

The Incorporated Village of Hempstead

Don Ryan, Mayor
Charles Renfroe, Deputy Mayor
Perry Pettus, Trustee
LaMont Johnson, Trustee
Jeffery J. Daniels, Trustee

2017 ANNUAL WATER QUALITY REPORT

CONSUMER CONFIDENCE REPORT
and
ANNUAL WATER SUPPLY STATEMENT

for the
INCORPORATED VILLAGE OF HEMPSTEAD
(Public Water Supply ID# 2902827) - 2017

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 reliable. In fact, Long Island has one of the safest and most tightly regulated public water supply systems in the entire country.

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 improved the safety, reliability and cost effectiveness of the water system including 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.

Water quality in many areas of Nassau County have been impacted with contaminants that require treatment systems for removal. Implementation of the required planning, regulatory approval and construction steps for these systems typically requires up to two years to complete. Two of our wells have had unexpected detections of contaminants and may not be available for use during the Summer 2018 peak pumping season. We ask in advance for your help to conserve water and to voluntarily reduce water use.

Improvements to the water system are now progressing from the planning stage toward construction. The improvements include a new air stripping VOC removal system for Laurel Avenue and new wells at Kennedy Park.

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 2017 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 Nichols Court, 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,

Don

Don Ryan
Mayor of the Incorporated Village of Hempstead



2017 ANNUAL WATER QUALITY REPORT

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 7,080 tests on the water, for 156 different chemicals, contaminants, or water quality parameters. We detected 18 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 Don Ryan 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.

Where does our water come from?

In general, the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department'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 derived 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 2017, our system experienced a restriction of our water source due to mechanical problems with the pump in Well 7. The use of Well 2R and Well 4 was voluntarily limited due to increasing concentrations of iron. Wells 1RR, 3R, 5, 6R, 8 and 9 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.

Types of 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 to oxidize iron. After aeration, chlorine is added to the water to prevent bacterial growth in the distribution system. Two air stripping towers have been in operation to remove higher concentrations of volatile organics found in the water from Wells 1RR, 4, 5, 6R and 8. 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:

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 linear blend of linear poly & ortho phosphates
Corrosion Control	Reduce metals leaching from household plumbing	Caustic Soda (sodium hydroxide)

VOC = volatile organic compounds

Facts and Figures about the Village Water System

The Village of Hempstead provides water to an official population of 53,891 full time residents (2010 Census) through 8,674 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 2017 was 1,884,265,000 gallons, of which approximately 89.5 percent was billed directly to consumers. The unbilled water was used for well and water main flushing, filter backwashing, firefighting, services to Village buildings, and losses due to leaks and water main breaks. The daily average of water treated and pumped into the distribution system is 5,162,370 gallons per day. Our highest single day was 7,557,000 gallons on September 21, 2017.

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

2017 WATER RATES (Effective August 1, 2017)	
Consumption (gallons per billing period)	Billing Rate
0-50,000	\$2.78/1000 gallons
50,001-100,000	\$3.80/1000 gallons
100,001-500,000	\$5.38/1000 gallons
500,001-1,000,000	\$6.47/1000 gallons
over 1,000,000	\$7.11/1000 gallons

In 2017, the annual average water charge per household was approximately \$640

Are There Contaminants in our Drinking Water?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform bacteria; turbidity, nitrate, nitrite, lead and copper, and other inorganic compounds; total trihalomethanes and 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.

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.

2017 ANNUAL WATER QUALITY REPORT

Table of Detected Contaminants

Primary (Health Related) Inorganic Parameters

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Range) (Avg/Max)		Unit Measurement	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination
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Nitrate	No	5/9/2017	ND	0.7	mg/l	10	MCL = 10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
		5/30/17		2.7				
		6/20/17						
		6/27/17						

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Range) (Avg/Max)		Unit Measurement	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination
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Barium	No	5/9/2017 6/20/17	0.0049	0.0092	mg/l	1	MCL = 1	Naturally occurring in some limestones, sandstones, and soils in the eastern United States
			0.0063	0.0092	mg/l			

Lead. If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. 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 (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>

Secondary (Aesthetic) Inorganic Parameters

Chloride	No	5/9/2017 6/20/17	22.1	46.3	mg/l	n/a	MCL = 250	Naturally occurring or indicative of road salt contamination
			36.6	46.3	mg/l			

Copper ^{1,2}	No	5/9/2017	ND	0.012	mg/l	1.3	AL ² = 1.3	Corrosion of household plumbing systems
		5/30/17		0.066				
		6/20/17	(.0096) ¹ .0075	0.012				

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Contaminant	Violation Yes/No	Date of Sample	Level Detected (Range) (Avg/Max)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination	
Iron ³	No	5/9/2017 6/20/17	ND	330	µg/l	n/a	MCL = 300	Naturally occurring
			141	330	µg/l			
<p>Health Effect Language provided by the New York State Department of Health: Iron has no health effects. At 1,000 µg/l a substantial number of people will note the bitter astringent taste of iron. Also, at this concentration, it imparts a brownish color to laundered clothing and stains plumbing fixtures with a characteristic rust color. Staining can result at levels of 50 µg/l, lower than those detectable to taste buds. Therefore, the MCL of 300 µg/l represents a reasonable compromise as adverse aesthetic effects are minimized at this level. Many multivitamins may contain 3000 or 4000 ug of iron per capsule.</p>								
Sodium	No	5/9/2017 6/20/17	12.3	57.2	mg/l	n/a	(See health effects below)	Naturally occurring; Road Salt; Water softeners; Animal Waste
			30.7	57.2	mg/l			
<p>Health Effect Language provided by the New York State Department of Health: 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.</p>								
Sulfate	No	5/9/2017 6/20/17	6.0	25.7	mg/l	n/a	MCL = 250	Naturally occurring; Agriculture and lawn fertilizers
			18.7	25.7	mg/l			
Color	No	5/9/2017 6/20/17	ND	5.0	units	n/a		Caused by dissolved and suspended materials
			ND	5.0	units			
Dibromochloro methane	No	9/26/2017	ND	0.55	µg/l	n/a	50	Disinfection byproducts when chlorine or other disinfectants used
			ND	0.55	µg/l			
Total Trihalomethanes	No	9/26/2017	ND	0.55	µg/l	n/a	80	Disinfection byproducts when chlorine or other disinfectants used
			ND	0.55	µg/l			
Turbidity	No	5/9/17 6/20/17	ND	0.37	NTU	n/a		The measure of relative clarity of water. Caused by clay, silt and other finely divided matter suspended in water
			0.32	0.37	NTU			

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Contaminant	Violation Yes/No	Date of Sample	Level Detected (Range) (Avg/Max)		Unit Measurement	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination
Nickel	No	5/9/17 6/20/17	0.0031	0.0076	mg/l	n/a		Naturally occurring, electroplating, stainless steel and alloy products, mining, and refining.
			0.0046	0.0076	mg/l			

Perchlorate	No	5/30/2017	ND	1.3	µg/l	5	MCL = 15	Fertilizers; sold fuel propellant; fireworks
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Other Inorganic and Chemical Parameters

Calcium	No	5/9/17 6/20/17	6.8	11.8	mg/l	n/a	0.1	Naturally occurring element
			8.73	11.8	mg/l			

Calcium Hardness	No	5/9/17 6/20/17	17.0	29.6	mg/l	n/a		Chemical Parameter used as a measure of water hardness
			21.83	29.6	mg/l			

Langelier Saturation Index	No	5/9/17 6/20/17	-2.45	-1.22		n/a		Chemical Parameter used as a measure of corrosivity or scale-forming tendency
			-1.67	-1.22				

pH	No	Various	7.5	7.9	pH units	n/a		Chemical Parameter used as a measure of acidity and alkalinity
			7.77	7.9	pH units			

Magnesium	No	5/9/17 6/20/17	2.2	3.16	mg/l	n/a		Naturally occurring element
			3.7	3.16	mg/l			

Total Dissolved Solids	No	5/9/17 6/20/17	108	269	mg/l	n/a	MCL = 500	Chemical Parameter used as a measure of solid materials dissolved in water
			204.6	269	mg/l			

Total Hardness	No	5/9/17 6/20/17	32.3	38.7	mg/l	n/a	MCL = 500	Chemical Parameter used as a measure of water hardness
			34.9	38.7	mg/l			

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Contaminant	Violation Yes/No	Date of Sample	Level Detected (Range) (Avg/Max)		Unit Measurement	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination
Total Residual Chlorine	No	Various each month	0.20	1.50	mg/l	n/a	MCL = 500	Byproduct of drinking water chlorination. Additive used as a measure of the disinfecting strength of water
			0.94	1.50	mg/l			
Total Alkalinity	No	5/9/17 6/20/17	3.0	70.3	mg/l	n/a		Chemical Parameter used as a measure of alkalinity (acid neutralizing ability)
			33.2	70.3	mg/l			
Ortho Phosphate	No	Various	ND	0.11	mg/l	n/a		Additive used as a measure to reduce corrosion of pipes. A food grade additive.
			ND	0.11	mg/l			

Disinfection Byproducts

Disinfection Byproducts can be formed when chlorine is added to the water to kill and prevent the growth of bacteria. The disinfection by products are not typically found in the wells but form in the water mains and piping. The Village samples for these compounds to determine if they are present and in what concentrations. Disinfection byproducts include four compounds considered as Trihalomethanes (THMs) and five different Haloacetic acids (HAA5). When all the THM concentrations are added together they are regulated as Total Trihalomethanes (TTHM).

THMs: Chloroform, Bromodichloro methane	No	9/26/2017	ND	ND	µg/l	70	MCL = 80	Disinfection byproduct when chlorine or other disinfectants are used
			ND	ND				
THMs also include Bromoform and Dibromochloromethane which are listed in the previous table.								

HAA5:	No	9/27/2016	ND	5.97	µg/l		MCL = 60	Disinfection byproduct when chlorine or other disinfectants are used
			3.48	5.97				
Monochloroacetic Acid			ND	ND		70		
Dichloroacetic Acid			ND	ND		0		
Trichloroacetic Acid			ND	ND		200		
Bromoacetic Acid			ND	5.97				
Dibromoacetic Acid			3.23	5.97				

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Radionuclides

The Village collected samples from each active well to investigate the occurrence of compounds that emit radioactivity. Tests were most recently performed during 2015 and included two forms of the metal Radium and two types of radioactive emissions.

Gross alpha emissions	No	3/4/15	2.29	3.91	pCi/l	MCL = 15	Emitted by naturally occurring materials
		9/22/15					
		10/29/15	2.94	3.91			
Gross beta emissions	No		2.30	3.88	pCi/l	n/a	
			3.18	3.88			
Radium 226 & Radium 228 (combined total)	No		1.36	2.33	pCi/l	MCL = 5	
			1.84	2.33			

- 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 - USEPA action level (maximum allowable) for the 90th percentile sample.
- 3 - The combined total of iron and manganese should not exceed 500 g/l (0.5 mg/l).
- 4 - USEPA guidelines for pH are 6.5 to 8.5; NY guidelines are 7.5 to 8.5.

Definitions:

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

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

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

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

Treatment Technique (TT): The treatment technique requirements established by EPA in lieu of MCL's to control unacceptable levels of some contaminants.

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

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

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

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

Pico Curies per liter (pCi/l): A measure of radioactivity in water.

n/a: Not applicable, or no standard established.

TABLE OF CONTAMINANTS NEVER DETECTED DURING 2017

Microbiological Contaminants

E. Coliform	Total Coliform		
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Primary (Health Related) Inorganic Parameters

Arsenic	Silver	Cadmium	Chromium
Fluoride	Mercury	Selenium	Lead

Secondary (Aesthetic) & Other Inorganic Parameters

Antimony	Beryllium	Bromoform	Free Cyanide
Nitrogen, Ammonia	Manganese	MBAS (Foaming Agents)	

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Zinc	Nitrite	Odor	
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Primary (Health Related) Volatile Organic Parameters

Benzene	Carbon tetrachloride	1,4-Dichlorobenzene	1,2-Dichloroethane
1,1-Dichloroethene	1,1,1-Trichloroethane	Vinyl Chloride	

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	Tetrachloroethene
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	Trichloroethene
Bromodichloromethane			

Specific Organic Chemicals/Pesticides

Alachlor	Aldicarb	Aldicarb Sulfone	Aldicarb Sulfoxide
Atrazine	Carbofuran	Chlordane, Total	DBCP (1,2-Dibromo-3-Chloropropane)
2,4-D	Endrin	1,2-Dibromoethane (EDB)	Heptachlor
Heptachlor Epoxide	Lindane	Methoxychlor	Polychlorinated Biphenyls (PCBs)
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)

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What Does This Information Mean?

The Village water system complied with all state and federal water quality standards during 2017. 121 different contaminants are routinely monitored for their presence throughout the year from all our wells, treatment facilities and the distribution system.

Is Our Water System Meeting Other Rules That Govern Operations?

During 2017, our distribution system was in compliance with all applicable State drinking water requirements except that two samples for volatile organic contaminants (VOCs) from the distribution system were not collected. VOC samples were collected from the wells following treatment but prior to chlorination. 150 different contaminants are routinely monitored for their presence throughout the year from all our wells, treatment facilities and the distribution system.

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 is currently in progress and UCMR table 4 will be available shortly. The EPA has 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-b-estradiol, 17-a –ethynylestradiol (ethinyl estradiol), 16-ahydroxyestradiol (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 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.

TABLE OF UNREGULATED CONTAMINANTS

Contaminant	Date of Sample	Level Detected (Range) (Avg/Max)		Unit Measurement	Likely Source of Contamination
Chlorodifluoromethane (HCFC-22)	6/18/2013	ND	0.89	µg/l	Refrigerant and propellant
Cobalt	6/18/2013 8/13/13	ND 0.78	1.6 1.6	µg/l	Naturally occurring metal alloy
Strontium	6/18/2013 8/13/13	ND 8.33	20 20	µg/l	Naturally occurring
Chromium-3	6/18/2013 8/13/13	ND 0.17	0.28 0.28	µg/l	Naturally occurring component of stainless steel metal plating
Chromium-6	6/18/2013	0.04 0.045	0.049 0.049	µg/l	Metal primer paint Naturally occurring
Chlorate	6/18/2013	84 142	200 200	µg/l	Pyrotechnics Naturally occurring

Note: UCMR List 1 contaminants test for but not detected included: 1,2,3 Trichloropropane, 1,3 Butadiene, Chloromethane, 1,1 Dichloroethane, Bromomethane, Bromochloromethane (halon 1011); 1,4 Dioxane; Vanadium, Molybdenum; Perfluorooctanesulfonic Acid (PFOS), Perfluorooctanoic Acid (PFOA), Perfluorooxonanoic Acid ((PFNA), Perfluorohexanesulfonic Acid (PFHxS), Perfluoroheptanoic Acid (PFHpA), and Perfluorobutanesulfonic Acid (PFBS).

Reverse 911

The Village has implemented a "Reverse 911" system to allow rapid public notification during emergency situations. We encourage you to sign up for this important Emergency Notification Service. Simply complete the form below by utilizing any of the following methods:

- **E-Mail** this form to rev911@villageofhempsteadny.gov
- **Sign-Up** online by visiting: www.villageofhempstead.org
- **Fax** the form to (516) 489-3734
- **Drop off** the form off at Village Hall, located at 99 Nichols Court



PLEASE PRINT CLEARLY

Name: _____

Address: _____ Apartment: _____

Home Phone: _____

Alternate Phone: _____

Cell Phone: _____

E-Mail: _____

System Improvements

The Village has planned and secured partial funding for a number of significant improvements to the water system, which are planned for construction during the next several years. Projects completed in 2017 include site drainage and blow-off pit improvements at the Laurel Avenue water plant; a new Sodium Hydroxide storage and metering building at Clinton Street; and replacement of the pump station roof at the Clinton Street booster plant. Installation of automated read water meters on a few remaining service lines continued during 2017. Please contact the Water Department if you still have an old meter installed.

Projects now under construction include improvements to control systems and fiber optic cables; and replacement of the pump for Well No. 7. Other projects in the planning and design stage include Air stripping treatment for VOC removal at Laurel Avenue; new wells at Kennedy Park, design of automated valves for automatic blow-off for Wells No. 4, 5 and 8; examination of cost effective options for 1,4 Dioxane treatment; rehabilitation and cleaning of the pumps and screens on wells 1RR, 5 and 6R; and design of water storage tanks to replace the Clinton Street Plant water treatment basins.

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. 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).

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 Nichols Court, 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 2017.

Una versión en español de este informe está disponible en línea @ www.villageofhempstead.org



Village Hall
99 Nichols Court
Hempstead Village, NY 11550
www.villageofhempstead.org

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Why Save Water and How To Avoid Wasting It?

The Incorporated Village of Hempstead continued its water conservation program during 2017. 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.
- **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.
- **Sweep, don't wash, sidewalks; use a bucket for car washing and turn the hose on and off for rinsing.**