a	Naturally occurring.
BromoChloroAcetic Acid	No	May-19	0.8 ND to 0.8	ug/l	n/a		Byproduct of drinking water chlorination (component of HAA5).
BromoDiChloroAcetic Acid	No	May-19	2.4 ND to 2.4	ug/l	n/a	MCL = 60 (HAA5 Haloacetic Acids)	Byproduct of drinking water chlorination (component of HAA6Br & HAA9).
ChloroDiBromoAcetic Acid	No	May-19	0.8 ND to 0.8	ug/l	n/a		Byproduct of drinking water chlorination (component of HAA6Br & HAA9).
DiBromoAcetic Acid	No	May-19	1.6 ND to 1.6	ug/l	n/a		Byproduct of drinking water chlorination (component of HAA5).
DiChloroAcetic Acid	No	May-19	0.4 ND to 0.4	ug/l	n/a		Byproduct of drinking water chlorination (component of HAA5 & HAA9).
Manganese	No	Apr-19	213 ND to 213	ug/l	n/a	MCL = 300 ⁴	Naturally occurring; indicative of landfill contamination.
Total Organic Carbon	No	Oct-18	3.26 0.94 to 3.26	mg/l	n/a	TT	Naturally present in the environment.
Unregulated Contaminants							
Perfluorobutanoic Acid (PFBA)	No	Apr-21	4.3 ND to 4.3	ng/l	n/a	MCL = 50,000	Released into the environment from widespread use in commercial and industrial applications.
Perfluoropentanoic Acid (PFPeA)	No	Apr-21	4.1 ND to 2.4	ng/l	n/a	MCL = 50,000	Released into the environment from widespread use in commercial and industrial applications.
Perfluorohexanoic Acid (PFHxA)	No	Apr-21	2.8 ND to 2.8	ng/l	n/a	MCL = 50,000	Released into the environment from widespread use in commercial and industrial applications.
Radiologicals							
Gross Alpha	No	7/18/18	1.86 0.028 to 1.86	(pCi/L)	n/a	15.0	Erosion of natural deposits.
Gross Beta	No	10/24/18	2.99 0.657 to 2.99	(pCi/L)	n/a	16.0	Erosion of natural deposits.
Combined Radium 226/228	No	10/24/18	1.5 ND to 1.5	(pCi/L)	n/a	5.0	Erosion of natural deposits.
Uranium	No	7/18/18	0.93 0.014 to 0.93	ug/l	n/a	30.0	Erosion of natural deposits.
Physical Characteristics							
Alkalinity	No	5/19/21	78.4 42.9 to 78.0	mg/l	n/a	n/a	Naturally occurring.
Calcium Hardness	No	10/29/21	106.0 39.5 to 106.0	mg/l	n/a	n/a	Naturally occurring.
Color	No	12/8/21	ND ND to ND	units	n/a	MCL = 15	Large quantities of organic chemicals, inadequate treatment, high disinfection demand and the potential for production of excess amounts of disinfection byproducts such as trihalomethanes, the presence of metals such as copper, iron and manganese; natural color may be caused by decaying leaves, plants, and soil organic matter.
pH	No	5/12/21	8.0 6.1 to 8.0	Std. Units	7.5-8.5 ⁸	n/a	Naturally occurring.
Total Dissolved Solids	No	5/26/21	288 88 to 288	mg/l	n/a	n/a	Naturally occurring.
Total Hardness	No	10/29/21	200 73.6 to 200	mg/l	n/a	n/a	Naturally occurring.
Turbidity	No	5/19/21	2.0 ND to 2.0	NTU	n/a	MCL = 5	Soil runoff.

1 The copper and lead levels represents the 90th percentile of the 33 sites tested in the year 2019.

2 Water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets.

3 Water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.

4 If iron and manganese are present, the total concentration of both should not exceed 500 ug/l.

5 UCMR 4 results represent the data collected from 15 Sites on two separate sampling events in 2018 and 2019.

6 Highest locational running annual average.

7 No individual MCL level - MCL is Locational Running Average for Total Trihalomethanes of 80 ug/l.

8 Nassau County Department of Health guideline.

9 One sample site exceeded the action level.

NON DETECTED CONTAMINANTS

Volatile Organic Compounds (VOC's) - Solvents - Degreasers - Fuel Additives

1,1,1,2-Tetrachloroethane	1,2-Dichlorobenzene	Bromobenzene	cis-1,3-Dichloropropene	sec-Butylbenzene
1,1,1-Trichloroethane	1,2-Dichloroethane	Bromochloromethane	Dibromomethane	Styrene
1,1,2,2-Tetrachloroethane	1,2-Dichloropropane	Bromomethane	Dichlorodifluoromethane	Tert-Butylbenzene
1,1,2-Trichloro 1,2,2-trifluoroethane	1,3,5-Trimethylbenzene	Carbon Tetrachloride	Hexachloro-1,3-butadiene	Toluene
1,1,2-Trichloroethane	1,3-Dichlorobenzene	Chlorobenzene	Hexachlorobutadinene	trans-1,2-Dichloroethene
1,1-Dichloroethane	1,3-Dichloropropane	Chlorodibromomethane	Isopropylbenzene	trans-1,3-Dichloropropene
1,1-Dichloropropene	1,4-Dichlorobenzene	Chlorodifluoromethane	Methyl Tert. Butyl Ether (MTBE)	Trichloroethene
1,2,3-Trichlorobenzene	2,2-Dichloropropane	Chloroethane	Methylene Chloride	Trichlorofluoromethane
1,2,3-Trichloropropane	2-Chlorotoluene	Chloroform	N-Butylbenzene	Vinyl Chloride
1,2,4-Trichlorobenzene	4-Chlorotoluene	Chloromethane	n-Propylbenzene	
1,2,4-Trimethylbenzene	Benzene	cis-1,2-Dichloroethene	p-Isopropyltoluene	(cont. on page 8)

NON DETECTED CONTAMINANTS (cont. from page 7)

Specific Organic Compounds (SOC's) - Herbicides - Pesticides, etc.

1,2-Dibromoethane (EDB)	Aldrin	DBCP (1,2-Dibromo-3-Chloropropane)	Endrin	Metolachlor
2,3,7,8-TCDD (Dioxin)	Atrazine	Di(2-ethylhexyl)adipate	Glyphosate	Metribuzin
2,4,5-TP (Silvex)	Benzo(a)pyrene	Di(2-ethylhexyl)phthalate	Heptachlor	Oxamyl (Vydate)
2,4-D	Butachlor	Dicamba	Heptachlor Epoxide	Pentachlorophenol
3-Hydroxycarbofuran	Carbaryl	Dieldrin	Hexachlorobenzene	Picloram
Alachlor	Carbofuran	Dinoseb	Hexachlorocyclopentadiene	Polychlorinated Biphenyls (PCBs)
Aldicarb	Chlordane, Total	Diquat	Lindane	Propachlor
Aldicarb Sulfone	Dalapon	Endothall	Methomyl	Simazine
Aldicarb Sulfoxide			Methoxychlor	Toxaphene

Microbiological Contaminants

Total Coliform Bacteria, E.Coli

Inorganic Compounds (IOC's) - Metals, etc.

Amonia as N; Antimony; Arsenic; Beryllium; Cadmium; Chromium; Cyanide, Free; Mercury; Nitrite as N; Perchlorate; Selenium; Silver; Thallium

Disinfection Byproducts

Bromoacetic acid; Dichloroacetic acid; Monochloroacetic acid; Trichloroacetic acid; Bromodichloromethane; Chlorodibromomethane

2021 Unregulated Contaminants Monitoring Rule 4 samples (UCMR 4's)

1-Butanol, 2-Methoxyethanol, 2-Propen-1-ol, Alpha-hexachlorocyclohexane, Bromide, BromoDiChloroAcetic Acid, Butylated hydroxyanisole, Chlorpyrifos, DiChloroAcetic Acid, Dimethipin, Ethoprop, Germanium, MonoBromoAcetic Acid, MonoChloroAcetic Acid, O-toluidine, Oxyfluorfen, Profenofos, Quinoline, Tebuconazole, Total Organic Carbon, Total permethrin (cis- & trans-), TriBromoAcetic Acid, Tribufos, TriChloroAcetic Acid

2021 Other Unregulated Contaminants – Per-and Polyfluoroalkyl Substances (PFAS)

Perfluorobutanesulfonic acid (PFBS); 11Cl-PF3OUdS (F53B Minor); 9Cl-PF3ONS (F53B Major); 4,8-dioxa-3H-perfluorononanoic acid (ADONA); Hexafluoro-propylene oxide dimer acid (HFPO-DA); 8:2 Fluorotelomersulfonic acid (8:2FTS A); Perfluorodecanoic acid (PFDA); Perfluorododecanoic acid (PFDoA); Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA); Perfluoroheptanesulfonic acid (PFHpS); 4:2 Fluorotelomersulfonic acid (4:2FTS A); Perfluoro-4-oxapentanoic acid (PFMPA); Perfluoro-5-oxahexanoic acid (PFMBA); 6:2 Fluorotelomersulfonic acid (6:2FTS A); Perfluoropentanesulfonic acid (PFPeS); Perfluoroundecanoic acid (PFUnA); Nonafluoro-3,6-dioxaheptanoic acid (NFDHA); Perfluorononanoic acid (PFNA)

SUMMARY

In summary, all wells are monitored 24 hours a day by State certified operators who inspect each well station daily to check the proper operation and record chemical feeds. Samples are collected at well sites and throughout the distribution system to ensure that the water supply provided to our residents is of the highest quality possible.

The Water Authority of Great Neck North recognizes the concerns

that residents have regarding the quality of their drinking water. The Authority makes every effort to continue to supply safe drinking water in compliance with all applicable health standards. Please contact the Authority at (516) 487-7973 should you have any questions or desire further information.

ADDITIONAL COPIES

Copies of the Annual Drinking Water Quality Report are available at the Authority's office at 50 Watermill Lane, Great Neck New York. A yearly supplement, which contains quality data for each

water source can be obtained at the same address. The report and supplements may also be downloaded from our website, www.waterauthorityofgreatnecknorth.com/waterquality.pdf.

CLOSING

Thank you for allowing us to continue to provide your family and business with clean, quality drinking water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. The costs of these improvements are reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements. The Water Authority of Great Neck North works hard to provide top quality water to

every customer. We ask that all our customers help us protect our water resources and advise us of any security concerns.

Please visit the Water Authority's website at www.waterauthorityofgreatnecknorth.com to download regulations, access the full Annual Drinking Water Quality Report, check on customer service information, important notices, the current rate and fee structure, and links to other resources.