

2020 drinking water quality report

INC. VILLAGE OF HEMPSTEAD WATER DEPARTMENT
PUBLIC WATER SUPPLY IDENTIFICATION NO. 2902827

ANNUAL WATER SUPPLY REPORT

APRIL 2021

CONSUMER CONFIDENCE REPORT and
ANNUAL WATER SUPPLY STATEMENT

for the
INCORPORATED VILLAGE OF HEMPSTEAD

A Message from the Mayor

Dear Hempstead Village Resident:

On behalf of the Village's Water Department, I am pleased to provide you with a copy of our **CONSUMER CONFIDENCE REPORT and ANNUAL WATER SUPPLY STATEMENT**. This report is provided each year to give you important information about the quality of drinking water in the Village of Hempstead, pursuant to state and federal regulations.

Water is one of our most precious natural commodities, and our drinking water supply is both safe and plentiful. In fact, Long Island has one of the safest and most tightly regulated public water supply systems in the entire country, and the New York State Department of Health has adopted regulations for "Emerging Contaminants" including 1,4 Dioxane and PFAS (Per and Poly Fluoro-Alkanated Substances).

We must do everything possible to ensure that both the quality and quantity of our drinking water is protected now and in the future. To achieve these objectives, the Village continues to implement projects that improve the safety, reliability and cost effectiveness of the water system including new treatment systems, leak detection, well screen cleaning, piping, pump and valve replacements and security improvements. The Village worked diligently to obtain past grants and we will continue efforts to secure additional funding sources to protect our water quality and reduce the cost burden on our residents.

Treatment systems for several wells were placed into operation last year to remove a compound found in our water supply, and other treatment systems are now being planned. The Village asks residents to continue efforts to conserve water both to save money and to conserve this natural resource. Thanks to the cooperation of our residents in conserving water, overall pumpage was reduced and we were able to get through the 2020 peak summer water usage season without having to enforce any mandatory water restriction measures. Residents should be aware that our Water Conservation Alert is still in effect so we ask that you continue practicing conservation measures on an ongoing basis. Tips on how to conserve water can be found in this report as well as on our Village website at: www.villageofhempstead.org.

A new advanced oxidation pilot scale treatment system is currently in use at the Clinton Street treatment plant as part of the design process to address emerging contaminants at existing wells, and further improvements include planning for new water wells.

This report provides all the information required under both state and federal regulations, together with additional information that you may find useful. Included is information relative to the current status of the Water Quantity, Water Quality, & Water Conservation Program of the Incorporated Village of Hempstead. A summary of the 2020 laboratory testing results from the distribution system and a review of water conservation measures available to the Village's consumers are also provided. Laboratory testing data for each well has been placed in the Hempstead Public Library and may also be obtained at Village Hall, 99 James A Garner Way, Hempstead, New York during regular business hours (8:30 - 4:15 Monday - Friday).

In the meantime, should you have any additional questions, please contact my office at 489-3400. Thank you for your continued interest in our community and our most precious natural resource.

Sincerely,



Waylyn Hobbs Jr.

Mayor of the Incorporated Village of Hempstead

2020 drinking water quality report

INC. VILLAGE OF HEMPSTEAD WATER DEPARTMENT
PUBLIC WATER SUPPLY IDENTIFICATION NO. 2902827

INTRODUCTION

To comply with State and Federal regulations, the Village of Hempstead issues an annual report describing the quality of our drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, we conducted over 10,000 tests on the water, for 158 different chemicals, contaminants, or water quality parameters. We detected 33 of those chemicals, contaminants, or water quality parameters in the distribution system with none of those at a level higher than what the State allows. 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 State standards.

If you have any questions about this report or concerning your drinking water, please contact Mayor Waylyn Hobbs at (516) 489-3400. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled Village Board meetings. The meetings are held the first and third Tuesday of each month (except July and August only the first Tuesday) in Village Hall, and start at 7:00 PM.

SOURCE OF OUR WATER

In general, the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, 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's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

The New York State Department of Health (NYSDOH) 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 Contaminants in our Drinking Water?" for a list of the contaminants that have been detected (if any). The source water assessments provide resource managers with additional information for protecting source waters into the future.

Drinking water is sourced from nine wells. The source water assessment has rated all of the wells as having a very high susceptibility to industrial solvents and a high susceptibility to nitrates. The elevated 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 elevated susceptibility to nitrates is due to residential land use and related practices, such as fertilizing lawns, as well as the historical use of cesspools and agricultural activities in the assessment area.

A copy of the assessment, including a map of the assessment area, can be obtained by contacting the Village, as noted below.

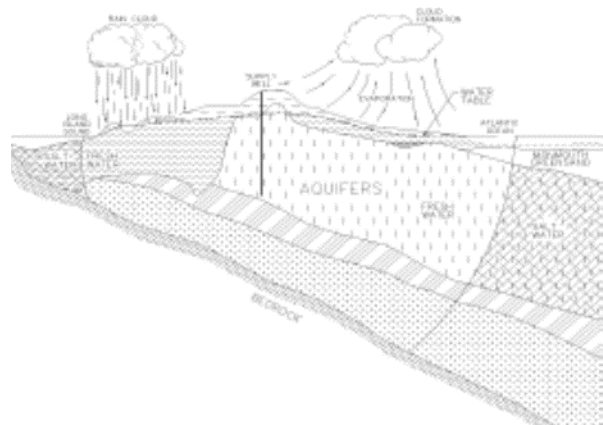
The source of water for the Village is groundwater drawn from the Magothy aquifer through nine drilled wells, ranging from 365 to 535 feet deep. These wells are located at the Clinton Street and Laurel Avenue Water Plants. During 2020, our system experienced a restriction of our water source due to detections of Freon 22 in Wells 7 & 9 until an

2020 drinking water quality report

INC. VILLAGE OF HEMPSTEAD WATER DEPARTMENT
PUBLIC WATER SUPPLY IDENTIFICATION NO. 2902827

aeration treatment system was placed in service. The use of Well 2R and Well 4 was voluntarily limited due to increasing concentrations of iron. Wells 1RR, 3R, 5, 6R and 8 were available for operation throughout the year except for periods of scheduled maintenance.

Plumes of volatile organic compounds have impacted the water quality in portions of the Magothy aquifer, and water from impacted wells is treated prior to being pumped to the distribution system as described below.



THE LONG ISLAND AQUIFER SYSTEM

WATER TREATMENT

The pH of the untreated water is low (acidic), and some of the wells have high iron levels prior to treatment. Iron is an aesthetic problem and is not health related. The water obtained from the Village's active wells meets all water quality criteria established by Federal and State agencies after treatment.

The Incorporated Village of Hempstead provides several types of treatment at all wells to improve water quality prior to distribution of water to the consumer. The pH of the water pumped is adjusted upward by the addition of caustic soda to reduce corrosive action between the water and water mains and household plumbing. Sequestering agents in the form of sodium hexametaphosphate and linear poly- and ortho-phosphates are added to keep dissolved

iron in solution and prevent the staining of laundry and fixtures. The water from Wells 1RR, 2R, 3R, 4, 5, 6R, and 8 at Clinton Street Plant is aerated to remove volatile organics, increase pH and oxidize iron. After aeration, chlorine is added to the water to prevent bacterial growth in the distribution system. Three air stripping towers are in operation to remove higher concentrations of volatile organics found in the water from Wells 1RR, 4, 5, 6R, 8, 7, and 9. Manganese Green Sand filters are used to remove dissolved iron from the water produced by Wells 7 and 9 at the Laurel Avenue Plant.

Very few chemicals are utilized to accomplish water treatment. The following table lists all of the treatment methods used by the Village:

WATER TREATMENT METHODS

METHOD	PURPOSE	CHEMICALS ADDED
Chlorination	Disinfection	Sodium Hypochlorite, Calcium Hypochlorite
Air Stripping	VOC Removal	None
Nozzle Stripping	Oxidation of Iron, VOC & Carbon Dioxide Removal	None
Iron Filtration	Remove Iron to Improve Aesthetics & Reduce Staining	Sodium Hypochlorite, Potassium Permanganate
Iron Sequestering	Improve Aesthetics & Reduce Staining	Sodium Hexametaphosphate; Blend of Poly & Ortho Phosphates
Corrosion Control	Reduce Metals Leaching From Household Plumbing	Caustic Soda (sodium hydroxide); Blend of Poly & Ortho Phosphates

VOC = volatile organic compound

2020 drinking water quality report

INC. VILLAGE OF HEMPSTEAD WATER DEPARTMENT
PUBLIC WATER SUPPLY IDENTIFICATION NO. 2902827

VILLAGE OF HEMPSTEAD WATER SYSTEM

The Village of Hempstead provides water to an official population of 53,891 full time residents (2010 Census) through 8,784 metered service connections. The water system includes 93.4 miles of water mains to serve an area of 3.8 square miles located within the village boundaries. The total amount of water withdrawn from the aquifer in 2020 was 1,733,819,000 gallons, of which approximately 97.4 percent was billed directly to consumers. The unbilled water was used for well and water main flushing, fire fighting, services to Village buildings, and losses due to leaks, inaccurate meters and water main breaks. The daily average of water treated and pumped into the distribution system was 4,750,189

gallons per day. Our highest single day was 8,135,000 gallons on July, 21, 2020.

The Inc. Village of Hempstead billed its consumers through a five-tier step schedule to encourage water conservation as follows:

2020 Water Rates (Effective August 1, 2020)	
Consumption (gallons per billing period)	Billing Rate
0-50,000	\$3.01/1000 gallons
50,001-100,000	\$4.11/1000 gallons
100,001-500,000	\$5.81/1000 gallons
500,001-1,000,000	\$7.00/1000 gallons
Over 1,000,000	\$7.69/1000 gallons

In 2020 the annual average water charge per household was approximately \$496.

SYSTEM IMPROVEMENTS

The Village has planned and secured partial funding for a number of significant improvements to the water system, which will continue in construction during the next several years. Projects now under construction include improvements to control systems and fiber optic cables; AOP treatment for emerging contaminant removal; and new wells at a third water plant. Installation of automated read water meters on a few remaining service lines

continued during 2020. Please contact the water department if you still have an old meter installed

Other projects in the planning and design stage include a pilot study and full scale design for 1,4 Dioxane treatment; searching for lead service lines; and planning for water transmission main improvements.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As New York State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total and fecal coliform bacteria; turbidity, nitrate, nitrite, lead and copper, and other inorganic compounds; total Trihalomethanes, volatile organic compounds; and synthetic organic compounds. The table presented below depicts which compounds are detected in your drinking water. A list of the contaminants tested for but not detected is contained in later sections of this report. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, may be more than one year old.

In addition to testing the treated drinking water delivered to your tap, the village also tests the quality of the raw water prior to treatment. The results of raw water samples from each well are contained in a Source Water Data Supplement. The

Supplement has been placed in the public library and copies may be obtained at Village Hall.

The Village of Hempstead was issued a deferral on January 8, 2021 for 1,4-Dioxane. With this deferral the water system agrees to schedule for corrective action and compliance with the new 1-4-Dioxane MCL. In exchange, the New York State Department of Health agrees to defer enforcement actions, such as assessing fines, if the Water Department is meeting established deadlines. Deferral recipients are required to update the Department and the Nassau County Department of Health each calendar quarter on the status of established deadlines. The Department can resume enforcement if the agreed upon deadlines are not met. Information about our deferral and established deadline can be found at the following site:

<https://www.villageofhempstead.org/404/Notice-of-Deferral-Approval-for-14-Dioxane>

2020 drinking water quality report

INC. VILLAGE OF HEMPSTEAD WATER DEPARTMENT
PUBLIC WATER SUPPLY IDENTIFICATION NO. 2902827

Additionally, we have an interconnection that allows us to take water from a Public Water System that is also currently operating under a deferral for PFOA and PFOS. Information about that system's deferral and established deadline can be found at the following site:

https://www.gardencityny.net/index.asp?Type=B_B ASIC&SEC={1534CA3D-55AB-4EE3-9528-40B429C3C121}

We will update the status of the interconnection at the Incorporated Village of Garden City, to indicate if it is active.

It should be noted that all drinking water, including bottled water, might reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791) or the Nassau County Department of Health at (516) 227-9697.

2020 drinking water quality report

INC. VILLAGE OF HEMPSTEAD WATER DEPARTMENT
PUBLIC WATER SUPPLY IDENTIFICATION NO. 2902827

2020 DRINKING WATER QUALITY REPORT - TABLE OF DETECTED PARAMETERS

Contaminants	Violation (Yes/No)	Date of Sample	Level Detected (Min. – Max.)	Unit Measurement	MCLG	Regulatory Limit (MCL or AL)	Likely Source of Contaminant	Health Effects
Lead & Copper								
Copper	No	August & September 2019	0.16	mg/l	1.3	AL = 1.3	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
Lead	No	August & September 2019	1.5	ug/l	0	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits	<p>If present, elevated levels of lead can cause serious health problems, especially for pregnant women 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 Village of Hempstead 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 or at http://www.epa.gov/safewater/lead.</p> <p>Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.</p>
Inorganic Contaminants & Physical Characteristics								
pH ⁷	No	8/11/2020 11/18/2020 12/15/2020	7.4 - 7.8	pH units	n/a	No MCL	Chemical Parameter used as a measure of acidity and alkalinity	
Sodium	No	12/15/2020	25.2 - 34.6	mg/l	n/a	No MCL ⁶	Naturally occurring; Road salt; Water softeners; Animal waste	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.
Chloride	No	12/15/2020	26.9 - 40.5	mg/l	n/a	MCL = 250	Naturally occurring or indicative of road salt contamination	Chloride is essential for maintaining good health. Research has not conclusively demonstrated that human exposure to chloride itself causes adverse health effects, although exposure to high levels of certain chloride salts has been associated with adverse health effects in humans. For example, high dietary intake of sodium chloride can be a contributing factor to high blood pressure, but this has been attributed mainly to the presence of sodium. The New York State standard for chloride is 250 milligrams per liter, and is based on chloride's effects on the taste and odor of the water.
Chlorine	No	1/7/2020 - 12/29/2020	0.92 – 1.5	mg/l	n/a	MRDL = 4	Added to water for disinfection	
Calcium	No	12/15/2020	5.9 - 7.4	mg/l	None	No MCL	Naturally occurring	

2020 drinking water quality report

INC. VILLAGE OF HEMPSTEAD WATER DEPARTMENT
PUBLIC WATER SUPPLY IDENTIFICATION NO. 2902827

Contaminants	Violation (Yes/No)	Date of Sample	Level Detected (Min. – Max.)	Unit Measurement	MCLG	Regulatory Limit (MCL or AL)	Likely Source of Contaminant	Health Effects
Iron	No	1/10/2020 12/15/2020	0.02 - 1.2	mg/l	n/a	MCL = 0.3	Naturally occurring	Iron is essential for maintaining good health. However, too much iron can cause adverse health effects. Drinking water with very large amounts of iron can cause nausea, vomiting, diarrhea, constipation and stomach pain. These effects usually diminish once the elevated iron exposure is stopped. A small number of people have a condition called hemochromatosis, in which the body absorbs and stores too much iron. People with hemochromatosis may be at greater risk for health effects resulting from too much iron in the body (sometimes called “iron overload”) and should be aware of their overall iron intake. The New York State standard for iron in drinking water is 0.3 milligrams per liter, and is based on iron’s effects on the taste, odor and color of the water.
Nitrate	No	6/17/2020 9/22/2020 12/15/2020	ND - 0.86	mg/l	10	MCL = 10	Runoff from fertilizer use; Leaching from septic tanks and sewage; Erosion of natural deposits	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.
Magnesium	No	12/15/2020	3.3 - 4.3	mg/l	n/a	No MCL	Naturally occurring	
Barium	No	12/15/2020	0.0044 - 0.0064	mg/l	n/a	MCL = 2.0	Discharge of drilling wastes	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure
Nickel	No	12/15/2020	0.0065 - 0.0078	mg/l	n/a	No MCL	Naturally occurring	
Sulfate	No	12/15/2020	18.5 - 19.1	mg/l	n/a	MCL = 250	Naturally occurring	Drinking water containing high concentrations of sulfate can cause short-term intestinal effects in humans. The effects can range from a laxative effect (loose stools) to diarrhea (unusually frequent and liquid bowel movements). Diarrhea is of particular concern in infants, because it can lead to more serious effects such as dehydration. Travelers or new residents, who may change from drinking water with low sulfate concentrations to drinking water with high sulfate concentrations, may experience short term intestinal effects due to sulfate. The New York State standard for sulfate is 250 milligrams per liter, and is based on sulfate’s effects on the taste and odor of the water.
Total Alkalinity	No	12/15/2020	11.3 - 42.4	mg/l	n/a	No MCL	Chemical Parameter used as a measure of alkalinity	
Calcium Hardness	No	12/15/2020	14.0 - 18.9	mg/l	n/a	No MCL	Chemical Parameter used as a measure of water hardness	
Total Hardness	No	12/15/2020	27.6 - 36.4	mg/l	n/a	No MCL	Chemical Parameter used as a measure of water hardness	
Total Dissolved Solids (TDS)	No	12/15/2020	108.0 - 113.0	mg/l	n/a	No MCL	Naturally occurring	
LSI	No	12/15/2020	Max -1.46 Min -1.89 Avg -1.675		n/a	No MCL	Chemical Parameter used as a measure of corrosivity or scale - forming tendency	
Color	No	12/15/2020	5.0 – 20.0	Units	n/a	MCL = 15	Large quantities of organic chemicals, inadequate treatment, high disinfectant demand and the potential for production of excess amounts of disinfectant by-products such as trihalomethanes, the presence of metals such as copper, iron and manganese; Natural color may be caused by decaying leaves, plants,	Color has no health effects. In some instances, color may be objectionable to some people at as low as 5 units. Its presence is aesthetically objectionable and suggests that the water may need additional treatment.

2020 drinking water quality report

INC. VILLAGE OF HEMPSTEAD WATER DEPARTMENT
PUBLIC WATER SUPPLY IDENTIFICATION NO. 2902827

Contaminants	Violation (Yes/No)	Date of Sample	Level Detected (Min. – Max.)	Unit Measurement	MCLG	Regulatory Limit (MCL or AL)	Likely Source of Contaminant	Health Effects
							and soil organic matter.	
Turbidity	No	12/15/2020	ND - 1.5	NTU	n/a	MCL = 5	Soil Runoff	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
Disinfection By-Products								
Total Trihalomethanes	No	3/2/2020 3/3/2020 6/17/2020 9/9/2020 9/22/2020	ND - 3.6 0.51 ⁹	ug/l	0	MCL = 80	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains organic matter.	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
Volatile Organic Contaminants								
Trichloroethene	No	3/2/2020 3/3/2020 6/17/2020 9/9/2020 9/22/2020	ND - 3.0	ug/l	0	MCL = 5	Discharge from metal degreasing sites and other factories.	Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
Tetrachloroethene	No	3/2/2020 3/3/2020 6/17/2020 9/22/2020	ND - 4.4	ug/l	n/a	MCL = 5	Discharge from factories and dry cleaners; Waste sites; Spills.	Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.
Radionuclides								
Gross Alpha	No	12/27/2019	3.97	pCi/L	n/a	MCL = 15	Erosion of natural deposits	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Gross Beta	No	12/27/2019	2.37	pCi/L	n/a	MCL = 50	Decay of natural deposits and man-made emissions.	Certain materials are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Radium 226 & 228 Combined	No	12/27/2019	1.695	pCi/L	n/a	MCL = 5 ¹⁰	Erosion of natural deposits	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
Synthetic Organic Compounds								
1,4-dioxane	No	2/27/2020 3/24/2020 9/15/2020 9/29/2020 12/14/2020 12/22/2020	0.03 - 8.9	ug/l	n/a	MCL = 1	Released into the environment from commercial and industrial sources and is associated with inactive and hazardous waste sites; present in some soaps, detergents and cosmetics. ¹⁰	Laboratory studies show that 1,4-dioxane caused liver cancer in animals exposed at high levels throughout their lifetime. Whether 1,4-dioxane causes cancer in humans is unknown. The United States Environmental Protection Agency considers 1,4-dioxane as likely to be carcinogenic to humans based upon studies of animals exposed to high levels of this chemical over their entire lifetimes.
Perfluorooctanoic Acid (PFOA) ⁸	No	2/27/2020 3/24/2020 9/15/2020 9/29/2020 12/14/2020 12/22/2020	ND - 11.0	ng/l	n/a	MCL = 10	Released into the environment from widespread use in commercial and industrial applications. ¹¹	PFOA caused a range of health effects when studied in animals at high exposure levels. The most consistent findings were effects on the liver and immune system and impaired fetal growth and development. Studies of high-level exposures to PFOA in people provide evidence that some of the health effects seen in animals may also occur in humans. The United States Environmental Protection Agency considers PFOA as having suggestive evidence for causing cancer based on studies of lifetime exposure to high levels of PFOA in animals.

2020 drinking water quality report

INC. VILLAGE OF HEMPSTEAD WATER DEPARTMENT
PUBLIC WATER SUPPLY IDENTIFICATION NO. 2902827

Contaminants	Violation (Yes/No)	Date of Sample	Level Detected (Min. – Max.)	Unit Measurement	MCLG	Regulatory Limit (MCL or AL)	Likely Source of Contaminant	Health Effects
Perfluorooctanesulfonic Acid (PFOS) ⁸	No	2/27/2020 3/24/2020 9/15/2020 9/29/2020 12/14/2020 12/22/2020	ND - 14.3	ng/l	n/a	MCL = 10	Released into the environment from widespread use in commercial and industrial applications. ¹¹	PFOS caused a range of health effects when studied in animals at high exposure levels. The most consistent findings were effects on the liver and immune system and impaired fetal growth and development. Studies of high-level exposures to PFOS in people provide evidence that some of the health effects seen in animals may also occur in humans. The United States Environmental Protection Agency considers PFOS as having suggestive evidence for causing cancer based on studies of lifetime exposure to high levels of PFOS in animals.

Definitions:

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

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 Residual Disinfection 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 Disinfection Level Goal (MRDLG) - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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

Health Advisory (HA) - 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.

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 in one trillion parts of liquid (parts per trillion - ppt)

Nephelometric Turbidity Unit (NTU) - Signifies that the instrument is measuring scattered light from the sample at a 90-degree angle from the incident light.

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

pCi/L - pico Curies per Liter is a measure of radioactivity in water.

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

⁽²⁾ - No MCL has been established for sodium. However, 20 mg/l is a recommended guideline for people on high restricted sodium diets and 270 mg/l for those on moderate sodium diets.

⁽³⁾ - TT (Treatment Technique) - A required process intended to reduce the level of a contaminant in drinking water.

⁽⁴⁾ - MCL is for Combined Radium 226 &

228.

⁽⁵⁾ - Perchlorate is an unregulated contaminant. However, the NYS Dept. of Health has established an action level of 18.0 ug/l.

⁽⁶⁾ - UCMR3 - Unregulated Contaminant Monitoring Rule 3 is a Federal water quality sampling program where water suppliers sample and test their source water for 1 year. Results will be used by the USEPA to determine if the contaminants need to be regulated in the future.

⁽⁷⁾ - USEPA guidelines for pH are 6.5 to 8.5; NY guidelines are 7.5 to 8.5 quality sampling program where water suppliers sample and test their source water for 1 year. Results will be used by the USEPA to determine if the contaminants need to be regulated in the future.

⁽⁸⁾ - The U.S. Environmental Protection Agency (EPA) has established a lifetime health advisory level (HAL) of 70 parts per trillion (ppt) for PFOA and PFOS combined. The New York State (NYS) proposed maximum contaminant level (MCL) is 10 ppt for PFOA and 10 ppt for PFOS.

⁽⁹⁾ - This level represents the highest locational running annual average calculated from the data collected.

⁽¹⁰⁾ - 1,4-Dioxane is used as a solvent for cellulose formulations, resins, oils, waxes and other organic substances. It is also used in wood pulping, textile processing, degreasing, in lacquers, paints, varnishes, and stains; and in paint and varnish removers.

⁽¹¹⁾ - PFO(A)S has been used to make carpets, leathers, textiles, fabrics for furniture, paper packaging, and other materials that are resistant to water, grease, or stains. It is also used in firefighting foams at airfields. Many of these uses are being phased out by U.S. manufacturers; however, there are still some ongoing uses.

2020 drinking water quality report

INC. VILLAGE OF HEMPSTEAD WATER DEPARTMENT
PUBLIC WATER SUPPLY IDENTIFICATION NO. 2902827

UNREGULATED CONTAMINANT TESTING FOR FURTHER MONITORING

Contaminants	Violation (Yes/No)	Date of Sample	Level Detected (Min. – Max.)	Unit Measurement	HAL	Likely Source of Contaminant
Unregulated Contaminants						
Perfluorohexanesulfonic Acid	No	2/27/2020 3/24/2020 9/15/2020 9/29/2020 12/14/2020 12/22/2020	ND – 6.0	ng/L	10.0	Used in firefighting foams, and in materials that are resistant to water, grease, or stains ²
Perfluorononanoic Acid	No	2/27/2020 3/24/2020 9/15/2020 9/29/2020 12/14/2020 12/22/2020	ND - 10.0	ng/L	10.0	Used in firefighting foams, and in materials that are resistant to water, grease, or stains ²

Definitions:

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.

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 in one trillion parts of liquid (parts per trillion - ppt)

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

⁽¹⁾ - 1,4-Dioxane is used as a solvent for cellulose formulations, resins, oils, waxes and other organic substances. It is also used in wood pulping, textile processing, degreasing, in lacquers, paints, varnishes, and stains; and in paint and varnish removers.

⁽²⁾ - PFO(A)S has been used to make carpets, leathers, textiles, fabrics for furniture, paper packaging, and other materials that are resistant to water, grease, or stains. It is also used in firefighting foams at airfields. Many of these uses are being phased out by U.S. manufacturers; however, there are still some ongoing uses.

2020 drinking water quality report

INC. VILLAGE OF HEMPSTEAD WATER DEPARTMENT
PUBLIC WATER SUPPLY IDENTIFICATION NO. 2902827

TABLE OF CONTAMINANTS NEVER DETECTED DURING 2020

Microbiological Contaminants			
E. Coliform	Total Coliform		
Primary (Health Related) Inorganic Parameters			
Arsenic	Silver	Cadmium	Chromium
Fluoride	Mercury	Selenium	Manganese
Secondary (Aesthetic) & Other Inorganic Parameters			
Antimony	Beryllium	Free Cyanide	Nitrite
Nitrogen, Ammonia	Manganese	MBAS (Foaming Agents)	Odor
Zinc			
Primary (Health Related) Volatile Organic Parameters			
Benzene	Carbon tetrachloride	1,4-Dichlorobenzene	1,2-Dichloroethane
1,1-Dichloroethene	1,1,1-Trichloroethane	Vinyl Chloride	
UCMR3 Parameters			
Perfluoroheptanoic Acid	Perfluorobutanesulfonic Acid	Perchlorate	
Other Volatile/Semi-Volatile/Non-Volatile Organic Parameters			
Bromobenzene	Bromochloromethane	Bromomethane	n-Butylbenzene
sec-Butylbenzene	tert-Butylbenzene	Chlorobenzene	Chloroethane
Chloroform	Chloromethane	2/4-Chlorotoluene	Dibromomethane
1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,1-Dichloroethane	cis-1,2-Dichloroethene
trans-1,2-Dichloroethene	Dichlorodifluoromethane	1,2-Dichloropropane	1,3-Dichloropropane
2,2-Dichloropropane	1,1-Dichloropropene	cis-1,3-Dichloropropene	trans-1,3-Dichloropropene
Ethylbenzene	Trichlorofluoromethane	Hexachlorobutadiene	Isopropylbenzene (Cumene)
4-Isopropyltoluene (p-Cymene)	Methyl tert-butyl ether (MTBE)	Methylene Chloride (Dichloromethane)	n-Propylbenzene
Styrene	1,1,1,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	Perchlorate
Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane
1,2,3-Trichloropropane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylene
o-Xylene	Bromoacetic acid	Dibromoacetic acid	Chloroacetic acid
Dichloroacetic acid	Trichloroacetic acid	Total Haloacetic Acid	
Specific Organic Chemicals / Pesticides			
Alachlor	Aldicarb	Aldicarb Sulfone	Aldicarb Sulfoxide
Atrazine	Carbofuran	Chlordane, Total	2,4-D
DBCP (1,2-Dibromo-3-Chloropropane)	Endrin	1,2-Dibromomethane (EDB)	Polychlorinated Biphenyls (PCBs)
Heptachlor	Heptachlor Epoxide	Lindane	Methoxychlor
Pentachlorophenol	Toxaphene	2,4,5-TP (Silvex)	Aldrin
Benzo(a)pyrene	Butachlor	Carbaryl	Dalapon
Di(2-ethylhexyl)adipate	Di(2-ethylhexyl)phthalate	Dicamba	Dieldrin
Dinoseb	Diquat	Endothall	Glyphosate
Hexachlorobenzene	Hexachlorocyclopentadiene	3-Hydroxycarbofuran	Methomyl
Metolachlor	Metribuzin	Oxamyl (Vydate)	Picloram
Propachlor	Simazine	2,3,7,8-TCDD (Dioxin)	

2020 drinking water quality report

INC. VILLAGE OF HEMPSTEAD WATER DEPARTMENT
PUBLIC WATER SUPPLY IDENTIFICATION NO. 2902827

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

The Village of Hempstead water system (HWS) is required to collect and analyze samples to demonstrate compliance with all state and federal water quality standards. 158 different contaminants, elements or compounds are routinely monitored for their presence throughout the year from all our wells, treatment facilities and the distribution system.

The Village is in violation of exceeding the MCLs of PFOA, PFOS, and Color. Therefore, we are required to include the following statement in this report: "Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches." The Village is in the process of actively seeking funding and has hired design engineers to comply with the Surface Water Treatment Rule.

On September 30, 2019 the HWS received a violation from the Nassau County Department of Health (NCDOH) of the New York State Sanitary Code (NYSSC), Part 5-1.72(c)(1) – *Monthly Operation*. This violation resulted from late submission of the August 2019 Monthly Operating Report (MOR). That report was completed and submitted and all subsequent MORs were submitted on time. The water system was otherwise in compliance with all applicable State drinking water requirements.

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

INFORMATION ON UNREGULATED CONTAMINANTS

Our distribution system is required by the Environmental Protection Agency to participate in the Unregulated Contaminant Monitoring Rule program. This program acts as a tool for the EPA to find unregulated contaminants of concern in the nation's drinking water. The Safe Drinking Water Act gives EPA the responsibility to protect public health and to set minimum standards for drinking water. The EPA identifies contaminants that may be harmful to human health and that may be present in drinking water. The EPA works with local water systems to periodically test the water for contaminants that are not regulated to determine whether or not these contaminants occur often enough at high enough concentrations to warrant further attention.

The fourth round of sampling UCMR table 4 (or UCMR4) is currently in progress. The EPA selected 30 contaminants including 10 Cyanotoxins, which might occur in surface waters, plus 20 other compounds including metals, solvents, dyes, a food preservative, Haloacetic acids, fungicides, pesticides, herbicides, and related byproducts.

The third round of sampling is known as UCMR3 and was performed from 2013 to 2015 and more

recently in 2020. The EPA selected numerous contaminants divided into three lists. The "List 1" contaminants are monitored using conventional laboratory testing methods. These contaminants include flame retardants, contaminants used in explosives, and contaminants related to insecticides, among which are seven volatile organic compounds, one synthetic organic contaminant, six metals, one oxyhalide ion (chlorate), and six perfluorinated compounds.

The "List 2" contaminants are monitored using testing methods that are relatively new. These contaminants include seven hormones (17- β -estradiol, 17- α -ethynylestradiol (ethinyl estradiol), 16- α -hydroxyestradiol (estriol), Equilin, Estrone, Testosterone, 4-androstene-3,17-dione) of which none were detected. The "List 3" contaminants include two viral contaminants for which standard procedures have not been well established. The great depth of the aquifer surrounding the Village's wells is considered to effectively filter out viruses and bacteria.

The Village continues to cooperate with EPA's nationwide sampling program and has performed monitoring for the presence of the contaminants

2020 drinking water quality report

INC. VILLAGE OF HEMPSTEAD WATER DEPARTMENT
PUBLIC WATER SUPPLY IDENTIFICATION NO. 2902827

from “List 1” and “List 2” throughout the year from all our wells. To date, six of these contaminants

have been detected in our water supply.

WATER CONSERVATION MEASURES

The Incorporated Village of Hempstead continued its water conservation program during 2020. Individual customers of the Village can implement water conservation measures such as retrofitting plumbing fixtures with flow restrictors, modifying automatic lawn sprinklers to include rain sensors, repairing leaks in the home, installing water conserving fixtures and appliances, and maintaining a daily awareness of water conservation in their personal habits. Besides protecting the limited underground water supply, water conservation will produce a cost savings to the consumer in terms of both water and energy bills for hot water. Following these conservation tips can achieve significant savings:

Indoor

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- 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.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances, and then check the meter after 15 minutes. If the register on the meter changed, you have a leak. The Village Water Department can also assist in certain cases by remotely reading your meter at a fixed interval.
- Toilets are the most common source of leaks and unnecessary use of water. Adding a few drops of food coloring to the tank will help disclose very slow leaks. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you can save more than 30,000 gallons a year.
- Do not use the toilet for flushing items that could go in a wastepaper basket. Water saving

devices can be installed in older model tanks to use less water for flushing.

- Keep conservation in mind when replacing or installing plumbing fixtures, washing machines and dishwashers. Look for fixtures and appliances that are designed to do the job with less water.
- Always try to do full loads of dishes or laundry. Adjust the water level for smaller loads.
- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Do not let water run when hand washing dishes, shaving or brushing teeth.
- Store water in the refrigerator to eliminate the need for running the tap for a cold drink.

Outdoor

- Nassau County Watering regulations for lawns and gardens are in effect year round. No watering is allowed between the hours of 10 AM and 4 PM. Odd numbered houses are allowed to water only on odd days of the month. Even numbered houses are allowed to water only on even days of the month.
- If your sprinkler system does not have a moisture sensor, we advise you to manually turn it off if it has rained, is raining, or is likely to start raining. According to staff at the Nassau County Cornell Cooperative Extension Center, over-watering is the cause of most lawn and garden problems. You can call them for advice at 516-292-7990 or 516-228-0426.
- Sprinkler systems should operate in the early morning hours, however make it a point to observe the operation of the system to check for faulty heads and leaking fittings. These problems waste water and cause higher bills.

2020 drinking water quality report

INC. VILLAGE OF HEMPSTEAD WATER DEPARTMENT
PUBLIC WATER SUPPLY IDENTIFICATION NO. 2902827

- Sweep, don't wash, sidewalks; use a bucket for car washing and turn the hose on and off for rinsing.

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. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the EPA Safe Drinking Water Hotline (800-426-4791).

FOR MORE INFORMATION

Call us at (516)478-6252 or visit our Web site at <https://www.villageofhempstead.org/187/Water-Plant>. For more information on lead in drinking water, contact the Nassau County Health Department at (516) 227-9692, or the New York State Department of Health directly by calling the toll-free number (within New York State) 1-800-458-1158, extension 27650, or out of state at (518) 402-7650, or by email at bpwsp@health.state.ny.us. For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA's Web site at www.epa.gov/lead, or

call the National Lead Information Center at 1-800-424-LEAD.

Reverse 911

The Village has implemented a "Reverse 911" system to allow rapid public notification during emergency situations. An automated system will dial the telephone numbers of all residents known to the Village and play a prerecorded message. *If any resident needs to update their telephone number please email the change to reverse911@villageofhempstead.gov.*

CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all of our customers help us protect our groundwater through proper disposal of chemicals and waste. Copies of this Consumer Confidence Report and Annual Water Supply Report are available at the Incorporated Village of Hempstead, Village Hall located at 99 James A. Garner Way, Hempstead, New York. In addition, a supplemental data package is available at the Village office, which includes the full water quality data, both before and after treatment, for each well utilized during 2020.

INFORMATION FOR NON-ENGLISH SPEAKING RESIDENTS

Este informe contiene informacion muy importante sobre el agua de beber. Traduzcalo o hable con alguien que lo entienda bien.

2020 drinking water quality report

INC. VILLAGE OF HEMPSTEAD WATER DEPARTMENT
PUBLIC WATER SUPPLY IDENTIFICATION NO. 2902827

Appendix A Public Notification of Deferral

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Deferral Issued for 1,4-Dioxane in the Village of Hempstead

Why are you receiving this notice/information?

You are receiving this notice because testing of our public water system found the chemical 1,4-Dioxane in your drinking water above New York State's maximum contaminant level (MCL) of 1 ppb for 1,4-dioxane. The MCLs are set well below levels known to cause health effects in animal studies. Therefore, consuming water with 1,4-dioxane at the level detected does not pose a significant health risk. Your water continues to be acceptable for all uses.

The Village of Hempstead has submitted, and the New York State Department of Health (Department) has issued, a deferral to the Village of Hempstead. 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 system 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 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 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 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. In the interim, the Village of Hempstead will continue to reduce exposure by minimizing use of the most impacted sources.

What is being done to remove these contaminants?

The Village of Hempstead is running a pilot study for an Advanced Oxidation Process (AOP) System to treat the water for 1,4-Dioxane. Once the pilot study is completed and the results examined the Village will begin the process to build a full scale AOP.

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 Taylor at 516-489-3400 or 99 James A. Garner Way. You can also contact the Nassau County Health Department at 516-227-9714.

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# 2902827

Date January 15, 2021