# 2020 Annual Water Quality Report

Public Water System Identification No. NY 2902830

Water Authority of Western Nassau County, 1580 Union Turnpike, New Hyde Park, NY 11040

## A Message from the Chairman

We are pleased to provide this year's Annual Water Quality Report. In accordance with New York State Public Health Law and Federal regulations, this report provides information about the quality of your drinking water, including a summary of the laboratory results for all testing performed by our independent laboratory during 2020.

This report is intended to aid your understanding of the source of your drinking water; help you understand the process by which safe drinking water is delivered to your home or commercial place of business; and educate customers about the importance of preventive measures, such as source protection, that ensure a safe drinking water supply. Educated customers are more likely to help protect our drinking water sources and to appreciate the challenges and the true costs of providing safe drinking water.

The annual Chairman's Report to the customers within the Water Authority's service area is also included in this document and can be found on page 7. Each year, I am required to provide each customer with a brief financial account on the operations of the water system, including water rates, total revenues, operating and maintenance expense, interest on bonds, as well as information required to be included in our Annual Water Quality Report.

In August 2020, the New York State Department of Health implemented new regulations for allowable levels for the emerging contaminants PFAs (Polyfluoroalkyl substances) and 1,4-Dioxane. These regulations require the Water Authority to install costly new well-head treatment designed to remove these contaminants at various sites. During the summer of 2020, we successfully installed and addressed these contaminants at five wells in the southern section of our territory. Currently, capital projects are underway which are addressing six other impacted wells in the northern section of the service territory. The cost demand of these critical projects requires the Water authority to incur an additional \$62 million debt through a bond issuance, which is currently underway.

This year's annual water quality report, as well as prior years' reports and other useful information, can be found on our website at www.wawnc.org. Additional copies of this report, as well as a supplemental package of complete water quality data of both treated and untreated water for each well placed in service during 2020, are available at our business office, located at 1580 Union Turnpike, New Hyde Park, New York, 11040.

The Water Authority has always assured the safety of our customers and employees, as well as the protection of our water system assets. Particularly in these difficult times, we are dedicated to providing a continuous and reliable supply of high quality drinking water. We look forward to serving you in 2021 and beyond.

On behalf of the Water Authority, we hope that you and your families stay safe and well. As always, we welcome your comments and suggestions.

Please contact us at (516) 327-4100 or by e-mail at inquiry@wawnc.org.

Sincerely,

John E. Ryan Chairman

#### **About the Water Authority**

The Water Authority is a corporate governmental agency constituting a public benefit corporation which was organized and exists under and by virtue of the laws of the State of New York. The Water Authority provides the essential services of extraction, treatment, distribution and sale of water for residential, commercial, industrial and public fire protection purposes.

The Water Authority is governed by a Board of Directors consisting of 9 members, appointed by the Towns of Hempstead and North Hempstead and the Villages of Bellerose, Floral Park, Garden City, New Hyde Park, S. Floral Park and Stewart Manor for a 2-year term.

Town of Hempstead George Bakich Cherie Zacker

Town of N. Hempstead Marianna Wohlgemuth

Village of Bellerose Susan Powderly

Village of Floral Park Dominick Longobardi

Village of Garden City David Osborn

Village of New Hyde Park Matthew McCann

Village of S. Floral Park Gregory Ifill

Village of Stewart Manor Christopher Gorman

The Water Authority's Board of Directors conducts regularly scheduled meetings which are generally held on the fourth Monday of each month beginning at 7:00 p.m. at our business office in New Hyde Park.

A press release is submitted to the local newspapers each month announcing the time and date of the regular meeting, as well as any specially scheduled meeting. In addition, a notice is posted on our website at www.wawnc.org, generally two weeks prior to the meeting.

#### **Lead in Drinking Water**

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 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 at (800) 426-4791 or at: http://www.epa.gov/safewater/lead.

#### **Communities Served**

Bellerose

Elmont

**Floral Park** 

**Floral Park Centre** 

Franklin Square \*

Garden City \*

**New Hyde Park** 

North Valley Stream \*

South Floral Park

Stewart Manor

Valley Stream \*

\* Partially served communities

## Are there contaminants in our drinking water?

As New York State ("State") regulations require, the Water Authority routinely monitors your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, haloaetic acids, radiological and synthetic organic compounds.

The table presented on pages 4 and 5 depicts which contaminants were detected in your drinking water. The State allows water systems to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Therefore, some of our data, though representative of the water quality, is more than one year old.

It should be noted that all drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. You can obtain more information about contaminants and potential health effects by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791 or the Nassau County Department of Health at (516) 227-9692.

## Do I need to take special precautions?

Some people may be more vulnerable to disease causing microorganisms or pathogens 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 from their health care provider about their drinking water. Environmental Protection Agency (EPA)/Center for Disease Control (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 at (800) 426-4791.

## Is our water system meeting other rules that govern operations?

The Water Authority was granted a deferral on January 8, 2021, by the New York State Department of Health ("NYSDOH") for compliance with the new PFOA, PFOS and 1,4 Dioxane MCL that went into effect on August 26, 2020. With this deferral, the Water Authority has submitted a compliance schedule for corrective action. In exchange, NYSDOH agrees to defer enforcement actions, such as assessing fines, as long as the Water Authority is achieving the established project deadlines. The Water Authority is required to update NYSDOH and the Nassau County Department of Health on a quarterly basis on the established deadlines. The NYSDOH can resume enforcement if the agreed upon deadlines are not met. Information regarding the Water Authority's deferral and quarterly updates can be found at the Water Authority's website, located at www.wawnc.org.

#### What does this information mean?

As you can see by the testing results in the table on pages 4 and 5, our treated water system had no violations, nor have we violated a maximum contaminant level ("MCL") or any other water quality standard. We have learned through our testing that some contaminants have been detected. Our comprehensive water quality monitoring and testing confirmed that there was no need to remove any well from service due to water quality in 2020, nor were there any restrictions of our water source. Wells which have aesthetic problems, such as high iron concentrations, or which have higher electrical or chemical treatment costs, are primarily used only during the summer months when the demand for water is higher.

There were many individual contaminants that were analyzed for but not detected. These non-detected contaminants include the following:

Microbiological contaminants such as turbidity;

Principal organic contaminants such as benzene, bromobenzene, chloromethane, styrene, vinyl chloride;

Specific organic chemicals and pesticides such as aldicarb, aldrin, carbofuran, endothall, endrin;

Physical and inorganic contaminants such as arsenic, cadmium, detergents (MBAs), fluoride, silver, thal-lium;

Unregulated contaminants such as cobalt, testosterone, molybdenum.

A complete list of non-detected contaminants can be obtained by contacting the Water Authority's Chief Engineer, Michael Leiner, PE at (516) 327-4100.

#### **Water Source**

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 that 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.

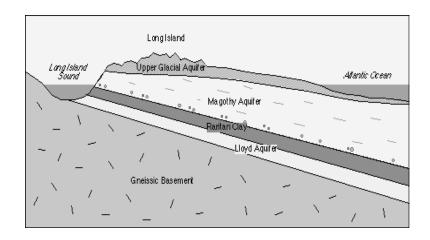
All of the water supplied by the Water Authority comes from groundwater drawn from 24 drilled wells located in the aquifer system beneath the land surface. Our wells are in the Upper Glacial, Magothy and Lloyd aquifers and range in depth from 87 to 722 feet.

#### **Water Treatment**

All well water is treated with chlorine (sodium hypochlorite) prior to distribution for disinfection purposes. Disinfection is mandated by the State Sanitary Code to assure that the water, which is free of bacteria as it is pumped from the aquifer, maintains its bacteria-free quality within the distribution system. Other treatment that the water receives before entering the distribution system includes the use of:

- Caustic soda (sodium hydroxide): This is used to neutralize the naturally acidic water found in Long Island groundwater. Raising the pH level to a neutral range of approximately 7.5 minimizes the corrosion of water mains, service lines and household plumbing.
- Zinc orthophosphate: This is a corrosion inhibitor which coats the interior surfaces of our water mains and service lines and household plumbing thereby reducing corrosion and extending their useful service life.
- Air-stripper treatment: These treatment facilities are used to remove Volatile Organic Compounds from the water prior to distribution. These compounds have entered the water supply as a result of improper disposal practices by industries and have been detected in groundwater.
- Iron removal treatment plants: These treatment facilities remove high levels of iron and manganese, which are natural occurring minerals in Long Island groundwater.
- Granular Activated Carbon: These treatment facilities remove Synthetic Organic Compounds (SOC) and Polyfluoroalkyl substances (PFAS) out of the groundwater.

These forms of treatment all comply with applicable Federal, State and local drinking water standards.



#### **Source Water Assessment**

The Source Water Assessment was carried out by the New York State Department of Health, with assistance from the local health department and CDM, a consulting firm, to identify the vulnerability of individual wells used by public drinking water systems to potential sources of contamination by microbials, nitrates, pesticides and volatile contaminants based on current land uses and water pumping patterns.

The source water assessment for this system has been completed based on available information, evaluating possible and actual threats to this drinking water source. 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 the "Table of Detected Contaminants" found on pages 4 and 5 for a complete list of contaminants that have been detected in your drinking water. The source water assessments provide resource managers with additional information for protecting source waters into the future.

Drinking water is derived from 20 wells. The source water assessment has rated most of the wells as having a very high susceptibility to industrial solvents and most of the wells as having a high susceptibility to nitrates. The very high susceptibility to industrial solvents is due primarily to point sources of contamination related to transportation routes and commercial/industrial facilities and related activities in the assessment area. The high susceptibility to nitrate contamination is attributable to high density residential and commercial land use and related practices in the assessment area, such as fertilizing lawns.

A copy of the assessment, including a map of the assessment area, can be reviewed upon request by contacting the Water Authority's Chief Engineer, Michael Leiner, PE at (516) 327-4100.

TABLE OF DETECTED CONTAMINANTS							
Contaminant	Maximum Detection Sample Date (Month/Year)	Level Detected (Maximum) (Range)	Unit Measurement	Regulatory Limit (MCL, TT or AL)	Violation	MCLG	Sources in Drinking Water
Total Coliform Bacteria 1	2/20 & 3/20	0.97% Samples	Present	LOGICAL CONTAMINATE $TT = more than 5.0$	No No	Absent	Naturally present in the environment
		were positive in the noted	Or	percent of the total coliform samples are			
		months	Absent	positive in one month			
Alkalinity, Total (as CaCO <sub>3</sub> )	2/20	<b>PHYSIC</b> 90.5	ML CHARACTER mg/l	No Standard	ONTAMIN No	IANTS N/A	Naturally occurring
, , , ,	·	ND to 90.5				·	, ,
Ammonia (as Nitrogen)	1/20	1.7 ND to 1.7	mg/l	No Standard	No	N/A	From fertilizers
Barium	7/20	0.063 ND to 0.063	mg/l	MCL=2	No	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Calcium	1/20	26.1 1.5 to 26.1	mg/l	No Standard	No	N/A	N/A
Chloride	1/20	86.9	mg/l	MCL=250	No	N/A	Naturally occurring or indicative of road salt contamination.
Chlorine Residual	9/20	2.5 to 86.9 1.47	mg/l	MRDL=4	No	N/A	Water additive to control microbes and disinfect the water.
Color	9/20	0.27 to 1.47 10	units	MCL=15	No	N/A	N/A
Copper	8/18	ND to 10 0.11 <sup>2</sup>	mg/l	AL=1.3	No	1.3	Corrosion of household plumbing systems; erosion of natural
Corrosivity (LSI)	1/20	ND to 0.11 -5.71	SI	No Standard	No	0	deposits; leaching from wood preservatives.  N/A
Dissolved Solids, Total	9/20	-0.84 to -5.71 258	mg/l	No Standard	No	N/A	N/A
Hardness, Total (as CaCO <sub>3</sub> )	1/20	48 to 258 120	mg/l	No Standard	No	N/A	N/A
Iron	3/20	8.2 to 120 210	ug/l	MCL=300	No	N/A	Naturally occurring.
Lead	6/18	ND to 210	ug/l	AL=15	No	0	Corrosion of household plumbing systems; erosion of natural
Magnesium	1/20	ND to 1.3 13.3	mg/l	No Standard	No	N/A	deposits.  Naturally occurring.
	4/20	0.93 to 13.3	_	MCL=300	No	N/A	Naturally occurring.
Manganese		ND to 140	ug/l			·	, 0
Nickel	1/20	9.2 ND to 9.2	ug/l	No Standard	No	N/A	Naturally occurring.
Nitrate (as Nitrogen)	8/20	6.6 ND to 6.6	mg/l	MCL=10 <sup>4</sup>	No	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Nitrite (as Nitrogen)	1/20	0.088 ND to 0.088	mg/l	MCL=1	No	1	Nitrites are a salt or ester anion of nitrous acid, which can be naturally or artificially occurring in groundwater. Nitrites come from fertilizers through run-off water, sewage, and mineral deposits.
Odor @ 60 °C	1/20	1 ND to 1	units	MCL=3	No	0	N/A
Perchlorate	1/20	2.2 ND to 2.2	ug/l	Primary AL=18 Secondary AL=5	No	N/A	Oxygen additive in solid fuel propellant for rockets, missiles & fireworks.
pН	8/20	8.4	units	$7.5 \le \text{pH} \le 8.5$	No	N/A	N/A
Selenium	1/20	5.3 to 8.4 2.4	ug/l	MCL=50	No	50	Erosion of natural deposits.
Sodium	7/20	ND to 2.4 58 3.3 to 58	mg/l	MCL=270 <sup>5</sup>	No	N/A	Naturally occurring; road salt; animal waste; water softeners.
Sulfate	1/20	49.7 ND to 49.7	mg/l	MCL=250	No	N/A	Naturally occurring.
Zinc	1/20	0.51 ND to 0.51	mg/l	MCL=5	No	N/A	Naturally occurring.
			ETIC ORGANIC	CONTAMINANTS AN	ID PESTIC	IDES	
1,2-Dibromoethane (EDB)	2/20	0.015 ND to 0.015	ug/l	MCL=0.05	No	0	Discharge from petroleum containing banned additive; soil fumigant.
1,4 Dioxane	3/20	17.5 ND to 17.5	ug/l	MCL=16	No	N/A	This compound may enter the environment through its use as a solvent and in textile processing, printing processes and deter-
Chlordane	6/20	0.46 ND to 0.46	ug/l	MCL=2	No	0	gent preparations.  Contaminant of indoor air when used for termite control.
Dieldrin	10/20	0.12 ND to 0.12	ug/l	MCL=5	No	0	Pesticide used in agriculture for soil and seed treatment; used in treatment of wood and mothproofing of woolen products.
Heptachlor Epoxide	6/20	0.046	ug/l	MCL=0.2	No	0	Breakdown of heptachlor; residue of banned pesticide.
Perfluorooctanesulfonic acid	3/20	ND to 0.046 15.3	ng/l	MCL=10 7	No	N/A	PFOS/PFOA have been used to make carpets, leathers, textiles,
(PFOS) Perfluorooctanoic acid (PFOA)	10/20	ND to 15.3 68.7 ND to 68.7	ng/l	MCL=10 <sup>7</sup>	No	N/A	fabrics for furniture, paper packaging, and other materials that are resistant to water, grease or stains. It is also used in fire-fighting foams at airfields. Many of these uses have been phased out by its primary U.S. manufacturer, however, there are still some ongoing uses.

			TABLE OF I	DETECTED CO	IMATAC	NANTS (d	cont'd)	
Contaminant	Maximum Detection Sample Date (Month/Year)	Level Detected (Maximum) (Range)	Unit Measurement	Regulatory Limit (MCL, TT or AL)	Violation	MCLG	Sources in Drinking Water	
				RADIOACTIVE (	CONTAMIN	ANTS		
Combined Radium 226/228	4/19	4.7 0.69 to 4.7	pCi/l	MCL=5	No	0	Erosion of natural deposits.	
Gross Alpha	4/19	6.3 0.04 to 6.3	pCi/l	MCL=15	No	0	Erosion of natural deposits.	
Gross Beta	10/19	6.2 0.3 to 6.2	pCi/l	MCL=15	No	0	Erosion of natural deposits.	
Uranium	4/19	3.1 0.02 to 3.1	pCi/l	MCL=30	No	0	Erosion of natural deposits.	
				DISINFECTION	BYPRODU	ICTS		
Total Trihalomethanes 8	3/20	4.35 8 ND to 9.0	ug/l	MCL=80	No	0	Byproduct of drinking water disinfection.	
			UNREGULAT	ED CONTAMIN	IANTS MO	NITORING I	RULE 3	
Bromide	6/18 & 12/18	497 88 to 497	ug/l	No Standard	No	N/A	Naturally occurring.	
Perfluorobutanesulfonic acid (PFBS)	4/20	8.1 ND to 8.1	ng/l	MCL=70 7	No	N/A	PFBS/PFHpA/PFHxS/PFNA have been used to make carpets, leath textiles, fabrics for furniture, paper packaging, and other materials that resistant to water, grease or stains. It is also used in firefighting foams airfields. Many of these uses have been phased out by its primary U manufacturer, however, there are still some ongoing uses.	
Perfluoroheptanoic acid (PFHpA)	10/20	7.7 ND to 7.7	ng/l	MCL=70 7	No	N/A		
Perfluorohexanesulfonic acid (PFHxS)	10/20	6.6 ND to 6.6	ng/l	MCL=70 <sup>7</sup>	No	N/A		
Perfluorononanoic acid (PFNA)	7/20	16.2 ND to 16.2	ng/l	MCL=70 7	No	N/A		

#### **Table Definitions**

**90<sup>th</sup> Percentile Value** The values reported for lead and copper represent the 90<sup>th</sup> 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 90<sup>th</sup> percentile is equal to or greater than 90% of the lead and copper values detected at your water system.

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

**LRAA (Location Running Annual Average)** The average of analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

**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 possible.

**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.

**MRDL** (Maximum Residual Disinfectant Level) The highest level of a disinfectant allowed in your drinking water. A certain amount of disinfectant has been shown to help control germs and microbes in the water.

**MRDLG (Maximum Residual Disinfectant Level Goal)** If the value of "Level Detected" column is below the MRDLG there is no known or expected risk to your health.

**N/A** Not applicable.

**ND** (Non-detects) Laboratory analysis indicates that the constituent is not present.

**SI (Saturation Index)** A measurement of the Langelier Saturation Index (LSI). LSI is a calculated number used to predict whether water will precipitate, dissolve or be in equilibrium with calcium carbonate. A negative LSI indicates that water has no scaling potential; a positive LSI indicates that scale has the potential to form.

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

#### Units

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

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

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

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

#### **Table Notes**

- In February and March of 2020, total coliforms were detected in one (1) sample of the 100 monthly routine compliance samples collected in our system during those months. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially harmful bacteria may be present. Three (3) additional samples were subsequently collected that month and total coliforms were not detected in those samples. Since total coliforms were detected in less than 5 percent of the samples collected during that month, the system did not have an MCL violation.
- 2 The value reported for copper represents the 90th percentile. In this case 54 samples were collected at your water system and the 90th percentile value was the fifth highest value (0.11 mg/l). The action level for copper was not exceeded at any of the sites tested.
- 3 The value reported for lead represents the 90th percentile. In this case 54 samples were collected at your water system and the 90th percentile value was the fifth highest value was (1.3 ug/l). The action level for lead was not exceeded at any of the sites tested.

- 4 Nitrate in drinking water at levels above 10 mg/l is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. If you are caring for an infant, you should ask for advice from your health care provider.
- 5 Water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.
- 6 New York State established a maximum contaminant level (MCL) of 1 part per billion (ppb) for 1,4-Dioxane as of August 26, 2020.
- 7 The U.S. Environmental Protection Agency (EPA) has established a lifetime health advisory (HAL) of 70 parts per trillion (ppt) for PFOA and PFOS combined. New York State established a maximum contaminant level (MCL) of 10 ppt for PFOA and 10 ppt for PFOS as of August 26, 2020.
- 3 Total Trihalomethanes (TTHMs) means the sum of chloroform, bromodichloromethane, dibromochloromethane, and bromoform. The Location Running Annual Average (LRAA) was used in the table.

#### **Water Conservation Methods**

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water. Saving water saves energy and some of the costs associated with both of these necessities of life. Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water storage tanks. It also lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential fire fighting needs are met.

You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less water whenever you can. The following suggestions will help you make your home "water efficient" without sacrificing comfort or changing lifestyles:

- Turn off your automatic lawn sprinkler if rain is expected or install a rain sensor.
- Load your automatic dishwasher to its maximum capacity before running it. Dishwashers use approximately 15 gallons for every cycle regardless of how many dishes are loaded.
- Turn off the tap when brushing your teeth or while shaving.
- 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 toilet 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 which will indicate a leak. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. By fixing it, you can save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn
  off all faucets and water using appliances, and be sure no
  one in your family uses water during the testing period.
  Note the water meter reading and check the meter after
  15 minutes. If the dial indicator on the water meter
  moved, you have a leak.

#### **Outside Water Use Restrictions**

Lawn sprinkling remains the leading nonessential use of water. Your lawn needs about 1-1/2 inches of water a week, preferably in one watering. You shouldn't follow a fixed schedule, but water only when the grass or plants show signs of needing it. During a cool or cloudy spell, you don't need to water as often.

Please remember that Nassau County watering regulations for lawns and gardens are in effect year-round. Outside water usage is prohibited between the hours of 10:00 a.m. and 4:00 p.m. year-round. Customers with odd-numbered addresses may only water on odd days of the month and customers with even-numbered (or no number) addresses may only water on even days of the month.

#### 2020 Statistics At-a-Glance

Wells Closed/Restricted	None
Violations of Standards	None
Number of Service Connections (Customers)	28,077
Population Served	120,000
Total Water Produced (billion gallons) <sup>1</sup>	4.046
Daily Average (million gallons)	11.056
Highest Single Day (million gallons)	19.455
Total Wells in System	24
Active Wells in System	20
Storage Facilities	4 ground, 3 elevated
Storage Capacity (million gallons)	11.8
Miles of Main	234
Fire Hydrants	2,432
Water Obtained or Disbursed through Interconnections With Other Water Suppliers	None
Average Annual Residential Water Rates (based on 102,000 gallons) <sup>2</sup>	\$538

- Approximately 82.3 percent of the water produced in 2020 was billed directly to customers and 8.0 percent was used for main flushing, hydrant testing and maintenance, and station and tank maintenance. The balance, or unaccounted for water of approximately 9.7 percent, was used for contractor activity, fighting fires, filling street sweepers and sewer cleaning trucks and also includes losses due to leaks, water main breaks and hit hydrants.
- <sup>2</sup> On June 1, 2020 the Water Authority implemented a 10.57% rate increase. The majority of Water Authority customers utilize a 5/8" meter and are charged quarterly \$53.54 for the first 9,000 gallons used. All customers pay \$4.897 per thousand gallons for the next 135,000 gallons, and then pay \$5.018 per thousand gallons for usage over 144,000 gallons.

Customers in violation of the Nassau County watering regulations are subject to the following terms adopted by the Water Authority's Board of Directors on May 27, 2003:

1st Violation: Warning

2nd Violation: \$50 Service Charge

3rd Violation: \$75 Service Charge

4th Violation: \$150 Service Charge

5th Violation: \$300 Service Charge

Each Additional: \$300 Service Charge

These service charges will be billed to the customer's water service account.

## **System Improvements**

In addition to the extensive monitoring and testing performed on our water supply, the Water Authority maintains, services and upgrades its water supply facilities and distribution system regularly. In 2020 capital projects completed or underway included the following:

- Completed electrical and mechanical upgrades at Station No. 15's (Elmont) booster pump facility and completed construction of a new Well No. 15D building.
- Completed emergency construction of a GAC wellhead treatment system for PFA's at Station No. 28 (Elmont) and Station No. 44 (Elmont).
- Construction of a new treatment facility at Station No. 57 (New Hyde Park). The new facility will provide treatment to remove 1,4 Dioxane and PFA's, including the replacement of the existing VOC removal system and raising the existing below grade well pumps to 18-inches above finished grade.
- Replacement of Well No. 16A's (New Hyde Park) well pump and appurtenances.
- Completed pilot testing for new treatment facilities at Station Nos. 20 (New Hyde Park), 35 (Floral Park) and 40 (New Hyde Park).
- Service and hydrant replacements.
- Computer upgrades and replacements.
- Meter replacements.

Planned improvements for 2021 include:

- Completion of a new treatment facility at Station No. 57 (New Hyde Park),
- Emergency construction of new GAC wellhead treatment for PFA's at Station No. 20 (New Hyde Park) and construction of permanent building to house the GAC vessels.
- Emergency construction of new AOP and GAC well-head treatment for 1,4 Dioxane and PFA's at Station No. 35 (Floral Park) and construction of a permanent building to house the GAC vessels.
- Rehabilitation of Tank No. 20 (Elmont).
- Design of new treatment facility at Station No. 40 (New Hyde Park). The new facility will provide treatment removal of 1,4 Dioxane and PFA's.
- Service and hydrant replacements;
- Floral Park and South Floral Park main replacement.
- Computer upgrades and replacements.
- Meter replacements.
- Vehicle and large equipment replacements.

#### **Unregulated Contaminant Monitoring Rule 3**

In 2018, the Water Authority was required to collect and analyze drinking water samples for unregulated contaminants. Unregulated contaminants that were detected are reported in the Table of Detected Contaminants found on page 5 of this report. You may obtain information on the monitoring results by contacting the Water Authority's Chief Engineer, Michael Leiner, PE at (516) 327-4100.

# Annual Chairman's Report Fiscal Year June 1, 2019 to May 31, 2020

Total Revenues Earned \$18,070,081

Operating and Maintenance Expenses \$10,178,138

Interest Expense on Long-term Debt \$4,429,318

Interest Income \$777,634

Additional expenses during the year included depreciation and amortization of original revenue bond and subsequent refinancing closing costs associated with the original purchase of the water system.

\$319,827

Miscellaneous Income



1580 Union Turnpike New Hyde Park, NY 11040

Phone: (516) 327-4100 Fax: (516) 327-4132 E-mail: inquiry@wawnc.org

Business Hours: Monday through Friday 8:00 a.m. to 5:00 p.m.

ACH & Credit Card payment options now available.
Add your contact information for Emergency Notifications.
Visit www.wawnc.org for more details.



# **About this Report**

To comply with New York State ("State") regulations, the Water Authority annually issues a report describing the quality of your drinking water. During 2020, our system was in compliance with applicable State drinking water operating, and reporting requirements.

During the 2020 calendar year, the Water Authority conducted more than 43,000 tests for over 163 drinking water contaminants. Last year, as in years past, your tap water met all United States Environmental Protection Agency ("EPA") and State drinking water health standards.

This report provides an overview of last year's water quality and includes details about where your water comes from, what it contains and how it compares to EPA and State standards. As in years past, our system was in compliance with all applicable State drinking water operating and reporting requirements as well as notification procedures.

If you have any questions about this report or your drinking water, please contact Michael Leiner, PE our Chief Engineer, at (516) 327-4100.

# **Share This Report**

Landlords, businesses, schools, hospitals and other groups are encouraged to share this important water quality information with water users at their location who are not customers of the Water Authority of Western Nassau County.

Additional copies of this report are available on our website at www.wawnc.org.

Or contact our customer service department at:

(516) 327-4100

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.



# Station 20,Well 20 Evergreen Avenue, New Hyde Park, N.Y.

Out of Service since January 27, 2021	
1,4 – dioxane (1 part per billion)	
PFOS (10 parts per trillion)	
PFOA (10 parts per trillion)	
1,4 – dioxane (.330 parts per billion)	
PFOS (10.6 parts per trillion)	
PFOA (11.6 parts per trillion)	

Construction Project for the Installation of Granular Activated Carbon ("GAC") vessels to remove PFOS/PFOA.

#### Phase 1 Construction Project Chronological Progress:

May 2020 Pilot Study Performed

August 2020 Pilot Study Report Sent to NYS Department of Health ("NYSDOH")

October 2020 Full Site Engineering Report Complete and Sent to NYSDOH

November 2020 Project Plans and Specifications Complete and sent to NYSDOH

December 2020 Construction Start Date with Estimated Completion Date of April 2021

March 15, 2021 GAC Vessels Arrived

May 2021 Estimated Well Startup and Completed Works Approval

	Pilot Study Report April 2021
Regulatory Approvals Dates	Full Engineering Report April 2021
	Approval of Overall Project May 2021

#### Phase 1 Current Status

All water assets are now installed. April 19th and 20th Bacteria samples will be taken from the air stripper and Well 20. Bacteria samples on the clearwell will be taken the week of April 14th. GAC vessels will be rinsed and backwashed during the week of April 14th. Arsenic sampling will take place at the end of next week. Target date for clean samples and approval to go to system is the second week of May. Approval request to utilize drainage system on Evergreen Avenue is ongoing but not expected to hold up GSAC treatment process going into service in time for peak demand season.

# Phase 2 Construction Project Permanent Building and Site Work Chronological Progress:

January 2021 Design of Permanent GAC Building

March 2021 Estimated Bid Date

June 2021 Estimated Construction Start Date

December 2021 Estimated Completion Date

Phase 3Construction Project Installation of AOP Treatment, Replacement of Elevated Storage Tank and Site Rehabilitation

Estimated Date of Engineering Report December 2022

Project Start Date September 2023

Estimated Completion Date December 2024



# Station 28,Well 28 Miriam Parkway, Elmont, N.Y.

Status:	April 2021 In Service	
	1,4 – dioxane (1 part per billion)	
NYS Allowable levels:	PFOS (10 parts per trillion)	
X	PFOA (10 parts per trillion)	
Maria Daniel Dan	1,4 – dioxane (ND parts per billion)	
Most Recent Raw Water Test Results: (Samples collected on March 9, 2021)	PFOS (4.3 parts per trillion)	
	PFOA (13.2 parts per trillion)	
M . B . T . I IW . T . I B II	1,4 – dioxane (ND parts per billion)	
Most Recent Treated Water Test Results: (Samples collected on March 9, 2021)	PFOS (<1.8 parts per trillion)	
	PFOA (<1.8 parts per trillion)	
Construction Desiret for the Installation of Consular Activated Corbon ("CAC") vaccale to		

Construction Project for the Installation of Granular Activated Carbon ("GAC") vessels to remove PFOS/PFOA.

# Phase 1 Construction Project Chronological Progress:

November 2019 Full Site Engineering Report Complete and Sent to NYSDOH

November 2019 Project Plans and Specifications Complete and sent to NYSDOH

December 2019 Construction Start Date with Estimated Completion Date of May 2020

June 2020 Estimated Well Startup and Completed Works Approval

Regulatory Approvals Dates	Full Engineering Report March 2020			
Regulatory Approvats Dates	Approval of Overall Pro	ject June 2020		

## Phase 2 Construction Project Temporary Fabric Enclosures:

January 2021 Enclosure Installation Started

February 2021 Enclosure Installation Complete

#### Phase 3 Construction of Permanent Building around GAC Vessels

Permanent building installation to take place beginning January 2023

\*\*\*\* Well 28 running to system through new treatment. Water quality is in compliance with all NYSDOH Standards



# Station 35,Well 35A Cisney Avenue, Floral Park, N.Y.

Status:	April 2021 In Service
NYS Allowable levels:	1,4 – dioxane(1 part per billion) PFOS (10 parts per trillion) PFOA (10 parts per trillion)
Most Recent Raw Water Test Results: (Samples collected March 11, 2021)	1,4 – dioxane(.680 parts per billion) PFOS (5.3 parts per trillion) PFOA (8.1 parts per trillion)

Construction Project for the Installation of Granular Activated Carbon ("GAC") vessels to remove PFOS/PFOA and installation of Ultraviolet Advanced Oxidation Process ("AOP") to remove 1,4 – dioxane.

#### Phase 1 Construction Project Chronological Progress:

April 2020 Pilot Study Performed

August 2020 Pilot Study Report Sent to NYS Department of Health ("NYSDOH")

October 2020 Full Site Engineering Report Complete and Sent to NYSDOH

December 2020 Project Plans and Specifications Complete and sent to NYSDOH

January 2021 Construction Start Date with Estimated Completion Date of May 2021

March 2021 GAC Vessels Expected to Arrive

March 2021 AOP Enclosure Expected to Arrive

April 2021 AOP Equipment Expected to Arrive

June 2021 Estimated Well Startup and Completed Works Approval

	Pilot Study Report March 2021
Regulatory Approvals Dates	Full Engineering Report NCDOH April 2021
Regulatory Approvals Dates	(Awaiting comments from NYSDOH)
	Approval of Overall Project June 2021

#### Phase 1 Current Status

The Water Authority experienced several weeks of delay due to weather conditions. The AOP enclosure arrived on March 4, 2021 and is set. The AOP reactor is scheduled to arrive on April 13, 2021. The GAC vessel manufacturer has been delayed by one month and are now scheduled for delivery on April 28th. Given the proximity of this site to the LIRR we are

required to receive Coordination approval which was received April 3, 2021. During these delays contractors continued to work on site piping and other essential project items. Target date for approval to go to system remains at June 2021.

Phase 2 Construction Project Permanent GAC Building and Site Work Chronological Progress:

April 2021 Design of Permanent GAC Building

April 2021 Estimated Bid Date for Permanent GAC Building

July 2021 Estimated Construction Start Date for Permanent GAC Building; expected to take 6 months

Phase 3 Construction Project Demolition of Existing Well House to Raise Wells and Site Rehabilitation Work:

Project will start following the installation of all Water Authority wellhead treatment for emerging contaminants for all Water Authority impacted wells.

Note: Well 35 at this site is out of service due to high levels of iron.



# Station 40, Wells 40 & 40A (Headquarters Site)

Union	Turnpik	e, New	Hyde	Park,	N.Y.
-------	---------	--------	------	-------	------

Status:	April 2021 In Service		
	1,4 – dioxane(1 part per billion)		
NYS Allowable levels:	PFOS (10 parts per trillion)		
	PFOA (10 parts per trillion)		
Most Recent Raw Water Test Results:			
W II 40	1,4 – dioxane(.590 parts per billion)		
Well 40	PFOS (4.9 parts per trillion)		
(Samples collected March 11, 2021)	PFOA (8.5 parts per trillion)		
W. H. 404	1,4 – dioxane (1.20 parts per billion)		
Well 40A	PFOS (6.3 parts per trillion)		
(Samples collected March 11, 2021)	PFOA (9.5 parts per trillion)		
Construction Project for the Installation of Granular Activated Carbon ("GAC") vessels to remove PFOS/PFOA and installation of Ultraviolet Advanced Oxidation Process ("AOP") to remove 1,4 – dioxane.			

#### Phase 1 Construction Project Chronological Progress:

April 2020 Pilot Study Performed

August 2020 Pilot Study Report Sent to NYS Department of Health ("NYSDOH")

	Pilot Study Report March 2021
Regulatory Approvals Dates	Full Engineering Report NCDOH April 2021
Regulatory Approvats Dates	(Awaiting comments from NYSDOH)
	Approval of Overall Project June 2021

<sup>\*</sup>Water Authority is awaiting NYSDOH comments on Pilot Study.

Available space for wellhead treatment at this site is an obstacle to preparing the full engineering report and to prepare project design and specifications. This site serves as the Water Authority headquarters location.

In December 2020 the Water Authority acquired one section of property adjacent to this well station. The Water Authority has begun action to acquire a second property adjacent to this site which will provide adequate space for the installation of new wellhead treatment systems. Eminent Domain procedures have begun, a public hearing is scheduled for April 19,

2021, and we expect results toward obtaining this adjacent property by July 2021.

The Water Authority has instructed the engineering firm of H2M Group to prepare a request for blending proposal of the two wells located at Station 40. This report is in draft form and expected to be forwarded in April 2021. The Engineering Report is expected to be complete by May 2021 using the assumption that the adjacent property is acquired.

Potential delays could occur toward the procurement of necessary treatment system assets. It is expected to take 3-4 months to obtain GAC vessels and 6-7 months to obtain an AOP reactor.



# Station 44, Wells 44, 44A, 44B, 44C Chelsea Street, Elmont, N.Y.

Update: April 7, 2021	
Status:	April 2021 In Service
NYS Allowable levels:	1,4 – dioxane(1 part per billion) PFOS (10 parts per trillion) PFOA (10 parts per trillion)
Most Recent Raw Water Test Results:	
Well 44 (Samples collected March 9, 2021)	1,4 – dioxane(ND parts per billion) PFOS (7.3 parts per trillion) PFOA (12.2 parts per trillion)
Well 44A (Samples collected March 9, 2021)	1,4 - dioxane (ND parts per billion) PFOS (26.7 parts per trillion) PFOA (10.1 parts per trillion)
Well 44B (Samples collected March 9, 2021)	1,4 – dioxane (ND parts per billion) PFOS (9.0 parts per trillion) PFOA (16.2 parts per trillion)
Well 44C (Samples collected March 9, 2021)	1,4 – dioxane (ND parts per billion) PFOS (9.2 parts per trillion) PFOA (16.2 parts per trillion)
Most Recent Treated Water Test Results:	
Well 44 / 44A (Samples collected March 9, 2021)	1,4 – dioxane (NA parts per billion) PFOS (<1.9 parts per trillion) PFOA (<1.9 parts per trillion)
Well44B / 44C (Samples collected March 9, 2021)	1,4 – dioxane (NA parts per billion) PFOS (<1.9 parts per trillion) PFOA (<1.9 parts per trillion)
Construction Project for the Installation of Granular Activated Carbon ("GAC") vessels to remove PFOS/PFOA.	
Phase 1 Construction Project Chronological	Progress:

September 2019 Full Engineering report complete and sent to NYSDOH

November 2019 Project design and specifications complete and sent to NYSDOH

December 2019 Project Construction begins

January 2020 Calgon Carbon column testing performed

Actual Regulatory Approval Dates

Full Engineering Report March 2020

Design Approval April 2020

Approval of Overall Project in Service June

2020

# Phase 2 Construction Project Temporary Fabric Vessel Enclosures:

December 2020 Construction of Fabric tent enclosures around 2 sets of vessels

January 2021 Tent Enclosures are Complete

Phase 3 Construction Project Permanent Treatment Buildings, Raising Wells and full site Rehabilitation:

August 2021 Design and Specifications for Public Bidding

October 2021 Construction starts

Project length is estimated at 1 ½ years

\*\*\*\*Wells 44, 44A, 44B and 44C running to system through new treatment. Water quality is in compliance with all NYSDOH Standards.



# Station 57, Wells 57, 57A South 6th Street, New Hyde Park, N.Y.

Update: April 2021		
Status:	Out of Service since October 15, 2020	
NYS Allowable levels:	1,4 – dioxane(1 part per billion) PFOS (10 parts per trillion) PFOA (10 parts per trillion)	
Most Recent Raw Water Test Results (last test October 2020):		
Well 57	1,4 - dioxane(14.5 parts per billion) PFOS (7.9 parts per trillion) PFOA (68.7 parts per trillion)	
Well 57A	1,4 – dioxane(11.9 parts per billion) PFOS (4.8 parts per trillion) PFOA (61.9 parts per trillion)	
Construction Project for the Installation of Granular Activated Carbon ("GAC") vessels to remove PFOS/PFOA and installation of Ultraviolet Advanced Oxidation Process ("AOP) to remove 1,4 – dioxane.		
Phase 1 Construction Project Chronological Progress of Full Site Rehabilitation:		
December 2016 Acquired property adjacent to this site  September 2018 Pilot Study Performed  March 2019 Pilot Study Report Sent to NYS Department of Health ("NYSDOH")  June 2019 Full Engineering report complete and sent to NYSDOH  January 2020 Project design and specifications complete and sent to NYSDOH  October 2020 Project Construction begins with Estimated Completion Date of October 2021		
EstimatedRegulatory Approval Dates	Pilot Study Report July 2019 Full Engineering Report May 2020	

This project includes a full site rehabilitation including demolition of all existing buildings, raising wells, new air stripper tower, new emergency generator, replacement of all water assets and appurtenances and new wellhead treatment for the removal of emerging contaminants.

#### **Current Status**

The Water Authority experienced several weeks delay resulting from Winter weather conditions. There were also delays due to unexpected storage tank piping. This project includes full demolition of assets which is complete. The Air Stripper and GAC buildings have foundations in place and walls are being formed at this time. Site piping is well underway. The AOP reactor has already been delivered and is stored off site. The GAC vessels are complete and ready to be shipped. The new Air Stripper is complete and ready to be shipped. The Emergency Generator is ordered and expected to be delivered by late Summer.

Despite the aforementioned delays we expect completion of this project to remain at October 2021 for approval to go into service.

## IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Deferral Issued for PFOA, PFOS and 1,4-Dioxane at the Water Authority of Western Nassau County

#### Why are you receiving this notice/information?

You are receiving this notice because testing of our public water system found the chemicals perfluorooctanoic acid (PFOA), perfluorooctanesulfonic acid (PFOS) and 1,4-Dioxane in your drinking water. This is above New York State's maximum contaminant level (MCL) of 10 parts per trillion (ppt) for PFOA, 10 ppt for PFOS and 1 part per billion (ppb) for 1,4-Dioxane in public drinking water systems. The MCL is set well below levels known or estimated to cause health effects. Consuming drinking water with PFOA, PFOS or 1,4-Dioxane at or somewhat above the MCL does not pose a significant health risk. Your water continues to be acceptable for all uses. The Water Authority of Western Nassau County is working on a strict timetable to reduce levels below the MCL.

The Water Authority of Western Nassau County has submitted, and the New York State Department of Health (Department) has issued, a deferral to the Water Authority of Western Nassau County. When a public water system is issued a deferral, the water system agrees to a schedule for corrective action and compliance with the new MCLs. In exchange, the Department agrees to defer enforcement actions, such as assessing fines, if the water district is meeting the established deadlines. We are required to update the Department and the Nassau County Department of Health each calendar quarter on the status of our projects. If we do not meet the agreed upon deadlines, the Department can resume enforcement.

#### What are the health effects of PFOA/PFOS?

The available information on the health effects associated with PFOA and PFOS, like many chemicals, comes from studies of high-level exposure in animals or humans. Less is known about the chances of health effects occurring from lower levels of exposure, such as those that might occur in drinking water. As a result, finding lower levels of chemicals in drinking water prompts water suppliers and regulators to take precautions that include notifying consumers and steps to reduce exposure.

PFOA and PFOS has caused a wide range of health effects when studied in animals that were exposed to high levels. Additional studies of high-level exposures of PFOA and PFOS in people provide evidence that some of the health effects seen in animals may also occur in humans. The most consistent findings in animals were effects on the liver and immune system and impaired fetal growth and development. The United States Environmental Protection Agency considers PFOA and PFOS as having suggestive evidence for causing cancer based on studies of animals exposed to high levels of this chemical over their entire lifetimes.

At the level of PFOA and PFOS detected in your water, exposure from drinking water and food preparation is well below PFOA and PFOS exposures associated with health effects.

## What are the health effects of 1,4-dioxane?

Laboratory studies show that 1,4-dioxane caused liver cancer in animals exposed at high levels throughout their lifetime. Other types of cancer have also been reported, although less consistently than liver cancer. There is no evidence of 1,4-dioxane cancer effects in humans. The United States Environmental Protection Agency considers 1,4-dioxane a likely human carcinogen based upon studies of animals exposed to high levels of this chemical over their entire lifetimes.

At the level of 1,4-dioxane detected in your water, exposure from drinking water and food preparation is well below 1,4-dioxane exposures associated with health effects.

# What is New York State doing about PFOA, PFOS and 1,4-Dioxane in public drinking water?

The New York State Department of Health (NYS DOH) has adopted a drinking water regulation that requires all public water systems to test for PFOA, PFOS and 1,4-dioxane. If found above the MCLs, the water supplier must take steps to lower the level to meet the standard. Exceedances of the MCL signal that steps should be taken by the water system to reduce contaminant levels.

## What is being done to remove these contaminants?

The Water Authority will make every effort to operationally minimize the concentration of 1,4-dioxane, PFOA and PFOS in the distribution system at any given time. Additional information will be shared as further testing and progress occurs. This process is similar for any chemical detected in public drinking water that requires mitigation. The compliance timetable will ensure that your drinking water will meet the MCL as rapidly as possible. The deferral is effective until August 25, 2022.

# Where can I get more information?

For more information, please contact Michael J. Tierney at (516) 327-4100 or by mail at Water Authority of Western Nassau County, 1580 Union Turnpike, New Hyde Park, NY 11040. You can also contact the Nassau County Health Department at (516) 227-9692.

If you have additional questions about these contaminants and your health, talk to your health care provider who is most familiar with your health history and can provide advice and assistance about understanding how drinking water may affect your personal health.

Public Water System ID# NY2902830 Date January 29, 2021