J.C. Broderick & Associates, Inc.

Environmental/Construction Consulting & Testing

September 30, 2021

Dr. Christopher Dillon Levittown Union Free School District Administration Building 850 Seamans Neck Road Seaford, New York 11783

Re: 1,4 Dioxane in Drinking Water

JCB#: 21-50129

Dear Dr. Dillon:

On August 26, 2020, New York State (NYS) adopted a new drinking water standard for Public Water Systems (PWSs) making NYS the first state to develop a maximum contaminant level (MCL) for 1,4-dioxane. A PWS is any entity that provides potable water to the public, such as New York American Water (NYAW) and Suffolk County Water Authority (SCWA). Levittown Public Schools is not a PWS, but rather receives water from PWSs that includes both NYAW and the Town of Hempstead Water Department.

This new drinking water standard set an MCL of 1 part per billion (1 ppb) for 1,4-dioxane and requires PWSs to regularly monitor for this contaminant. This MCL is among the most protective for this contaminant in public water supply for any state.

MCLs are set with a large margin of protection, meaning that MCLs are set several orders of magnitude below levels that cause health effects. Therefore, an exceedance of an MCL does not mean that water is unsafe for use.

MCLs are essentially an action level, that when exceeded, require the PWS to notify the health department and work with that health department to bring their water systems into compliance. The health department will continue to determine if the water is safe to drink while the public water system takes actions to reduce the levels.

Although NYAW has reported levels of 1,4-dioxane above the MCL, the observed levels are still far below levels known to cause health effects. Therefore, consuming water with 1,4-dioxane at the levels detected does not pose a significant health risk and the water provided to Levittown Schools continues to be acceptable for all uses.

For your reference, attached is a a copy of both the Town of Hempstead Water Department's and New York American Water's most recent water quality reports. If there are any questions, or if more information is needed, please contact our office.

Sincerely,

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Edward McGuire III J. C. Broderick & Associates, Inc.



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2020 WATER QUALITY REPORT

Service Area 2–South Shore: Merrick Operations District

Public Water Supply ID# NY2902840

This report complies with Part 5-1.72, New York State Sanitary Code (10 NYCCR) and federal Consumer Confidence Report regulations (40 CFR Part 141, Subpart 0).

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

本报告与您的饮用水有关。

如果您不了解其内容,应请别人为您翻译解说。

이 보고서에는 귀하께서 사용하고 계시는 식수에 관한 정보가 들어있습니다. 만약에 이해를 못하시면 누군가에게 번역을 의뢰하십시오.

A Message from the New York American Water President



To Our Valued Customer:

Thank you for the opportunity to serve you. I am pleased to share our **Annual Water Quality Report** with you – this is our report card on the quality of the drinking water delivered to our customers. The report shows that we continue to supply you with water that

meets or surpasses all county, state, and federal water quality standards. We encourage our customers to review this report as it provides important details about the source and quality of your drinking water between January and December 2020.

New York American Water (NYAW) invests in our infrastructure to deliver quality drinking water to our customers. This includes the facilities and technology needed to draw water from the source and treat it, along with miles and miles of pipeline hidden below the ground to bring water to your tap. In addition, our plant operators, water quality experts, engineers and maintenance crews work around the clock to provide you with quality water. Delivering safe, reliable water service requires significant investment to maintain and upgrade aging facilities. In 2020, we invested approximately \$62 million in system improvements. NYAW is also making important investments in water treatment technology to comply with New York State Department of Health's (NYSDOH) new drinking water standards for emerging compounds, specifically 1,4-Dioxane, PFOA, and PFOS.

néwyork Merican Water

The COVID-19 public health emergency highlighted how essential water is for public health. We remain steadfast in our commitment to delivering safe and reliable water service while maintaining a safe environment for our employees and customers. NYAW extends our sincerest gratitude to our field employees as well as all frontline workers and essential employees who are on the job and keeping life flowing. Thank you!

Sincerely,

Lynda DiMenna President, New York American Water

Public Participation – How You Can Get Involved

Customers can participate in decisions that may affect the quality of water by:

- Reading the information provided in bill inserts and special mailings
- Contacting the company directly with questions or to discuss issues
- Attending open houses conducted by the company
- Responding to survey requests
- Attending presentations by the company made to local community and civic associations
- Contacting agencies such as the Nassau County Health Department (NCDOH) at 516-227-9692

Be Water Smart – Think Conservation

The New York State Department of Environmental Conservation requested that all Long Island water suppliers reduce their peak pumpage by 15 percent to protect the long-term sustainability of the Long Island aquifer. Our customers must conserve water to help us achieve this goal. When our customers conserve, not only do they reduce their water bill, but NYAW is able to defer infrastructure investment projects that are needed to meet peak water demand, which can reach as high as 50 million gallons of water a day in the summer.

The following suggestions will help you make your home "water efficient" without sacrificing comfort or changing lifestyles:

- Install smart irrigation technology on your irrigation system to irrigate as efficiently as possible.
- Install a moisture sensor on your irrigation system to prevent wasteful watering during or just after a rain.
- Use native, drought-resistant shrubs, trees, plants, and grasses in your landscape.
- Run dishwashers and washing machines only with full loads.
- Turn off the tap when brushing your teeth or shaving.
- Check every faucet for leaks. Even a slow drip can waste 15 to 20 gallons a day, or about 6,000 gallons a year.
- If you suspect that you have a water leak, order our free Leak Detection Kit. The kit contains information, and dye tablets to help you determine if you have a wasteful water loss. Call our customer call center or 516-632-2244 to order.
- Replace older devices with water-saving showerheads, faucets, or low flush toilets. A normal showerhead uses 5 to 7 gallons a minute. Switching to a low-flow model that uses 1.5 gallons a minute can save a family thousands of gallons of water a year.

What is a Water Quality Report?

To assure that water is safe to drink, the U.S. Environmental Protection Agency (USEPA), and the Health Departments of New York State and Nassau County, set regulations for water quality and indicate the levels of various substances that are acceptable in public drinking water. This report explains how our water measures up to those standards. As you can see by the results, our water quality is excellent.

The NYSDOH) and the U.S. Food & Drug Administration regulate and set limits for substances in bottled water, which must also provide protection for public health.

During 2020, our system was in compliance with applicable NYS drinking water operating, monitoring and reporting requirements. If you have questions about this report, please contact our Water Quality Manager at 516-632-2239.

Share This Report:

Landlords, businesses, schools, hospitals, and others are encouraged to share this important water quality information with water users at their location who are not direct customers of NYAW. Additional copies of this report are available by contacting us at 516-632-2239.

How to Contact Us

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all our customers protect our water sources, which are the heart of our community. Please call our Customer Call Center tollfree if you have questions:

NYAW:

Customer Call Center: 1-877-426-6999 (M-F; 7am-7pm) Emergencies: 1-877-426-6909 (24 hours) TDD (Hearing/Speech impaired): 1-800-300-6202 Online: www.newyorkamwater.com

Merrick Administrative Office:

New York American Water 60 Brooklyn Avenue, Merrick, NY 11566 516-632-2232

Billing Payment Address:

New York American Water PO BOX 371332 Pittsburgh, PA 15250-7332

Water Information Sources : NYSDOH

1-518-473-8600 • <u>www.health.state.ny.us</u> NCDOH 516-227-9692 • <u>www.co.nassau.ny.us/health</u> New York State Department of Public Service 1-800-342-3377 • <u>www.dps.state.ny.us</u> USEPA

www.epa.gov/safewater

EPA Safe Drinking Water Hotline 1-800-426-4791 American Water Works Association www.awwa.org Water Quality Association www.wqa.org

About NYAW

NYAW, a subsidiary of American Water (NYSE: AWK), is the largest investor-owned water company in New York, providing high-quality and reliable water and/or wastewater services to approximately 350,000 people.

About American Water

With a history dating back to 1886, American Water is the largest and most geographically diverse U.S. publicly traded water and wastewater utility company. The company employs more than 6,800 dedicated professionals who provide regulated and market-based drinking water,



wastewater, and other related services to more than 14 million people in 46 states. American Water provides safe, clean, affordable, and reliable water services to our customers to make sure we keep their lives flowing. For more information, visit <u>amwater.com</u> and follow American Water on <u>Twitter</u>, <u>Facebook</u> and <u>LinkedIn</u>.

Communities Served

Bellmore East Massapequa* Levittown* Massapequa* Merrick North Bellmore North Merrick North Merrick North Seaford North Wantagh Seaford Wantagh *community partially served

Average Residential Usage & Cost

In 2020, the average residential household used approximately 105,353 gallons of water at a cost of about \$646, or \$1.77 a day. With an average of 3.0 persons per household, the cost of water was about 59¢ a day per person.

Source, Quality & Quantity

Groundwater is the source of your drinking water supply. It is drawn from 16 wells located in the aquifer system beneath the land surface.

The Aquifers

The aquifers are water-bearing geologic deposits of sand and clay that absorb and store about 45 percent of the rain and snow that fall on Long Island. NYAW– Merrick Operations Center has wells in the Magothy aquifer.

Not all wells are operating at the same time, which means that the water you receive is a blend of treated water from different well locations (an integrated system).



Not to scale

If you have a private well which is unregulated and untested, you should not use the water for drinking or cooking. (Source: NCDOH)

Source Water Assessment

The NYSDOH, with assistance from the local health department and a consulting firm, has completed a source water assessment for this system, based on available information. Possible and actual threats to this drinking water source were evaluated. The source water assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how rapidly contaminants can move through the subsurface to the wells. The susceptibility of a water supply well to contamination is dependent upon both the presence of potential sources of contamination within the well's contributing area and the likelihood that the contaminant can travel through the environment to reach the well. The susceptibility rating is an estimate of the potential for contamination of the source water, it does not mean that the water delivered to consumers is or will become contaminated. See section "Are there 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 16 wells. The source water assessment has rated most 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 high susceptibility to nitrate contamination is attributable to residential, commercial, and institutional 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 obtained by contacting our Water Quality Manager at 516-632-2239.

How is Your Water Treated?

Our water supply is obtained from wells located throughout our service area, and average about 500 feet in depth. In our area of southeastern Nassau County, the soil has naturally high iron and mineral content. The water dissolves these naturally occurring minerals, and while they are not health hazards, they can cause discolored water issues. Bacteriological pollutants are not usually present in wells at the average depth of 500 feet and, consequently, water directly from the well is drinkable. However, water treatment is required to protect the water in the distribution system and to minimize discolored water conditions.

Treatment consists of:

1. Chlorination for bacteriological disinfection (using Sodium Hypochlorite)



- 2. Caustic Soda (Sodium Hydroxide) to raise pH and minimize corrosivity to water mains and household plumbing
- 3. Filtration to remove iron at three well locations
- 4. Calciquest (Phosphate compound) to stabilize or sequester the iron not removed by filtration, and to act as a corrosion control inhibitor.
- 5. Granular Activated Carbon (GAC) to remove organics at one well location (US Navy / Northrop-Grumman plume site).

We take steps to reduce the potential for lead to leach from your pipes into the water. This is accomplished by adding a corrosion inhibitor (Calciquest is an Orthophosphate compound) to the water leaving our treatment facilities. There are steps that you can take to reduce your household's exposure to lead in drinking water. For more information, please review our Lead and Drinking Water Fact Sheet at:

www.nyamwater.com/water-quality/lead-and-drinkingwater

System Improvements

In 2020, we continued to make significant upgrades to our system and infrastructure. These improvements include:

- Replaced 14,893 feet of water main throughout the service territory.
- Replaced 10 fire hydrants.
- Replaced 114 service lines.
- Replaced 8,014 water meters.
- Completed replacement of the iron filtration media and drilled a new 3 Million-Gallon-Per-Day water supply well at the Newbridge Road Treatment Plant in North Bellmore.
- Drilled a new 3 Million-Gallon-Per-Day water supply well at the Jefferson Plant in Merrick.
- Completed design of a 6 Million-Gallon-Per-Day Advanced Oxidation Plant for removal of 1,4-Dioxane at the Seaman's Neck Treatment Plant in Wantagh.

Improvements planned for 2021 include:

- Replace approximately 14,700 feet of water main.
- Replace 5 fire hydrants.
- Replace 120 service lines.
- Replace approximately 1,500 water meters.
- Construct new well buildings at the Jefferson St. Plant in Merrick, and the Newbridge Plant in North Bellmore.
- Breaking ground on construction of the 6 Million-Gallon-Per-Day Advanced Oxidation Plant for removal of 1,4-Dioxane at the Seaman's Neck Treatment Plant in Wantagh.
- Drilling of a replacement 3 Million-Gallon-Per-Day water supply well at the Sunrise Mall Well Site in Massapequa.

Do I Need to Take Special Precautions?

To ensure that tap water is safe to drink, the USEPA prescribes regulations limiting the number of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Although our drinking water meets all state and federal regulations, 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.

If you have questions, contact the NCDOH at 516-227-9692. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium*, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline at 1-800-426-4791.

Substances Expected to be in Drinking Water

In general terms, the sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activities.

Substances that may be present in source water include:

- Microbiological Contaminants: Such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations or wildlife.
- Inorganic Contaminants (IOC's): Such as salts and metals which can be naturally occurring or may result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- **Pesticides and Herbicides (SOC's):** Which may come from a variety of sources such as agriculture, urban storm water runoff and residential uses.
- Organic Chemical Contaminants (VOC's): Including synthetic and volatile organic chemicals which are by-products of industrial processes and petroleum production, and may also come from gas stations, urban storm water runoff and septic systems.
- Radioactive Contaminants: Which can be naturally occurring or may be the result of oil and gas production and mining activities.



For more information about contaminants and potential health effects, call the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

Cryptosporidiosis & Giardiasis

Although there have been no cases of Cryptosporidiosis in Nassau County attributable to the water supply, you should be aware of the risks to people with severely weakened immune systems. Cryptosporidiosis and Giardiasis are intestinal illnesses caused by microscopic parasites that can be transmitted several ways including through drinking water. Cryptosporidiosis can be very serious for people with weak immune systems, such as transplant patients; individuals receiving chemotherapy or dialysis, and people with Crohn's disease or HIV infection. Individuals who think they may have been exposed to Cryptosporidiosis or Giardiasis should contact their health care providers immediately.

Immuno-compromised patients who may have been advised by their health care provider that they may be at risk, especially when traveling, should observe the following:

- One minute of boiling water at a rolling boil will kill *Cryptosporidium* parvum and Giardia lamblia.
- Drinking bottled water does not guarantee that the water is free from Cryptosporidiosis or Giardiasis.
 Contact your health care provider about your options. If you have guestions, contact the NCDOHat 516-227-9692.

Lead & Copper Rule Statements

The Lead and Copper Rule requires sampling for lead and copper at the tap. In 1992, the first-year testing was required; tap water was sampled in compliance with EPA regulations. Test results were excellent: at least 90 percent of the lead tests were well below 10 parts per billion, and for copper, below 0.5 parts per million, indicating that the company's corrosion control treatment processes continue to be effective. The same tests were done roughly every three years from 1997 through 2020 with similar results. We are on an approved reduced monitoring schedule, and the next round of homeowner monitoring for the Lead and Copper Rule was completed in the summer of 2023. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. New York American Water 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 drinking 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 1-800-426-4791 or at http://www.epa.gov/safewater/lead.

How do I read the Water Quality Table?

The Water Quality Table – **"Table of Detected Contaminants**" is the most important section in this report, containing details on New York American Water's comprehensive testing program for drinking water at the tap. It compares the results from tests we performed in 2020 (and earlier) with the health standards established by federal, state, and local health authorities. Of approximately 165 substances or parameters tested, detectable levels were found for about 35; and these levels are trace amounts, well below the levels set to protect public health.

To review the quality of your drinking water, compare the result in the "Maximum Amount Detected" column with the Standard in the "MCL" column. That Standard is the highest level that is considered safe for drinking water. To be in compliance, the High result in the "Range: Low-High" column should be lower than the MCL Standard. For example, under Metals & Inorganic Substances, the "MCL" standard for Barium is 2,000 ppb and the "Maximum Amount Detected" result is 120 ppb, well below the maximum allowed level (or "MCL").

Also review the "**Compliance Achieved**" and "**Violation**" columns to determine if New York American Water violated any standards. As you can see, our system had no violations. Further evidence of the quality of our water can be seen in the "Listing of Non-Detected (ND) Contaminants" — An extensive list of substances that we tested for and did not find in our distribution system and/or water sources.

The **Definition of Terms** below provides further explanation of the data.

Definitions of Terms Used in This Report

- Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- 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.
- **MGD** = Million Gallons per Day
- **90th Percentile Value:** The values reported in the "Lead and Copper Rule" section represent the 90th percentile. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90 percent of the lead and copper values detected in your water system.
- N/A: Not applicable



- None Detected (ND): Laboratory analysis indicates that the constituent is not present at the method detection level.
- Parts Per Million (ppm): Corresponds to one part of liquid in one million parts of liquid [Equivalent to "milligrams per liter" (mg/L)].
- Parts per Billion (ppb): Corresponds to one part of liquid in one billion parts of liquid [Equivalent to "micrograms per liter" (µg/L)].
- Parts per Trillion (ppt): Corresponds to one part of liquid in one trillion parts of liquid [Equivalent to "nanograms per liter"; or one second in approximately 31,506 years].
- **Picocuries per liter (pCi/L):** A measure of the radioactivity in water.
- Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.
- Total Dissolved Solids (TDS): An overall indicator of the amount of minerals in the water.

Water Quality Facts

To provide high quality water, individual water samples are taken each year for chemical, physical, and microbiological tests. Testing can pinpoint a potential problem so that preventive action may be taken.

Tests are done on water taken from the well ("raw water"), water within our treatment facilities, water exiting our treatment plants at the point-of-entry to the distribution system, and from sites located throughout our distribution system after treatment. These tests are conducted in the company's state certified laboratory, by the NCDOH Laboratory, and by independent, certified laboratories approved by the state, who report results simultaneously to the company and to the Health Department. NYS allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year-to-year. Some of the data, though representative of the water quality, are more than one year old.

For a copy of the Water Supplement containing detailed data on testing at the source water wells before treatment, call us at 516-632-2239 and request a copy.

2020 STATISTICS AT-A-GLANCE

Wells Closed/Restricted	None
Violations of Standards	None
Typical Well Depth	500 Feet
Aquifers	Magothy
Pumping Stations	12
Service Area	20 Square Miles
Total Water Withdrawn	5,055,053,000 Gal.
Total Water Sales	4,837,659,000 Gal.
Total Water Lost from System*	259,890,000 Gal.
Population Served (approx.)	135,000
Customers Served (accounts)	45,018
Miles of Mains	433

* Total water lost from the system includes "Accounted For" and "Unaccounted For" water. Non-revenue water is approx. 9.4% of total water delivered to the system; of which, approximately 5.1% is accounted for and 4.3% is unaccounted for.

Water Quality Table – Table of Detected Contaminants 2020 (SA2 - Merrick Operations) REGULATED SUBSTANCES

Contaminant (units)	Date Sampled	MCL	MCLG	Maximum Amount Detected	Range: Low- High	Violation (Yes/No)	Typical Source
Microbiological							
Total Coliform (% positive samples in any given month) ¹	2020 (highest month was August 2020)	TT=>5% samples positive	N/A	1.6% ¹ (2 POS out of 126 total samples in August 2020)	ND (0%) - 1.6%	No	Naturally present in the environment
Disinfection By-Products							
TTHM's (Total Trihalomethanes) (ppb) ²	Quarterly	80	0	4.8	<1.0 - 4.8	No	By-product of drinking
AA5's (Total Haloacetic acids)	2020	60	0	<2.0	<2.0 - <2.0	No	water disinfection
Disinfectants							
Chlorine (ppm) ⁴	2020	N/A	N/A	2.20	<0.10 - 2.20	No	Water additive used to control microbes
Radiological 5							
Gross Alpha Activity (pCi/L)	10/2018	15	0	8.06	ND - 8.06	No	
Gross Beta Activity (pCi/L)	10/2018	50	0	4.23	0.171 - 4.23	No	
Combined Radium-226 and Radium-228 (pCi/L)	09/2018	5	0	4.61	0.280 - 4.61	No	Erosion of natural deposits
Uranium (ug/L)	10/2018	30	0	0.187	ND - 0.187	No	



Lead and Copper Rule (Tap water samples were collected from 54 homes in the service area)

		· ·		•			
Contaminant (units)	Date Sampled	Action Level	MCLG	Amount Detected (90th %tile)	Range (Low-High)	Violation (Yes/No)	Typical Source
Copper (ppm) ⁶	07-09/	1.3	1.3	0.270	0.021- 0.340	No	Correction of household plumbing systems
Lead (ppb) 7	2020	15	0	1.4	ND - 6.6	No	

Metals & Inorganic Substances

Contaminant (units)	Date Sampled	MCL	MCLG	Maximum Amount Detected	Range: Low-High	Violation (Yes/No)	Typical Source
Barium (ppb)	10/2020	2,000	2,000	120	ND - 120	No	Erosion of natural deposits
Calcium (ppm)	06/2020	N/A	N/A	5.4	ND - 5.4	No	Naturally occurring
Chlorides (ppm)	06/2020	250	N/A	26.7	ND - 26.7	No	Naturally occurring or indicative of road salt contamination
Iron (ppb) ⁸	06/2020	300	N/A	940	ND - 940	No	Naturally occurring
Manganese (ppb) ⁸	05/2020	300	N/A	89	ND - 89	No	Naturally occurring
Nickel (ppb)	11/2020	N/A	N/A	25.0	1.2- 25.0	No	Naturally occurring
Nitrates as N (ppm)	07/2020	10	10	0.320	ND - 0.320	No	Erosion of natural deposits; Runoff from fertilizers and septic tanks
Sodium (ppm) ⁹	10/2020	N/A	N/A	37.5	2.6 - 37.5	No	Naturally occurring; Road salt; Water softeners
Sulfate (ppm)	06/2020	250	N/A	59.3	ND - 59.3	No	Naturally occurring; Road salt; Water softeners

Organic Substances

Contaminant (units)	Date Sampled	MCL	MCLG	Maximum Amount Detected	Range: Low-High	Violation (Yes/No)	Typical Source
Trichloroethene (TCE)- (ppb)*	12/2020	5	0	22.5	ND - 22.5	No	Discharges from metal degreasing sites and other factories. Grumman-NAVY plume
Specific Organic Compounds							
1,4 dioxane (ppb)*	11/2020	1.0	N/A	1.50	ND - 1.50	No	Released into the environment from commercial and industrial sources and is associated with inactive and hazardous waste sites

Physical Parameters & Unregulated Substances

Contaminant (units)	Date Sampled	Maximum Amount Detected	Range: Low-High	Typical Source
Alkalinity (ppm)	2020	48.5	27.9 - 48.35	N/A
Calcium Hardness (ppm)	2020	3.7	0.9 – 3.7	N/A
Color Index (units)	2020	15	ND - 15	Presence of metals such as copper, iron and manganese. Results greater than 15 units are considered 'discolored'.
Corrosivity (Langelier Index) 10	2020	(-2.31)	(-3.27) - (-2.31)	N/A
Hardness, Total (ppm)	2020	10.1	1.7 - 10.1	N/A
Magnesium (ppm)	2020	1.9	ND - 1.10	Naturally occurring
pH (units) ¹¹	2020	7.1	7.0 - 7.1	N/A
Total Dissolved Solids (TDS) (ppm)	2020	123	42 123	N/A

Footnotes:

¹ A total of 1,449 distribution system bacteriological samples were taken in 2020, with 3 positive Total Coliform results = 0.21% positives for the year. ²TTHM's mean the sum of: Bromoform, Bromodichloromethane, Dibromochloromethane, and Chloroform. The highest 'Locational Running Annual Average"

* 11HM s mean the sum of: Bromotorm, Bromodicnioromethane, Dibromochioromethane, and Chiorotorm. The highest "Locational Running Annual Average" was 4.8 ppb in 2020.

³ HAA5's includes the sum of: Monochloroacetic acid, Dichloroacetic acid, Trichloroacetic acid, Bromoacetic acid, and Dibromoacetic acid. The highest 'Locational Running Annual Average' was less than 2.0 ppb ("<2.0") in 2020.

⁴ The running annual average of all Chlorine Residual readings (1,459) in the distribution system was **1.50 ppm** for 2020.

⁵ Radiological results are from individual raw water wells, and not distribution locations, as required by the NCDOH.

⁶ The level presented represents the 90th percentile of 54 sites tested. The "action level" for copper was not exceeded at any of 54 sites tested.

⁷ The level presented represents the 90th percentile of 54 sites tested. The "action level" for lead was not exceeded at any of 54 sites tested.

⁸ Higher levels of iron (up to 1,000 ppb) may be allowed by the state when justified by the water supplier, as is the case with NYAW - Merrick Operations district. The Total of iron and manganese should not exceed 500 ppb, unless allowed by the state, as is the case with NYAW - Merrick Operations district.



⁹ Water containing more than 20 mg/L of sodium should not be used for drinking by persons 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.

¹⁰ The NCDOH recommends that the Langelier Saturation Index (for corrosivity) be as close to zero as possible.

¹¹NCDOH guidelines recommend a pH range of 7.0 – 8.5. The running annual average of all pH readings in the distribution system taken during routine bacteriological testing was 7.10 units in 2020.

*See public notification attached for 1,4 dioxane information.

Unregulated Contaminant Monitoring Rule (UCMR4):

The following parameters were tested for as per a required USEPA monitoring program (2018 - 2020) to try to quantify the presence and amount of emerging or unregulated compounds to see if any should be regulated by the EPA in the future. Unregulated contaminants are those for which USEPA has not established drinking water standards for. The purpose of unregulated contaminant monitoring is to assist USEPA in determining the occurrence of these constituents in drinking water and whether future regulation is warranted. (No Federal MCL's exist for these parameters to-date, although some might be already regulated by the NYSDOH.)

The following contaminants that we tested for on the treated water exiting our treatment plants ("Entry Point" locations) were detected as follows:

-		-	· · ·	•
Contaminant (units)	Date Sampled	Maximum Amount Detected	Range: Low-High	Typical Source
Manganese (ppb)	2018	37	ND - 37	Naturally occurring
Germanium (ppb)	2018	0.41	ND - 0.41	Naturally occurring

The following contaminants that we tested for on the raw water wells were detected as follows:

Contaminant (units)	Date Sampled	Maximum Amount Detected	Range: Low-High	Typical Source
Bromide (ppb)	2018	190	ND - 190	Naturally occurring
Total Organic Carbon (ppb)	2018	901.5	ND - 901.5	Naturally occurring

The following contaminants that we tested for on distribution system locations were detected as follows:

0		2		
Contaminant (units)	Date Sampled	Maximum Amount Detected	Range: Low-High	Typical Source
Total Haloacetic Acids – UCMR4 (ppb)	2018	0.83	ND - 0.83	By-product of drinking water disinfection
Total Haloacetic Acids – Bromide-related (ppb)	2018	0.38	ND - 0.38	By-product of drinking water disinfection

Total Haloacetic Acids for UCMR4 include the sum of the following contaminant combinations: Monochloroacetic acid, Monobromoacetic acid, Dichloroacetic acid, Trichloroacedic acid, Bromochloroacetic acid, Dibromoacetic acid, Bromodichloroacetic acid, Chlorodibromoacetic acid, Tribromoacetic acid.

Unregulated Contaminant Monitoring Rule (UCMR4) - Listing of Non-Detected (ND) Contaminants (2018):

The following contaminants that we tested for under UCMR4 Monitoring Program were "Non-detected" (ND):

Alcohols:	Pesticides and byproducts:
1-butanol	Alpha-Hexachlorocyclohexane
2-methoxyethanol	Chlorpyrifos
2-propen-1-ol	Dimethipin
	Ethoprop
Semi-Volatile Chemicals:	Oxyfluorfen
Butylated hydroxyanisole (BHA)	Profenofos
o-toluidine	Tebuconazole
Quinolone	Total Permethrin (cis- & trans-)
-	Tribufos

Unregulated Contaminant Monitoring Rule (UCMR3):

The following parameters were tested for as per a required USEPA monitoring program (2013 - 2015) to try to quantify the presence and amount of emerging or unregulated compounds to see if any or all of them should be regulated by the USEPA in the future (No MCL's for these parameters to-date).

The following contaminants that we tested for on the treated water exiting our treatment plants ("Entry Point" locations) were detected as follows:

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1,4-Dioxane (ppb) * 2017-2	2019 1.35	ND - 1.35	Manufacturing solvent

*NYS guidance level for 1,4-dioxane was 1.0 ppb before new regulations were put into effect in August of 2020. Special 1,4-dioxane sampling was performed on raw water wells in 2017-2019 by the water company for proactive, informational, and quality control purposes only, and not due to any regulatory requirement.

USEPA Health Advisory Definitions:

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Health advisories provide information on contaminants that can cause human health effects and are known or anticipated to occur in drinking water. EPA's Health Advisories are non-enforceable and non-regulatory and provide technical information to states agencies and other public health officials on health effects, analytical methodologies, and treatment technologies associated with drinking water contamination.



Special Message about new Regulations on Emerging Contaminants by NYSDOH:

On August 26, 2020, NYS adopted new drinking water standards for public water systems that set maximum contaminant levels (MCLs) of 10 parts per trillion (ppt) each for perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS), and 1 part per billion (ppb) for 1,4-dioxane.

About Drinking Water Standards and MCLs

A MCL is the highest level of a contaminant allowed in drinking water delivered by public water systems. They are enforceable regulatory limits. MCLs are set far below levels that cause health effects. According to the NYSDOH, because MCLs are set at levels with a large margin of protection, an exceedance of an MCL does not mean that water is unsafe for use while the public water system takes actions to reduce the levels.

The USEPA has also established guidance for the presence of PFOA and PFOS in drinking water. The EPA has established a nonenforceable health advisory level of 70 parts per trillion (ppt) for the sum of PFOA and PFOS. An MCL for 1,4-Dioxane in drinking water has not been established by the EPA.

What Are Emerging Compounds?

1,4-Dioxane is a synthetic industrial chemical that is present in many goods, including paint strippers, dyes, greases, antifreeze, and aircraft deicing fluids, and in some consumer products such as deodorants, shampoos and cosmetics.

PFOA/PFOS are per- and polyfluoroalkyl substances (PFAS), which are a group of man-made chemicals that can be found in food packaging; commercial household products, including stain- and water-repellent fabrics (ex: Scotchgard), nonstick products (e.g., Teflon), polishes, waxes, paints, and cleaning products; and fire-fighting foams.

Emerging compounds can enter our water resources after being landfilled, spilled, discharged as waste, or by seepage and infiltration into the water table, eventually entering water supplies.

NYAW's Action Plan

In advance of the adoption of these new standards by the State, New York American Water tested its entire water supply to determine the presence of these emerging compounds.

NYAW determined that, of the 55 sites that supply water across NYAW's service areas in Long Island and upstate New York, one site in your district has detections of emerging compounds above the NYS MCLs. Detections of 1,4-Dioxane at the Seamans Neck Well Station in North Wantagh/Levittown at 1.4 ppb. NYAW is pursuing Advanced Oxidation Process (AOP) treatment for 1,4-Dioxane at the Seamans Neck Well Station. NYAW has completed our AOP pilot testing and is working closely with the NCDOH on final treatment design. While AOP treatment will take time to fully install, NYAW's proactive approach has significantly reduced the time needed to install the right treatment system for our customers served by the Seamans Neck Well Station. Please see Public Notification below.

NYAW is pursuing the appropriate treatment where needed. While new treatment will take time to fully install, NYAW's proactive approach has significantly reduced the time needed to install the right treatment system for our customers.

When a public water system (PWS) is issued a deferral, the water system agrees to a schedule for corrective action and compliance with the new PFOS, PFOA, or 1,4-dioxane MCL's. In exchange, the NYSDOH agrees to defer enforcement actions, such as assessing fines, if the PWS is meeting established deadlines. Deferral recipients are required to update the Department and the NCDOH each calendar quarter on the status of the established deadlines. The Department can resume enforcement if the agreed upon deadlines are not met. Information about our deferral and established timelines can be found at the following site: https://www.amwater.com/nyaw/water-quality/Emerging-Compounds/seamans-neck



IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Deferral Issued for 1,4-Dioxane to New York American Water (NYAW) – Merrick

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.

NYAW - Merrick has submitted, and the New York State Department of Health (Department) has issued, a deferral to NYAW - Merrick. 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.

What is being done to remove these contaminants?

NYAW - Merrick is in the process of installing treatment to remove 1,4-dioxane at our Seamans Neck Road Facility and will operate impacted wells in a last on first off sequence to minimize exposure to 1,4-Dioxane. 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 our Customer Service Center at 1-877-426-6999 or Natasha Niola, Water Quality Manager at 516-632-2239. 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#: NY2902840 Date: January 21, 2021



Listing of Non-Detected (ND) Contaminants – 2020 (SA2 - Merrick Operations):

Volatile Organic Compounds

(VOC's):

Benzene

Bromobenzene

Bromomethane

n-Butylbenzene

sec-Butvlbenzene

Bromochloromethane

None of the following compounds that we analyzed for were detected in your drinking water at the respective method detection levels:

Microbiological: E.coli

Inorganics & Physical:

Ammonia as N Cyanide, free Fluoride Nitrite as N Perchlorate Surfactants (as MBAS) Turbidity

Metals:

Antimony Arsenic Beryllium Cadmium Chromium Mercury Selenium Silver Thallium Zinc

Miscellaneous: Asbestos fibers tert-Butylbenzene Carbon Tetrachloride Chlorobenzene Chloroethane Chloromethane Chlorodifluoromethane 2-Chlorotoluene 4-Chlorotoluene Dibromomethane 1.2-Dichlorobenzene 1,3-Dichlorobenzene 1.4- Dichlorobenzene (Meta) Dichlorodifluormethane 1.1-Dichloroethane 1,2-Dichloroethane 1,1-Dichloroethane cis-1,2-Dichloroethene trans-1,2-Dichloroethene 1.2-Dichloropropane 1,3-Dichloropropane 2.2-Dichloropropane 1,1-Dichloropropene cis-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene Hexachlorobutadinene Isopropylbenzene 4-Isopropyltoluene Methyl Tert Butyl Ether (MTBE) Methylene Chloride (Dichloromethane) n-Propylbenzene Styrene 1,1,2-trichloro 1,2,2trifluoroethane 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane Tetrachloroethene (PCE) Toluene 1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1.1.1-Trichloroethane 1,1,2-Trichloroethane Trichlorofluoromethane 1,2,3-Trichloropropane 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene M-Xylene 0-Xylene P-Xylene Vinyl Chloride

Synthetic (Specific) Organic Compounds (SOC's)* Regulated Group #1:

Alachlor Aldicarb Aldicarb Sulfone Aldicarb Sulfoxide Atrazine Carbofuran Chlordane, Total 1.2-Dibromo-3-Chloropropane (DBCP) 2,4-D Endrin 1,2-Dibromomethane (EDB) Heptachlor Heptachlor Epoxide Lindane Methoxychlor PCB's Pentachlorophenol Toxaphene 2,4,5-TP (Silvex)

Regulated Group #2:

Aldrin Benzo(a)pyrene Butachlor Carbaryl Dalapon Di (2-Ethylhexyl) adipate Di (2-Ethylhexyl) phthalalte Dicamba Dieldrin Dinoseb Diguat Endothall Glyphosate Hexachlorobenzene Hexachlorocyclopentadiene 3-Hydroxycarbofuran Methomyl Metolachlor Metribuzin Oxamyl (Vydate) Picloram Propachlor Simazine 2,3,7,8-TCDD (Dioxin)

* Synthetic (Specific) Organic

Compounds (SOC's) are mainly Pesticides and Herbicides, and are required to be tested on raw water wells, and not on distribution locations, as per NCDOH requirements.

Unregulated Contaminant Monitoring Rule (UCMR3):

The following parameters were tested for as per a required USEPA monitoring program (2013 - 2015) to try to quantify the presence and amount of emerging or unregulated compounds to see if any should be regulated by the EPA in the future.

The following contaminants that we tested for on the treated water exiting our treatment plants ("point of entry" locations) were "Nondetected" (ND):

UCMR3 Volatile Organic Compounds (VOC's) Group (all ND):

1,1-Dichloroethane 1,2,3-Trichloropropane 1,3-Butadiene Bromochloromethane (halon1011) Bromomethane Chlorodifluoromethane Chloromethane <u>UCMR# Perfluorinated</u> <u>Compounds Group (all ND):</u> Perfluorooctanesulfonin acid (PFOS)

Perfluorooctonoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorohexanesulfonic acid (PFHxS) Perfluoroheptanoic acid (PFHpA) Perfluorobutanesulfonic acid (PFBS)

UCMR3 Hormones Group (all ND):

Estradiol (17beta-) Equilin 4-Androstene-3,17-dione Estrone Ethynylestradiol (ethinyl estradiol) Hydroxyestradiol Testosterone







Dear Water Customer:

The Town of Hempstead remains committed to providing the over 37,000 residents served by the Water Department with a clean, pristine, and plentiful supply of water. The department's staff continues to utilize cutting edge technology and testing methods designed to maintain the high quality water our township has long been known for.

The Town of Hempstead Water Department is here to serve you. If you have any questions related to the Drinking Water Quality Report, or any other concerns, please call the Water Department at (516) 794-8300.

Sincerely

JOHN L. REINHARDT Commissioner, Water Department

PUBLIC NOTICE ANNUAL DRINKING WATER QUALITY REPORT FOR THE BOWLING GREEN ESTATES, EAST MEADOW, LEVITTOWN, ROOSEVELT FIELD AND UNIONDALE WATER DISTRICTS 2020 PUBLIC WATER SUPPLY ID #2900000

The following Annual Drinking Water Quality Report has been prepared by the Town of Hempstead Department of Water on behalf of the Bowling Green Estates, East Meadow, Levittown, Roosevelt Field and Uniondale Water Districts in conformance with Title 10 of the New York State Health Law and more specifically Part 5 of the New York State Sanitary Code, Subpart 5-1, Public Water Supplies Section 5-1.72, Operation of Public Water System.

This Annual Drinking Water Quality Report provides in part, information relating to the districts' source of water supply, annual pumpage data, water treatment processes, distribution water quality, average customer expense, suggestions for conservation of water and other pertinent items relating to the operation of the districts. Specific water quality data pertaining to district supply wells is not published as part of this water supply statement, but is available at the office of the Department of Water located at 1995 Prospect Avenue, East Meadow, New York 11554, telephone number (516) 794-8300. Also, residents are advised that a schedule of regular Town Board meetings can be found at www.hempsteadny.gov. Customers desiring further information not found in this annual water supply statement should contact the Department of Water at the above referenced telephone number.

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

SOURCE OF SUPPLY

Water for the districts is supplied from 29 wells, all of which are located in the Magothy formation, which serves as the primary source of public water supply. The depths of these wells range from 487' to 741' and were installed between 1951 and 2010. The number of operating wells in each of the water districts is as follows: Bowling Green Estates, 2; East Meadow, 7; Levittown, 9; Roosevelt Field, 5; and Uniondale, 6.

DATE WATER DISTRICT ESTABLISHED

Jniondale	July 3, 1933
Bowling Green Estates	January 18, 1949
ast Meadow	March 2, 1949
evittown	March 24, 1949
Roosevelt Field	January 29, 1963

PUMPAGE DATA

The districts presently serve 35,145 customers. These customers in 2020 utilized the following amounts of water:

TOTAL WATER PUMPED	5,985,003,000 gallons
TOTAL WATER DELIVERED	
TOTAL WATER UNBILLED	· · · · ·
	914 600 000 gallons

CONSUMPTION COST

The average customer used 144,271 gallons of water in 2020, which cost \$251.46. The average daily consumption per customer was 395 gallons at a cost of \$0.69 per day.

WATER TREATMENT

Water pumped from the districts' wells is naturally acidic and requires treatment to reduce the level of corrosiveness. This is accomplished by adding lime to the pumped water before entering the distribution system. The amount of lime added in the treatment process is such to allow the pumped water to meet regulatory requirements for corrosiveness.

In addition, to insure the bacteriological quality of the supply, chlorine is added to pumped water before entering the distribution system. Regulatory requirements for the addition of chlorine are met by maintaining minimum specified levels in the districts' distribution system.

Nitrate levels in five source water wells are at or above the Maximum Contaminant Level (MCL). Three of these wells are blended with other wells before entering the distribution system, effectively keeping nitrate levels below the MCL. Two wells go through an ion exchange process to lower nitrate levels before entering the distribution system.

At two sites, for aesthetic purposes, a blended polyphosphate is added to water entering the distribution system. The polyphosphate is used to prevent rusty water and to aid in corrosion control.

Water is also treated for organic constituents at nine sites. Organic compounds are removed through granular activated carbon filtration and/or packed tower aeration.

Supervisor DONALD X. CLAVIN, JR.

Council Members Dorothy L. Goosby Bruce A. Blakeman Anthony P. D'Esposito Dennis Dunne, Sr. Thomas E. Muscarella Christopher Carini *Town Clerk* Kate Murray *Receiver of Taxes* Jeanine C. Driscoll John L. Reinhardt Commissioner, Water Department

TOWN OF HEMPSTEAD DEPARTMENT OF WATER ANNUAL SUMMARY CHART FROM DISTRIBUTION SYSTEM SERVING THE

BUWLING GREEN ESTATES,	EAST MEADU	W, LEVIIIOW	N, KUUSEV	ELI FIELDA	ND UNION	DALE WAIEK DI	STRICTS FOR THE YEAR 2020	
LEAD AND COPPER (SAMPLES COLLECTED FROM 59 HOMES)	VIOLATION	DATE OF MAX SAMPLE	RANGE	90 th Percentile VALUE	MCLG	ACTION LEVEL	LIKELY SOURCE OF CONTAMINANT	
COPPER	NO	JUNE-SEPT. 2020	ND-0.46 (mg/l)	0.084	1.3	1.3	Corrosion of galvanized pipes. Erosion of natural deposits.	
LEAD	NO	JUNE-SEPT. 2020	ND-12.4 (ug/l)	1.3	0	15	Corrosion of household plumbing systems, Erosion of natural deposits.	
CONTAMINANT	VIOLATION	DATE OF MAX SAMPLE	RANGE	UNITS	MCLG	MCL	LIKELY SOURCE OF CONTAMINANT	
Physical Characteristics and Inorganics								
PERCHLORATE	NO	02/05/20	ND-1.9	ug/l	N/A	Action Level=18	Oxygen additive in solid fuel propellant for rockets, missiles, and fireworks.	
NITRATE	NO	10/13/20	0.45-8.4	mg/l	10.0	10.0	Erosion of natural deposits. Runoff from fertilizers and septic tanks.	
IRON	NO	10/13/20	ND-3307	ug/l	N/A	300	Naturally occurring.	
BARIUM	NO	02/04/20	0.0021-	mg/l	2.0	2.0	Discharge from metal refineries; erosion of natural deposits	
NICKEL	NO	10/13/20	0.0021-	mg/l	N/A	NDL	N/A	
THALLIUM	NO	10/13/20	ND-1.1	ug/l	0.5	2	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories.	
SULFATE	NO	10/13/20	ND-6.0	mg/l	N/A	250	Naturally occurring.	
SODIUM	NO	02/04/20	7.4-27.4	mg/l	N/A	NDL	Naturally occurring.	
CHLORIDE	NO	02/04/20	7.6-59.8	mg/l	N/A	250	Naturally occurring.	
LANGLIERS INDEX	NO	02/04/20	-0.97 to	mg/l	N/A	NDL	N/A	
TOTAL ALKALINITY	NO	08/25/20	3.7-63.1	mg/l	N/A	NDL	N/A	
TOTAL HARDNESS	NO	10/13/20	15.4-59.0	mg/l	N/A	NDL	N/A	
CALCIUM HAPDNESS	NO	08/25/20	84.62.0	mg/1	N/A	NDL	N/A N/A	
COLOR	NO	10/20/20	ND 5.0	UNITS	N//X NI/A	15	Lorge quantities of ergenic shemicals	
							madequate treatment, high disinfection demand, and the potential for production of excess amounts of disinfection by products such as trihalomethanes; the presence of metals such as copper, iron, and manganese.	
ODOR	NO	10/20/20	ND-1	UNITS	N/A	3	Organic or inorganic pollutants originating from municipal or industrial waste discharges; naturally occurring.	
pH	NO	01/08/20	7.0-8.8	UNITS	N/A	7.5-8.5 ³	N/A	
TOTAL DISSOLVED SOLIDS	NO	02/04/20	51.0-174	mg/l	N/A	NDL	N/A	
Radiological								
Gross alpha ²	NO	12/02/20	ND-4.6	pCi/l	0	15	Erosion of natural deposits.	
Gross Beta and photon activity ²	NO	07/14/20	ND-9.25	pCi/l	0	505	Decay of natural deposits and man-made	
Combined Radium-226 and 228 ²	NO	12/02/20	ND-4.41	pCi/l	0	51	Erosion of natural deposits.	
Uranium	NO	12/02/20	ND-4.6	ug/l	0	30	Erosion of natural deposits.	
Principal Organic Contaminants								
1,1 Dichloroethane	NO	10/20/2020	ND- 1.9	ug/l	N/A	5	Released into the environment as fugitive emissions and in wastewater during production and use as a chemical intermediate solvent.	
Synthetic Organic Contaminants								
1,4 Dioxane	NO	10/06/20	ND-4.1 ⁶	ug/l	N/A	16	Released into the environment from commercial and industrial sources and is associated with inactive and hazardous waste sites.	
Perfluorooctanoic acid (PFOA)	NO	10/14/20	ND-6.9	ng/l	N/A	10	Released into the environment from	
Perfluorooctane sulfonic acid (PFOS)	NO	10/14/20	ND-7.5	ng/l	N/A	10	widespread use in commercial and industrial applications.	
Disinfection by products stage 2								
Total Trihalomethane	NO	QUARTERLY	1.72 (ND- 6.7)	ug/l	N/A	$80 LRAA^4$	By-product of drinking water chlorination needed to kill harmful organisms that form when source water contains large amounts of organic matter.	
Disinfectant					MRDLG	MRDL		
CHLORINE	NO	07/07/2020	0.09-1.25	mg/l	N/A	4	Water additive used to control microbes	

The Fourth Unregulated Contaminant Monitoring Rule (UCMR4) - this federal program is designed to collect data for contaminants suspected to be present in drinking water, but do not have a USEPA MCL set under the Safe Drinking Water Act. For more information on UCMR3 sampling call John Markwalter at 296-7245.

UCMR4	VIOLATION	DATE OF MAX SAMPLE	RANGE	UNITS	MCL	HA
Manganese ²	NO	03/27/19	ND-94.4	ug/l	300	300
Bromide ²	NO	09/24/19	ND-183	ug/l	N/A	N/A
Total organic carbon ²	NO	03/26/19	ND-9060	ug/l	N/A	N/A

Non Detected UCMR4 Contaminants- bromochloroacetic acid, bromodichloroacetic acid, chlorodibromoacetic acid, tribromoacetic acid, germanium, alpha-hexachlorocyclohexane, chlorpyrifos, dimethipin, ethoprop, oxyfluorfen, profenofos, tebuconazole, total permethrin, tribufos, 1-butanol, 2-methoxyethanol, 2-propen-1-ol, butylated hydroxyanisole, o-toluidine, quinoline

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

FOOTNOTES:

An MCL violation occurs when the annual composite of four quarterly samples or the average of the analysis of four quarterly samples exceeds the MCL. ² Results are from raw source water.

³ Nassau County Department of Health guideline.
⁴ Locational Running Annual Averages (LRAA)

for total Trihalomethanes and Haloacetic acids.

5 The state considers 50 pCi/l to be the level of concern for beta particles. ⁶ See EMERGING CONTAMINANT INFORMATION

section in this report. 7 A resample was required. An MCL violation occurs

when the average of the two results exceeds the MCL.

NEW YORK STATE DEPARTMENT OF HEALTH ADVISORY

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 natural minerals and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include microbial contaminants, inorganic contaminants, pesticides and herbicides, organic chemical contaminants and radioactive contaminants.

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 methods to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

In order to ensure that tap water is safe to drink, the state and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of contaminants. This does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

ANNUAL FLUSHING PROGRAM

The department continues an active program of annual flushing of hydrants to remove any accumulation of precipitated iron, which may have settled in the main. This is done to minimize the discoloration of water throughout the distribution system and allows for the annual inspection of each fire hydrant in the system. Public notification is provided to each customer prior to commencement of the program.

DISTRICT DATA

WELLS CLOSED/RESTRICTED	
VIOLATIONS OF STANDARDS	0
TOTAL GALLONS PUMPED	5,985,003,000
NUMBER OF ACTIVE WELLS	
NUMBER OF PUMPING STATIONS	
AVERAGE DAY—GALLONS	16,397,268
PEAK DAY—GALLONS	
MILES OF WATER MAINS	
NUMBER OF WATER MAIN BREAKS	
NUMBER OF SERVICE LINE LEAKS	
NUMBER OF PUBLIC FIRE HYDRANTS	
TOTAL NUMBER OF CUSTOMERS	
RESIDENTIAL	
COMMERCIAL	
INDUSTRIAL	
TAX EXEMPT	
POPULATION SERVED	
SIZE OF SERVICE AREA—SQUARE MILES	

EMERGING CONTAIMINANT INFORMATION

On July 30, 2020, the New York State Department of Health (NYSDOH) announced the finalization of new contaminant levels for emerging contaminants, which include 1,4-dioxane. This new standard went into effect on August 26, 2020. Recognizing that designing and constructing treatment systems was a time consuming and costly endeavor for water suppliers, NYSDOH allowed water suppliers to apply for a compliance deferral to allow time for these treatment systems to be constructed. The Town of Hempstead Department of Water like many water suppliers on Long Island, applied for and was granted a deferral for regulation of 1,4-dioxane for two years (with the potential for a one year extension) to come into full compliance of these new regulations. This deferral has come with conditions to keep you, the consumer, informed of the work being done, the latest test results for this compound and a proposed schedule for milestones in the design and construction of these please go to https://hempsteaduy.gov/water-department/eci.

MAJOR IMPROVEMENTS

In 2020, the New York State Department of Health established an official standard for 1,4-Dioxane, PFOA, and PFOS. The Town of Hempstead Water Department is finalizing design for Advanced Oxidation Process(AOP) treatment systems to be placed on 14 wells throughout our system for the elimination of these emerging contaminants. Construction at most of these sites should start in 2021 pending regulatory approval. At several of these sites, work will include new treatment systems to further improve water quality.

The New York State Department of Health's Environmental Facilities Corporation for Grants has provided partial funding for construction of 1,4-Dioxane treatment at one site.

Additionally in 2021 the Department of Water will begin pilot testing and design work of AOP treatment systems for seven additional wells.

WATER QUALITY TESTING

The Department of Water routinely samples district wells and the districts' distribution system. Laboratory tests were performed on thousands of water quality samples collected in 2020. These tests include various inorganic, organic and microbiological constituents listed in the New York State drinking water standards. Water quality test results for detected constituents as sampled from the districts' distribution system have been tabulated and the acceptable standards for each constituent indicated in the ANNUAL SUMMARY CHART included in this report. 2020 radiological sampling from district wells are also included in the chart.

All of these tests performed both of source water and from the districts' distribution system met all of the current state and federal drinking water standards.

WATER CONSERVATION MEASURES

Conserving water saves energy and some of the costs associated with both of these necessities of life. Reductions in water usage lessen the strain on the water system and can prevent costly construction of new pumping stations and storage facilities, as well as avoid water use restrictions during hot, dry spells.

Here are some useful conservation tips the average customer can put into immediate use: check your toilet, faucets and pipes for leaks. Toilets should be checked for leaks by observing that the water tank level is below the tank overflow pipe and the flapper valve sits tightly. The flapper valve can be checked by placing a few drops of food coloring in the tank, if the color appears in the bowl, the flapper valve should be replaced immediately. Hidden household leaks can be detected by checking your meter after turning off all taps and water-using appliances in the house. When brushing your teeth or shaving, do not let the water run. Install water-saving shower heads or flow restrictors and take shorter showers. Use your automatic dishwasher and washing machine only with full loads, and keep a bottle of cold water in the refrigerator rather than running the cold-water tap. Also, water your lawn only between the hours of 10 AM to 4 PM. Do not let the hose run unnecessarily when washing your car.

Water conservation kits are available free to the public and can be obtained at our main office in East Meadow.

NITRATE INFORMATION

The Annual Drinking Water Quality Report (ADWQR), established by the USEPA as part of the Safe Drinking Water Act, requires that all suppliers with detected nitrate levels above 5 ppm but below 10 ppm include a statement about the impact of nitrate on children. Nitrate in drinking water at levels above 10 ppm is a health risk for infants less than six months of age and can cause blue baby syndrome.

If you are caring for an infant you should ask for advice from your healthcare provider. As you can see from the ANNUAL SUMMARY CHART, our system had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were below the New York State limits.

Last year your tap water met all state drinking water health standards.

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all our customers help us protect our water sources, which are the heart of our community.

CODES for chart to the left:

MCL - THE HIGHEST LEVEL OF CONTAMINANT ALLOWED IN DRINKING WATER MCLG - THE LEVEL OF A CONTAMINANT IN DRINKING WATER BELOW WHICH THERE IS NO KNOWN OR EXPECTED RISK TO HEALTH NDL - NO DESIGNATED LIMIT ND - NOT DETECTED mg/l - MILLIGRAMS PER LITER OR PARTS PER MILLION ug/l - MICROGRAMS PER LITER OR PARTS PER BILLION mg/l - NANOGRAMS PER LITER OR PARTS PER TRILLION

pCi/I- PICOCURIES PER LITER

MRDLG - MAXIMUM RESIDUAL DISINFECTANT LEVEL GOAL MRDL - MAXIMUM RESIDUAL DISINFECTAN T LEVEL

N/A - NOT AVAILABLE

HA - HEALTH ADVISORY- An estimate of acceptable drinking water levels for a chemical substance based on health effects information. An HA is not a legally enforceable Federal standard, but serves as technical guidance to assist Federal, State and local officials.

90th Percentile - The values reported for lead and copper represent the 90th percentile. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the lead and copper values detected in our water system. Help preserve and conserve! Observe even-odd watering days. Never water between 10 a.m. & 4 p.m.

LEAD INFORMATION

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. Town of Hempstead Department of Water is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. The Department of Water collected 59 samples for Lead and Copper in 2020 and the results did not exceed the Action Level for either Lead or Copper. 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 and 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.

FOR WATER EMERGENCIES, CALL 516-794-8181 24 HOURS A DAY

SOURCE WATER ASSESSMENT

The NYS DOH, with assistance from the local health department and the CDM consulting firm, has completed a source 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 each 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 Annual Summary Report for a list of contaminants that have been detected. The source water assessments provide resource managers with additional information for protecting source waters into the future.

Drinking water is derived from twenty-nine (29) wells. The source water assessment has rated most 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 of sources 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 commercial/industrial activities in the assessment area.

A copy of the assessment, including a map of the assessment area, can be obtained by contacting us at 794-8300.

m Dichlorobenzene 1.1.2 Trichloroethane n-Butylbenzene 1,3 Dichloropropane 2 Chlorotoluene (MTBE) or MethylTert.ButylEther Dichlorodifluoromethane Chlorobenzene 1,1,1 Trichloroethane 1,1 Dichloropropene n-Propylbenzene 4 Chlorotoluene Isopropylbenzene Trichlorofluoromethane Carbon Tetrachloride

Vinyl Chloride 1.3.5 Trimethylbenzene Chloromethane Benzene 1,2,4 Trichlorobenzene p-cymene Dibromomethane Bromomethane Hexachlorobutadiene 1,2 Dichloropropane sec-Butylbenzene tert-Butylbenzene 1,2 Dichloroethane 1,2,4 Trimethylbenzene p Dichlorobenzene Ethylbenzene

t-1.2 Dichloroethylene o Dichlorobenzene Bromobenzene 1,1,2,2 Tetrachloroethane 1,1,1,2 Tetrachloroethane 1,2,3 Trichlorobenzene Bromochloromethane Styrene t-1,3 Dichloropropene Chloroethane c-1,3 Dichloropropene 2,2 Dichloropropane Methylene Chloride Toluene m+p Xylene o Xylene

c-1,2 Dichloroethylene Cvanide Turbidity Nitrite Flouride Arsenic Antimony Beryllium Cadmium Mercury Silver Selenium Zinc Alachlor Aldicarb

NON-DETECTED CONTAMINANTS

Tetrachloroethylene

Aldicarb Sulfone Aldicarb Sulfoxide Atrazine Carbofuran Chlordane, Total EDB DBCP 2,4-D Endrin Heptachlor Heptachlor Epoxide Lindane Methoxychlor PCBs Pentachlorophenol Toxaphene

2,4,5-TP(Silvex) Aldrin Benzo(a)pyrene Butachlor Carbaryl Dalapon Di(2-ethylhexyl)adipate Di(2-ethylhexyl)phthalate Dieldrin Dinoseb Diquate Endothall Glyphosate Hexachlorobenzene Hexachlorocyclopentadiene 3-Hydroxycarbofuran

Methomyl Metolachlor Metribuzin Oxamyl(Vydate) Picloram Propachlor Simazine 2,3,7,8-TCDD (Dioxin) Dicamba Asbestos E. Coli Haloacetic Acid

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER Deferral Issued for 1,4-Dioxane in the Town 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 Town of Hempstead has submitted, and the New York State Department of Health (Department) has issued, a deferral to the Town 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.

What is being done to remove these contaminants? The Town of Hempstead Department of Water has been working with Long Island's leading engineering professionals in the water treatment industry to perform the required treatment system pilot testing and prepare all reports and plans required by State and County regulators to construct the necessary treatment systems to remove this compound from our water. In total the department will need to construct treatment on 21 of its wells at eleven different well sites.

Most water suppliers on Long Island have experienced similar levels of this contaminant in their water and are going through a similar process to our department. The increased demand for materials to construct these complex facilities will increase supply lead times as systems are approved for construction. In order to expedite these projects through their construction phase and limit any supply delays, the Department of Water will be bidding out filter vessel supply contracts ahead of the construction bids. This will provide a six month head start on the manufacturing of these items and ensure that there are no material delays once site construction begins. in order to ensure that contracts can be bid and awarded as soon as they are approved by regulatory agencies the Town Board recently passed a series of resolution to fund these treatment systems.

You can keep updated on the progress of these projects by regularly visiting our emerging contaminants page at WWW.HEMPSTEADNY.GOV/WATERDEPARTMENT/ECI.

By conserving water, residents can help reduce how often the department needs to run the effected wells. Until these systems are constructed the Town of Hempstead will operate affected wells in a "last on/first off" fashion to minimize exposure to 1,4-dioxane in drinking water. 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 Water Quality Control Specialist John Markwaiter at 516-296-7245 JMarkwalter@TOHMAIL.org or Commissioner of Water John Reinhardt at 516-296-7200 JReinhardt@TOHMAIL.org.

You can also contact the Nassau County Department of Health, Office of Public Water Supply Protection and Groundwater Assessment 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# 2900000 Town of Hempstead Department of Water 1995 Prospect Avenue East Meadow, New York 11554 Date February 3, 2021