



# 2018 WATER QUALITY REPORT



**Lynbrook Operations District**  
Public Water Supply ID# NY2902835  
January 1 to December 31, 2018

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

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:

New York American Water is proud to be your local water service provider, and I am pleased to share some very good news about the quality of your drinking water. As you read through our Annual Water Quality Report, you will see that we continue to supply water that meets

or surpasses all state and federal water quality standards.

**Better yet, the price you pay for this high-quality water service is about a penny per gallon.**

This is an exceptional value when you consider 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. What's more, our plant operators, water quality experts, engineers and maintenance crews work around the clock to make sure that quality water is always there when you need it.

Delivering safe, reliable water service requires significant investment to maintain and upgrade aging facilities. **In 2018 alone, we invested approximately \$46 million in system improvements across the state; and plan on investing another \$40 million in 2019.**

Because water is essential for public health, fire protection, economic development and overall quality of life, New York American Water's employees are committed to ensuring that quality water keeps flowing not only today, but well into the future.

Please take the time to review this report. It provides details about the source and quality of your drinking water using the data from water quality testing conducted for your local system between January and December 2018.

Thanks for allowing us to serve you. **WE KEEP LIFE FLOWING.**

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
- Contacting agencies such as the Nassau County Health Department at 516-227-9692.



**QUALITY. ONE MORE WAY WE KEEP LIFE FLOWING.**

## Be Water Smart – Think Conservation

Our system has more than enough water to meet present and future demands. However, saving water helps the environment by preserving our natural resource, and reducing the cost of pumping and treating the water. Saving water can also help lower your water bill and your hot water heating bill.

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

- 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, hints and dye tablets to help you determine if you have a wasteful water loss. Call our customer call center or 516-632-2236 to order.
- Water your lawn only on odd/even days according to your address, and only before 10:00am or after 4:00pm, as per **mandatory** Nassau County Dept. of Health ordinance.
- Install a moisture sensor on your lawn sprinkler system to prevent wasteful watering during or just after a rain.
- 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

For more than 30 years, New York American Water – Lynbrook Operations (formerly Long Island American Water) has published an Annual Water Quality Report to keep our customers up-to-date on the quality of our drinking water.

Once again, we are pleased to report that your tap water not only meets, but in all instances except iron, is better than all federal, state and local drinking water standards, and our system has never violated a primary maximum contaminant level.

To assure that water is safe to drink, the U.S. Environmental Protection Agency, 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 New York State Health Department 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 2018, 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 516-632-2215.

## Share This Report:

Landlords, businesses, schools, hospitals and other groups are encouraged to share this important water quality information with water users at their location who are not customers of New York American Water. Additional copies of this report are available by contacting us at 516-632-2215.

## 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 toll-free if you have questions:*

## New York American Water:

**Customer Call Center:** 1-877-426-6999 (M-F; 7am-7pm)

**Emergencies:** 1-877-426-6909 (24 hours)

**Automated Meter Reading Line:** 1-800-672-1095

**TDD (Hearing/Speech impaired):** 1-800-300-6202

**On-line – “My H2O Online”:** [www.newyorkamwater.com](http://www.newyorkamwater.com)

**Merrick Admin. 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 :

**New York State Department of Health**  
1-518-473-8600 • [www.health.state.ny.us](http://www.health.state.ny.us)

**Nassau County Health Department**  
516-227-9692 • [www.co.nassau.ny.us/health](http://www.co.nassau.ny.us/health)

**New York State Department of Public Service**  
1-800-342-3377 • [www.dps.state.ny.us](http://www.dps.state.ny.us)

**US Environmental Protection Agency**  
[www.epa.gov/safewater](http://www.epa.gov/safewater)

**EPA Safe Drinking Water Hotline**  
1-800-426-4791

**American Water Works Association**  
[www.awwa.org](http://www.awwa.org)

**Water Quality Association**  
[www.wqa.org](http://www.wqa.org)



## About New York American Water

New York American Water, 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 publicly traded water and wastewater utility company. The company employs more than 7,100 dedicated professionals who provide regulated and market-based drinking water, wastewater and other related services to more than 14 million people in 46 states and Ontario, Canada. 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 [amwater.com](http://amwater.com) and follow American Water on [Twitter](#), [Facebook](#) and [LinkedIn](#).

## Communities Served

Atlantic Beach	Lawrence
Baldwin	Lynbrook
Baldwin Harbor	Malverne
Barnum Island	Malverne Park-Oaks
Bay Park	Meadowmere
Cedarhurst	North Lawrence
East Atlantic Beach	North Lynbrook
East Rockaway	North Woodmere
Harbor Isle	Oceanside
Hewlett	Roosevelt
Hewlett Bay Park	South Hempstead
Hewlett Harbor	Valley Stream
Hewlett Neck	West Hempstead*
Inwood	Woodmere
Island Park	Woodsburgh
Lakeview	

\*community partially served

## Average Residential Usage & Cost

In 2018, the average residential household used approximately 91,997 gallons of water at a cost of \$679, or \$1.86 a day. With an average of 3.0 persons per household, the cost of water was about 62¢ a day per person.

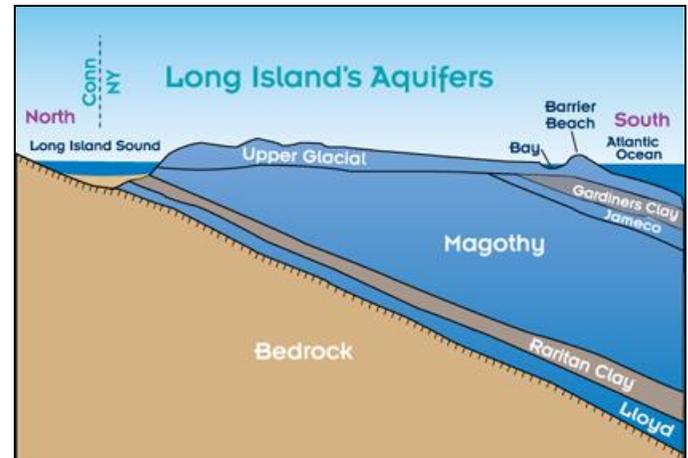
## Source, Quality & Quantity

Groundwater is the source of your drinking water supply. It is drawn from approximately 162 wells total, including small capacity ones in well field, 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. New York American Water – Lynbrook Operations has wells in the Upper Glacial, Magothy, Jameco and Lloyd aquifers.

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: Nassau County Department of Health)

## Source Water Assessment

The NYS DOH, with assistance from the local health department and the CDM consulting firm, has completed a source water assessment for this system, based on available information. Possible and actual threats to this drinking water source were evaluated. The source water assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how rapidly contaminants can move through the subsurface to the wells. The susceptibility of a water supply well to contamination is dependent upon both the presence of potential sources of contamination within the well's contributing area and the likelihood that the contaminant can travel through the environment to reach the well. The susceptibility rating is an estimate of the potential for contamination of the source water, it does not mean that the water delivered to consumers is, or will become contaminated. See section "Are there 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 36 wells (large wells – not including small wells included in well field). 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 very high susceptibility to industrial solvents is due primarily to point sources of contamination related to transportation routes and commercial/ industrial facilities and related activities in the assessment area. The high susceptibility to nitrate contamination is attributable to residential and commercial land use and related practices in the assessment area, including fertilizing lawns.



A copy of the assessment, including a map of the assessment area, can be obtained by contacting us, as noted: Please contact New York American Water's Water Quality Manager at 516-632-2215.

## How is Your Water Treated?

Our water supply is obtained from wells located throughout our service area. The wells range in depth from about 30 feet to 1,100 feet, averaging 500 feet. In our area of southwestern Nassau County, the soil has a 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 (with 12.5% Sodium Hypochlorite) for bacteriological disinfection at all treatment plants.
2. Lime (Calcium Hydroxide) to raise pH and minimize corrosivity to water mains and household plumbing (at 7 out of 20 locations).
3. Caustic Soda (25% Sodium Hydroxide) to raise pH and minimize corrosivity to water mains and household plumbing (at 12 out of 20 locations; 1 in-progress).
4. Filtration to remove naturally occurring Iron at 13 out of 20 well treatment locations.
5. Sodium Silicate to stabilize (sequester) iron not removed by filtration and for corrosion control at all treatment plant locations.
6. Air strippers to remove volatile organics at one location.
7. 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 (Sodium Silicate) 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: <https://amwater.com/nyaw/water-quality/lead-and-drinking-water>

## System Improvements

**In 2018, we continued to make significant upgrades to our system and infrastructure. These improvements include.**

- Replaced approximately 4.5 miles of water main throughout the service territory.
- Replaced 84 fire hydrants
- Replaced 899 service lines
- Replaced approximately 3,000 water meters
- Began construction of transmission main improvements in Baldwin, to include new 20-inch diameter transmission mains and crossing over the LIRR tracks and Sunrise Highway.
- Continued construction of new 6 MGD Iron Removal Filter Plant facility at Station #1 in Roosevelt.

- Completed construction of new 2 MGD Iron Removal Filter at Plant 20 in Valley Stream.
- Completed construction on chemical system improvements at Plant 19 in Lakeview, and Plant 2 in Lakeview.
- Started construction of chemical system improvements Plant 22 in Baldwin.

### Capital Improvements planned for 2019 include:

- Replace approximately 7 miles of water main throughout the service territory (over 36,950 feet)
- Replace approximately 90 fire hydrants
- Replace approximately 1,200 service lines
- Replace approximately 30,000 water meters
- Start construction on the roof replacement of the 1 MG storage tank at Plant 7 in Valley Stream.
- Drill two-2 MGD replacement wells at Plants 15 and 24 in Lynbrook.
- Complete construction on the new 6 MGD Iron Removal Filter Plant facility at Plant #1 in Roosevelt.
- Complete construction of chemical and electrical improvements at Plant 22 in Baldwin.
- Complete construction of new 20-inch diameter water transmission main and direction drill crossing under Sunrise Hwy and the Long Island Railroad in Roosevelt and Baldwin.

## Do I Need to Take Special Precautions?

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount 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 Nassau County Department of Health 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, we thought 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 a number of 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 questions, contact the Nassau County Department of Health at 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 5 parts per billion, and for copper, below 0.2 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 2017 with similar results. The next round of homeowner monitoring for the Lead and Copper Rule will be completed in the summer of 2020.

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 2018 (and earlier) with the health standards established by federal, state and local health authorities. Of about 200 substances or parameters tested, detectable levels were found for about 40; and with the exception of iron, which is not considered a health hazard, 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 **Chlorides** is **250 ppm** and the “**Maximum Amount Detected**” result is **29.8 ppm**, well below the maximum allowed contaminant 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. In fact, New York American Water – Lynbrook Operations District has never violated a primary maximum contaminant level standard.

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.
- **Maximum Residual Disinfectant Level (MRDL):** The highest level of 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 contaminants.
- **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
- **Nephelometric Turbidity Unit (NTU):** A measure of the clarity of water. Turbidity in excess of 5.0 NTU is just noticeable to the average person.
- **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)].
- **Picocuries per liter (pCi/L):** A measure of the radioactivity in water.
- **Total Dissolved Solids [TDS]:** An overall indicator of the amount of minerals in the water.

### Water Quality Facts

To assure 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 Nassau County Health Department Laboratory, and by independent, certified laboratories approved by the state, who report results simultaneously to the company and to the Health Department.

New York State 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 516-632-2215 and request a copy.

### 2018 STATISTICS AT-A-GLANCE

Wells Closed/Restricted	Two
Violations of Standards	None
Typical Well Depth	500 Feet
Aquifers	Upper Glacial*, Jameco, Magothy, Lloyd
Pumping Stations	23
Service Area	43 Square Miles
Total Water Withdrawn	9,326,096,000 Gal.
Total Water Sales	7,836,760,000 Gal.
Total Water Lost from System**	1,489,336,000 Gal.
Population Served (approx.)	220,000
Customers Served (accounts)	73,839
Miles of Mains	723

\* The Upper Glacial aquifer is no longer utilized for water source  
 \*\* Total water lost from the system includes “Accounted For” and “Unaccounted For” water. Non-Revenue Water is approx. 16.0% of total water withdrawn; of which, 6.0% is accounted for, and 10.0% is unaccounted for.



## Water Quality Table – Table of Detected Contaminants 2018 (Lynbrook Operations)

### REGULATED SUBSTANCES

Contaminant (units)	Date Sampled	MCL	MCLG	Maximum Amount Detected	Range: Low-High	Compliance Achieved	Typical Source
<b>Microbiological</b>							
Total Coliform (% positive samples in any given month) <sup>1</sup>	2018 (One positive sample in Oct 2018)	MCL => 5% samples positive in a month	0	0.65 % (10/2018)	ND = 0.65%	Yes	Naturally present in the environment
<b>Radiological <sup>2</sup></b>							
Gross Alpha Activity (pCi/L)	2016-2018	15	0	5.44	ND - 5.44	Yes	Erosion of natural deposits
Gross Beta Activity (pCi/L)	2018	50	0	5.74	0.221 - 5.74	Yes	Decay of natural deposits
Combined Radium-226 and Radium-228 (pCi/L)	2016-2018	5	0	5.0	0.378 - 5.0	Yes	Erosion of natural deposits and man-made emissions
Uranium (ppb)	2016-2018	30	0	0.270	ND - 0.270	Yes	Erosion of natural deposits
<b>Disinfection By-Products</b>							
TTHM's [Total Trihalomethanes] (ppb) <sup>3</sup>	2018	80	0	7.4	0.6 - 7.4	Yes	By-product of drinking water disinfection
HAA5's [Total Haloacetic acids] (ppb) <sup>4</sup>	2018	60	0	0.6	ND - 0.6	Yes	By-product of drinking water disinfection
<b>Disinfectants</b>							
Chlorine (ppm) <sup>5</sup>	2018	MRDL = 4.0	MRDLG = 4.0	1.95	0.12 - 1.91	Yes	Water additive used to control microbes

### Lead and Copper Rule (Tap water samples were collected from 52 homes in the service area)

Contaminant (units)	Date Sampled	Action Level	MCLG	Amount Detected (90th %tile)	Range: Low-High	Homes Above Action Level	Violation	Typical Source
Copper (ppm) <sup>6</sup>	9/17	1.3	1.3	0.180	ND - 0.210	0	No	Corrosion of household plumbing systems
Lead (ppb) <sup>7</sup>	9/17	15	0	3.0	ND - 8.6	0	No	Corrosion of household plumbing systems

### Metals & Inorganic Substances

Contaminant (units)	Date Sampled	MCL	MCLG	Maximum Amount Detected	Range: Low-High	Typical Source
Barium (ppm)	2018	2	2	0.0054	ND - 0.0054	Erosion of natural deposits
Chlorides (ppm)	2018	250	N/A	29.8	15.8 - 29.8	Naturally occurring or indicative of road salt contamination
Iron (ppb) <sup>8</sup>	2018	300	N/A	710	ND - 710	Naturally occurring
Manganese (ppb) <sup>9</sup>	2018	300	N/A	45	ND - 45	Naturally occurring
Nitrates as N (ppm)	2018	10	10	0.03	ND - 0.03	Erosion of natural deposits; Runoff from fertilizers and septic tanks
Sodium (ppm) <sup>10</sup>	2018	None	N/A	51.0	14.6 - 51.0	Naturally occurring; Road salt; Water softeners
Sulfate (ppm)	2018	250	N/A	49.4	ND - 49.4	Naturally occurring
Zinc (ppm)	2018	5	N/A	0.062	ND - 0.062	Naturally occurring
Arsenic (ppb) *	2018	10	N/A	1.8	ND - 1.8	Erosion of natural deposits

\* Arsenic detected in 2 out of 30 raw water wells, and not in distribution system samples.



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## Organic Substances

Contaminant (units)	Date Sampled	MCL	MCLG	Maximum Amount Detected	Range: Low-High	Typical Source
Dacthal (ppb) <sup>11</sup>	2018	50	N/A	3	ND - 3	Agricultural herbicide
Chlorodifluoromethane (ppb) *	2018	5	N/A	1.5	ND - 1.5	Industrial discharges
Methyl Tertiary Butyl Ether (MTBE) - (ppb)	2018	10	N/A	0.9	ND - 0.9	Releases from gasoline storage tanks

\* Chlorodifluoromethane (Freon-22) was detected in 3 out of 30 raw water wells, and not in distribution system samples.

## Physical Parameters & Unregulated Substances

Contaminant (units)	Date Sampled	Maximum Amount Detected	Range: Low-High	Typical Source
Alkalinity (ppm)	2018	73.8	45.7 - 73.8	N/A
Aluminum (ppb)	2018	80	ND - 80	Naturally occurring
Calcium (ppm)	2018	28.0	4.0 - 28.0	Naturally occurring; Water treatment additive
Calcium Hardness (ppm)	2018	70.4	11.1 - 70.4	N/A
Color Index (units)	2018	5	ND - 5	Presence of metals such as copper, iron and manganese
Corrosivity (Langelier Index) <sup>12</sup>	2018	(-2.06)	(-0.90) - (-2.06)	N/A
Hardness, Total (ppm)	2018	77.0	20.1 - 77.0	N/A
Magnesium (ppm)	2018	7.0	1.0 - 7.0	Naturally occurring
pH (units) <sup>13</sup>	2018	8.6	6.8 - 8.6	N/A
Odor (units)	2018	1	ND - 1	N/A
Nickel (ppb)	2018	1.0	ND - 1.0	N/A
Silica (ppm as SiO <sub>2</sub> )	2018	20.0	ND - 20.0	Naturally occurring; Water additive used for corrosion control and to help control discolorations due to iron.
Temperature (°F)	2018	72	54 - 72	N/A
Turbidity (NTU)	2018	1.0	ND - 1.0	Measurement of the clarity of water
Total Dissolved Solids [TDS] (ppm)	2018	164	110 - 164	N/A

### Footnotes:

- <sup>1</sup> 1,833 total distribution system bacteriological samples taken in 2018; with two positive Total Coliform results (one in August and one in October) = 0.11% positive for the year.
- <sup>2</sup> Radiological results are from raw water wells, not on distribution locations, as required by the Nassau County Dept. of Health (NCDOH).
- <sup>3</sup> Total Trihalomethanes (TTHM's) mean the sum of: Bromoform, Bromodichloromethane, Dibromochloromethane, and Chloroform. The highest 'Locational Running Annual Average' was 5.9 ppb in 2018.
- <sup>4</sup> Total Haloacetic acids (HAA5's) include the sum of: Monochloroacetic acid, Dichloroacetic acid, Trichloroacetic acid, Bromoacetic acid, and Dibromoacetic acid. The highest 'Locational Running Annual Average' was 0.6 ppb in 2018.
- <sup>5</sup> The running annual average of all (1833) Chlorine Residual tests in the distribution system was **0.86 ppm** for 2018.
- <sup>6</sup> The level presented represents the 90th percentile of 52 sites tested. The "action level" for copper was not exceeded at any of 52 sites tested.
- <sup>7</sup> The level presented represents the 90th percentile of 52 sites tested. The "action level" for lead was not exceeded at any of 52 sites tested.
- <sup>8</sup> Higher levels of iron (up to 1,500 ppb) may be allowed by the state when justified by the water supplier by using metal sequestering treatments, as is the case with New York American Water - Lynbrook Operations District.
- <sup>9</sup> Total of iron and manganese should not exceed 500 ppb, unless allowed by the state, as is the case with New York American Water - Lynbrook Operations.
- <sup>10</sup> 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.
- <sup>11</sup> Dacthal also known as Dimethyl Tetrachloroterephthalate (DCPA) is an unregulated SOC, and was analyzed on raw water wells, and not on distribution locations, as per NCDOH requirements.
- <sup>12</sup> The Nassau County Dept. of Health (NCDOH) recommends that the Langelier Saturation Index (for corrosivity) be as close to zero as possible.
- <sup>13</sup> Nassau County Dept. of Health (NCDOH) guidelines recommend a pH range of 7.0 - 8.5. The running annual average of all pH readings in the distribution system was **7.46 units** in 2018.



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### 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 EPA has not established drinking water standards for. The purpose of unregulated contaminant monitoring is to assist EPA 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 New York State Department of Health.}

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	100	0.55 - 100	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	170	30 - 170	Naturally-occurring
Total Organic Carbon (ppb)	2018	403.2	ND – 403.2	Naturally-occurring

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

Contaminant (units)	Date Sampled	Maximum Amount Detected	Range: Low-High	Typical Source
Total Haloacetic Acids – UCMR4 (ppb)	2018	3.10	0.59 – 1.30	By-product of drinking water disinfection
Total Haloacetic Acids – Bromide-related (ppb)	2018	1.60	0.34 – 1.60	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, Trichloroacetic acid, Bromochloroacetic acid, Dibromoacetic acid, Bromodichloroacetic acid, Chlorodibromoacetic acid, Tribromoacetic acid.

### 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 (No MCL's exist 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:

Contaminant (units)	Date Sampled	Maximum Amount Detected	Range: Low-High	Typical Source
Cobalt (ppb)	2014-2015	8.0	ND – 8.0	Naturally-occurring; medicines
Chromium (ppb)	2014-2015	9.1	ND – 9.1	Naturally-occurring; steel manufacturing; metal plating
Chromium VI (ppb)	2014-2015	0.28	ND – 0.28	Naturally-occurring; steel manufacturing; metal plating
Strontium (ppb) *	2014-2015	73.4	18.2 – 73.4	Naturally-occurring
Vanadium (ppb)	2014-2015	0.8	ND – 0.8	Naturally-occurring
Chlorate (ppb)	2014-2015	180	ND - 180	Agricultural defoliant
1,4-Dioxane (ppb) **	2014-2015; 2017-2018*	1.20	ND – 1.20	Manufacturing solvent
Chlorodifluoromethane (ppb)	2014-2015	0.44	ND – 0.44	Refrigerant

\* USEPA health advisory level for Strontium is 4,000 ppb.

\*\* USEPA health advisory level for 1,4-dioxane is 35 ppb.

\*\* Special 1,4-dioxane sampling was performed on raw water wells in 2017-2018 by the water company for informational and quality control purposes only, and not due to any regulatory requirement.

### USEPA Health Advisory Definitions:

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.

### 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):

#### Metals:

Germanium

#### Pesticides and byproducts:

Alpha-Hexachlorocyclohexane  
Chlorpyrifos



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#### Alcohols:

1-butanol  
2-methoxyethanol  
2-propen-1-ol

#### Semi-Volatile Chemicals:

Butylated hydroxyanisole (BHA)  
o-toluidine  
Quinolone

Dimethipin  
Ethoprop  
Oxyfluorfen  
Profenofos  
Tebuconazole  
Total Permethrin (cis- & trans-)  
Tribufos

## Listing of Non-Detected (ND) Contaminants – 2018 (Lynbrook Operations):

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)

#### Metals:

Antimony  
Boron  
Beryllium  
Cadmium  
Chromium  
Cobalt  
Mercury  
Molybdenum  
Potassium  
Selenium  
Silver  
Strontium  
Thallium  
Vanadium

#### Miscellaneous:

Asbestos fibers

#### Volatile Organic Compounds

##### (VOC's):

1,1,2-trichloro 1,2,3-trifluoroethane  
Benzene  
Bromobenzene  
Bromochloromethane  
Bromomethane  
n-Butylbenzene  
sec-Butylbenzene  
tert-Butylbenzene  
Carbon Tetrachloride  
Chlorobenzene  
Chloroethane

Chloromethane  
2-Chlorotoluene  
4-Chlorotoluene  
Dibromomethane  
1,2-Dichlorobenzene  
1,3-Dichlorobenzene  
1,4-Dichlorobenzene (Meta)  
Dichlorodifluoromethane  
1,1-Dichloroethane  
1,2-Dichloroethane  
1,1-Dichloroethane  
cis-1,2-Dichloroethane  
trans-1,2-Dichloroethane  
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  
Methylene Chloride (Dichloromethane)  
n-Propylbenzene  
Styrene  
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  
Trichloroethene (TCE)  
Trichlorofluoromethane  
1,2,3-Trichloropropane  
1,2,4-Trimethylbenzene  
1,3,5-Trimethylbenzene  
M-Xylene  
O-Xylene  
P-Xylene  
Vinyl Chloride

#### Synthetic 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) 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)

##### Unregulated SOC's:\*

2,4-DB  
2,4,5-T  
3,5-Dichlorobenzoic Acid  
Acifluorfen  
Bentazon  
Dichlorprop  
Methiocarb

\* Synthetic Organic Compounds (SOC's) are mainly Pesticides and Herbicides, and are required to be sampled on raw water wells, 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 "Non-detected" (ND):

#### Metals Group:

Molybdenum

#### Volatile Organic Compounds (VOC's) Group:

1,1-Dichloroethane  
1,2,3-Trichloropropane  
1,3-Butadiene  
Bromochloromethane (halon1011)  
Bromomethane  
Chloromethane

#### Perfluorinated Compounds Group (all ND):

Perfluorooctanesulfonic acid (PFOS)  
Perfluorooctanoic acid (PFOA)  
Perfluorononanoic acid (PFNA)  
Perfluorohexanesulfonic acid (PFHxS)  
Perfluoroheptanoic acid (PFHpA)  
Perfluorobutanesulfonic acid (PFBS)

#### Hormones Group (all ND):

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



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