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April 10, 2024

Liberty Utilities (New York Water) Corporation – Merrick Operations District PWS ID No. NY2902840 MCL Deferral Exemption for 1,4-Dioxane Quarterly Report – First Quarter 2024

Introduction

On behalf of Liberty Utilities (New York Water) Corporation (Liberty), D&B Engineers and Architects (D&B) has prepared this document in accordance with the requirements of the New York State Department of Health (NYSDOH) for public water suppliers who have been granted a deferral from maximum contaminant level (MCL) violations for 1,4-Dioxane. Liberty's Merrick Operations District was granted an MCL deferral for 1,4-Dioxane in 2020 due to its proactive efforts toward the implementation of treatment for this compound.

The last three years have been a time of unprecedented disruption in the supply chain of chemical supplies, equipment, infrastructure components, pipe, and materials (e.g., steel), and treatment systems. Contractors and water suppliers, locally and nationwide, have been impacted by these issues in completing both small-scale and large-scale projects. Shortages of necessary items have significantly impacted Liberty, primarily in terms of price increases, decreased availability, and longer lead times. In addition, due to the rapidly changing regulatory environment through an expanded list of contaminants with lower regulatory advisory levels or MCLs, local and state regulators are experiencing a large number of capital project submissions, in addition to their regular workload. This increased workload has led to longer regulatory review times of engineering reports, detailed design plans, and specifications. In many cases, these factors, which are out of Liberty's control, have caused delays in obtaining final regulatory approval, commencing construction, procuring equipment and necessary components, and conforming to construction schedules proposed prior to the onset of pandemic impacts.

Liberty has done everything within its power to adhere to the project schedule approved in the original deferral request, as described in the previous quarterly deferral reports. The full impact of delays was not known at the time of the original compliance deferrals and due to these regulatory changes, these delays were expected to become worse before improving because of increased national demand. Recognizing these exceptional circumstances, Liberty requested and received a 12-month MCL deferral exemption which extended the MCL compliance deadline to August 25, 2024. This deferral exemption was granted under Part 5-1.92 of the New York State Sanitary Code. The intent of the deferral exemption is to extend the compliance deadline an additional year to reflect the hardship that these delays have had upon the project completion schedule.

Liberty's goal, as always, is to provide an adequate supply of potable water to its consumers and it has done everything in its ability to move forward on the treatment project to further that goal and meet consumer demands. These impacts are expected to continue for the foreseeable future; however, Liberty's accomplishments with construction during the term of the deferral and extension are expected to support project completion before the expiration in August of 2024.

D&B Engineers and Architects

Liberty Utilities (New York Water) Corporation – Merrick Operations District PWS ID No. NY2902840 MCL Deferral Exemption for 1,4-Dioxane Quarterly Report – First Quarter 2024

The enclosed is a report describing Liberty's progress towards maintaining the highest quality of water for the customers in the Merrick Operations District, and meeting the deadlines set forth in the deferral exemption approval. The schedule for the project is contained in **Attachment A**.

Corrective Action Plan Milestones

Advanced Oxidation Process (AOP) Treatment System for Seamans Neck Road Wells 3A and 4

As indicated in the previous report, the station has been removed from service for the construction of the AOP treatment system which commenced in the first quarter of 2023. It is anticipated that the AOP treatment system construction will be complete and will be placed into service in the second quarter of 2024 as performance testing is currently being done. The Iron Removal Facility (IRF) improvements project, currently on-going at the site, which is required for efficient AOP treatment operation, is in construction and iron media replacement has been completed and approved by the Nassau County Department of Health for placement into service. Miscellaneous other improvements at the site are on-going. Substantial completion of the project occurred in the first quarter of 2024 with start-up and testing being completed in the second quarter of 2024 before the station is placed into service.

Public Notification

Public notification regarding the presence and regulation of emerging compounds, as well as the deferral, was included in the former New York American Water (NYAW) 2020 Annual Water Quality Report (AWQR)/Consumer Confidence Report released in May 2021, posted on the former NYAW website at libertyutilities.com and publicized via newspaper ads and bill insert. The most recent AWQR from 2022, specific to the Merrick Operations District, provides public notification of the deferral as well and is available at https://new-york-water.libertyutilities.com/uploads/Merrick_CCR.pdf. In addition, Liberty has uploaded this quarterly report to its website at https://new-york-water.libertyutilities.com/all/residential/safety/seamans-neck-public-notification.html. Documentation of the recent deferral exemption public notification is found at https://new-york-water.libertyutilities.com/all/. Post Nater Merrick - Liberty https://new-york-water-libertyutilities.com/all/. Post Nater Merrick - Liberty https://new-york-water-libertyutilities.com/all/. Post Nater Merrick - Liberty https://new-york-water-libertyutilities.com/all/. Post Nater Merrick - Liberty https://new-york-water-libertyutilities.com/all/. Post Nater Merrick - Liberty https://new-york-water-liberty. Post Nater Merrick - Liberty <a href="https://new-york-water-

Analytical Sampling

Sample results for the wells for which the deferral exemption was granted (Seamans Neck Wells 3A and 4 and Jefferson Street Well 11), taken during the first quarter of 2024, are contained in the table below. It should be noted that the results for Wells 3A and 4 are taken from the AOP influent (i.e., water entering the AOP treatment system after iron removal) during the performance testing of the system. The 1,4-Dioxane levels for the Jefferson Street Well 11 in the first quarter of 2022 were 0.023 micrograms per Liter (ug/L) and, in the second quarter of 2022 through first quarter of 2024, were non-detectable levels. The historical sampling at Jefferson Street Well 11 shows consistent 1,4-Dioxane results below the MCL. Full laboratory reports for each sample are contained in **Attachment C**.

Liberty Utilities (New York Water) Corporation – Merrick Operations District PWS ID No. NY2902840 MCL Deferral Exemption for 1,4-Dioxane Quarterly Report – First Quarter 2024

Merrick Ops District (PWS No. NY2902840)						
Location	Well ID No.	Date Sampled	Lab Utilized	1,4-Dioxane (ug/L)		
Jefferson Street Well 11	N-07407	01/24/2024	Pace	ND		
Seamans Neck Well 3A	AOP Influent SP-1	02/26/24	Pace	2.4; 2.7; 2.9; 2.6		
Seamans Neck Well 3A	AOP Influent SP-1	02/27/24	Pace	1.3; 2.3		
Seamans Neck Well 4	AOP Influent SP-1	02/27/24	Pace	2.0; 2.0; 2.0; 2.1; 2.1; 2.1		
Seamans Neck Well 3A	AOP Influent SP-1	03/19/24	Pace	2.9; 3.0; 2.9		

First Quarter 2024 1,4-Dioxane Water Quality Monitoring Results

ND – Not Detected

Conclusion

As demonstrated above, Liberty is actively working to preserve the quality of water for its customers and comply with the requirements put forth by the NYSDOH. Liberty looks forward to continuing to work towards completion of its treatment facilities for the Merrick Operations District.

Should you have any questions, please contact the undersigned at (516) 364-9890, Ext. 3401, or visit the website at <u>https://libertyutilities.com/</u>.

Very truly yours,

PILSL

Philip R. Sachs, P.E. Vice President

PRS/LOt/kb Enclosures cc: K. Wheeler (NYSDOH) B. Rogers (NYSDOH) W. Provoncha (NCDH) P. Young (NCDH) R. Putnam (NCDH) D. Franco (Liberty) J. Kilpatrick (Liberty) G. Sachs (Liberty) P. Connell (D&B) L. Ortiz (D&B) •5479\KK04032404_Q1 2024(R01)

ATTACHMENT A

Project Schedule Associated with MCL Exemption

Liberty New York Water Merrick Operations District	Seamans Neck Road Wells 3A and 4
MCL Exemption Report - Q1 2024	AOP Project Schedule
Task Name	2023 2024 Qtr 1 Qtr 2 Qtr 3 Qtr 4 Qtr 1 Qtr 2
Pilot Test (Complete)	
Basis of Design Report (BODR) (Complete)	
Regulatory Review of BODR (Complete)	
Detailed Design (Complete)	
Regulatory Review of Contract Documents (Complete)	
Town Zoning Process (Complete)	
Bidding (Complete) and Construction (In Progress)	
Startup and Regulatory Acceptance Testing (In Progress)	

ATTACHMENT B

Public Notification Documentation

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 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:

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.

NEW YORK 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

QUALITY. ONE MORE WAY WE KEEP LIFE FLOWING.

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 • www.health.state.ny.us NCDOH 516-227-9692 • www.co.nassau.ny.us/health New York State Department of Public Service 1-800-342-3377 • www.dps.state.ny.us 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.wga.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,



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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.

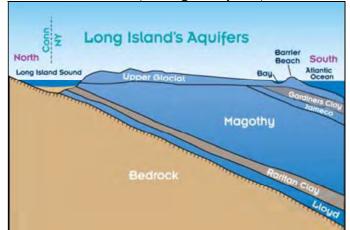
Source, Quality & Quantity

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 byproducts 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.



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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



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- 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

LOLO OTATIOTICO ATA GLA	
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

 \ast 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	
HAA5's (Total Haloacetic acids) (ppb) ³	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	1	



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	
Lead (ppb) 7	2020	15	0	1.4	ND – 6.6	No	Corrosion of household plumbing systems

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"

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.



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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:

		8		
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:

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, Trichloroacetic 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
Upredulated Contensinent Menitering Dule (UOMD2):	

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:

Contaminant (units)	Date Sampled	Maximum Amount Detected	Range: Low-High	Typical Source
1,4-Dioxane (ppb) *	2017-2019	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:

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.



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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):

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 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 Vinvl Chloride

Volatile Organic Compounds (VOC's):

Benzene

Bromobenzene

Bromomethane

n-Butvlbenzene

sec-Butvlbenzene

tert-Butylbenzene

Carbon Tetrachloride

Bromochloromethane

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 Diquat 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> Compounds Group (all ND):

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



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RESULTS TO PROVE IT

We have an exceptional track record when it comes to water quality and drinking water regulatory compliance. That's why we invite you to read our latest Water Quality Report, specifically for your local community.



new york American Water

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PROVIDING SAFE, QUALITY WATER SERVICE

- Our drinking water meets or surpasses all primary state and federal standards, including regulations related to lead.
- Statewide, we perform thousands of tests each year on the water before it leaves our treatment plants, plus a significant number of tests in the distribution system.
- Our team of water quality experts sample and interpret data regularly, following state quality control standards. Our team utilizes certified labs across the state to process and analyze these samples. We sample above and beyond the required regulations provided by the USEPA and the local health departments.

See how we're doing in your community.

Every year, we provide a detailed analysis of the water we deliver to our communities in our Water Quality Reports. To learn more about our commitment to water quality or to view the Water Quality Report for your area, visit us online at **newyorkamwater.com**. Under Water Quality, select Water Quality Reports.

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2023 Consumer Confidence Report on Water Quality for 2022

Annual Water Quality Report

Merrick Operations District Public Water Supply ID# NY2902840



Message from the President

Dear Liberty Customers,

At Liberty, providing customers with safe, quality drinking water is at the forefront of everything we do – day in and day out. We do this by continuously investing in our infrastructure and by constantly looking for opportunities improve our operations and seek enhancements to our daily processes.

Liberty makes significant investments each year to ensure the water we deliver to customers meets all Safe Drinking Water Act (SDWA) standards established by the United States Environmental Protection Agency (EPA) and New York State Department of Health (NYSDOH). We invest responsibly to maintain the local water infrastructure, because strong infrastructure is a key factor in delivering quality water. Additionally, we have a top-notch water quality program that ensures the water delivered to your home or business is thoroughly tested by independent laboratories and the data is provided to the state to verify compliance with all applicable SDWA and NYSDOH water regulations.

In the pages that follow, you will find our 2022 Water Quality Report (Consumer Confidence Report), which outlines detailed information regarding the quality of water we provided in calendar year 2022. This report can be found on our website at <u>www.libertyenergyandwater.com</u>. It includes information like the source of your water, the areas we serve, information about naturally occurring substances in the water and how we get eliminate them, our complex intake and distribution system, and more.

If you have any questions about the information within this report, please don't hesitate to contact us anytime at 1-877-426-6999 TDD:711. We encourage you to visit our website at <u>www.libertyenergyandwater.com</u> to stay up-to-date and receive tips about water conservation and more.

On behalf of the entire Liberty family, thank you for being a valued customer and neighbor. We are proud to be your water provider and look forward to serving you for years to come.

Sincerely, Chris Alario President, Liberty New York Water

To request a printed copy of this report, please call us at 1-877-426-6999 TDD:711. This report can also be found at <u>www.libertyenergyandwater.com</u>.



Where Does My Water Come From?

The Merrick water system serves approximately 135,000 people through 45,018 connections. Our water source is groundwater wells located in the aquifer system beneath the land surface. The water is treated as prior to distribution in five ways. Sodium hypochlorite is added to the water bacteriological disinfection. Caustic Soda (Sodium Hydroxide) is used to raise pH and minimize corrosivity to water mains and household plumbing. Calciquest (Phosphate compound) is used to maintain optimum treatment and inhibit the corrosion of plumbing materials; and to stabilize naturally occurring iron and manganese that can cause discolored water conditions. Filtration to remove iron at three well locations. Granular Activated Carbon (GAC) to remove organics at one well location (US Navy / Northrop-Grumman plume site).

Communities Served

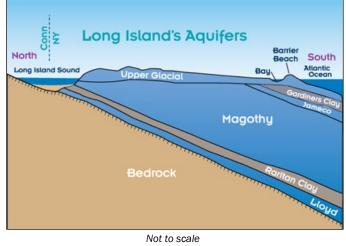
Bellmore	North Bellmore
East Massapequa*	Massapequa*
Merrick	North Merrick
North Seaford	Seaford
North Wantagh	Wantagh
Levittown*	

*community partially served



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. Merrick Operations Center has wells in the Magothy aquifer.



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

Be Water Smart – Think Conservation

The New York State Department of Environmental Conservation (NYSDEC) requested that all Long Island water suppliers reduce their peak pumpage by 15 percent to ensure 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 Liberty 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, hints, and dye tablets to help you determine if you have a wasteful water loss.
- 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.



Source Water Assessment

The NYSDOH, 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 additional information managers with 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 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.

What are Drinking Water Standards?

Drinking water standards are the regulations set by the USEPA to control the level of contamination in the nation's drinking water. The USEPA and the NYSDOH are the agencies responsible for establishing drinking water quality standards in New York. This approach includes assessing and protecting drinking water sources; protecting wells and surface water; making sure water is treated by qualified operators; ensuring the integrity of the distribution system; and making information about water quality available to the public. The water delivered to your home meets the standards required by the USEPA and the NYSDOH.

This report describes those contaminants that have been detected in the analyses of almost 200 different potential contaminants, nearly 100 of which are regulated by the USEPA and the NYSDOH. Liberty is proud to tell you that there have been no contaminants detected that exceed any federal or state drinking water standards. Hundreds of samples are analyzed every year by a NYS certified laboratory. Sample results are available on the Table in this report. This report is intended to provide information for all water users. If received by an absentee landlord, a business, or a school, please share the information with tenants, employees, or students. We are happy to make additional copies of this report available; please call Liberty's Water Quality Manager at 516-273-5670. You may also access this report on the Liberty web page at www.libertyenergyandwater.com.

Substances That Could be in Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up



substances resulting from the presence of animals or from human activity.



Contaminants that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic Contaminants, such as salts and metals, which can be naturally- occurring or result from urban stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwaterrunoff, and septic systems. Radioactive Contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the USEPA and the NYSDOH prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration (USFDA) also establishes limits for contaminants in bottled water that 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 USEPA Safe Drinking Water Hotline at 1-800-426-4791. For information on bottled water visit the USFDA website at <u>www.fda.gov</u>.

Do I Need to Take Special Precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such with as persons 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 about drinking water from their health care providers. The USEPA and Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection Cryptosporidium and other microbial by contaminants are available from the 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 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 questions, contact the NCDOH 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 10 parts per billion, and for copper, below 0.3 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. The next round of homeowner monitoring for the Lead and Copper Rule will be 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. Liberty Utilities 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 1-800-4264791 or at http://www.epa.gov/safewater/lead.

System Improvements

In 2022, we continued to make significant upgrades to our system and infrastructure. These improvements include:

- Replaced 6,200 feet of water main throughout the
- service territory.
- Replaced 1 fire hydrants.
- Replaced 74 service lines.
- Replaced 1,731 water meters.
- Completed a new 3 Million-Gallon-Per-Day water supply well at the Newbridge Road Treatment Plant in North Bellmore.
- Completed a pipe loop water treatment study in South Hempstead researching ways to reduce rusty water.
- Completed clean out of Newbridge Road Treatment Plant water recharge basin.
- Construct wellhouse at a new water supply well at Jefferson Plant in Merrick.
- Completed blow off automation at Jefferson Supply Well 11 to reduce rusty water.
- Completed liner installation and rehabilitation of the 2 Million-Gallon-per-Day Newbridge Well 3 in North Bellmore.
- Complete cleaning and rehabilitation of the 3 Million-Gallon-per-Day Jerusalem Well 5 in Wantagh.

Improvements planned for 2023 include:

- Replace approximately 775 feet of water main.
- Replace 2 fire hydrants.
- Replace 8 service lines.
- Replace approximately 1,470 water meters.
- A new iron removal facility at Charles Plant in Merrick
- Start construction on 6 Million-Gallon-Per-Day Advanced Oxidation Plant for removal of 1,4-Dioxane at the Seaman's Neck Treatment Plant in Levittown.
- Replace iron filter media at Seaman's Neck Road Plant. Install new pH optimization system.
- Demolish old wellhouse at Jefferson Plant in Merrick.

2022 STATISTICS AT-A-GLANCE

Wells Closed/Restricted	1
Violations of Standards	None
Typical Well Depth	500 Feet
Aquifers	Magothy
Pumping Stations	12
Service Area	20 Square Miles



Total Water Withdrawn5,155,729Total Water Sales4,846,38Population Served (approx.)135,000Customers Served (accounts)45,018Miles of Mains433

5,155,729,000Gal. 4,846,385,260 Gal. 135,000 45,018 433

Average Residential Usage & Cost

In 2022, the average residential household used approximately 106,965 gallons of water at a cost of about \$656, or \$1.80 a day. With an average of 3.0 persons per household, the cost of water was about 60¢ a day per person.

Important Health Information

Lead

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. Liberty New York Water is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact Liberty New York Water at 1-877-426-6999 TDD:711.

Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at http://www.epa.gov/safewater/lead.

1,4 dioxane

Laboratory studies show that 1,4 dioxane caused liver cancer in animals exposed at high levels throughout their lifetime. Whether 1,4 dioxane causes cancer in humans is unknown. The United States Environmental Protection Agency considers 1,4 dioxane as likely to be carcinogenic to humans based upon studies of animals exposed to high levels of this chemical over their entire lifetimes.

Is Our Water System Meeting Other Rules That Govern Our Operations?

During 2022, Merrick water system was in compliance with applicable State drinking water operating, monitoring and reporting requirements.

How Might I Become Actively 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
- Responding to survey requests
- Attending presentations by the company made to local community and civic associations; our last meeting was October 2022. 2023 meetings TBD.
- Contacting agencies such as the Nassau County Health Department (NCDOH) at 516-227-9692



Testing Results

During the year, Liberty collects water samples to determine the presence of any radioactive, biological, inorganic, or organic contaminants. All the substances listed in the table below tested under the Maximum Contaminant Level (MCL). Liberty believes it is important you know what was detected, and how much of the substance was present. The state allows the monitoring of certain substances less than once a year because the concentrations of these substances do not change frequently. If a substance was tested and there was no detection, it is not listed in this table. You can find Definitions, Terms and Abbreviations related to this Table in the next section for easy reference.

Merrick 2022 Annual Water Quality Report

PRIMARY STANDARDS - Health Based

DISTRIBUTION SYSTEM								
Disinfectant Residuals	Violation? (Yes/No)	Date of Sample	MRDL	MCLG	Range of Detection	Average	Typical Source of Constituent	
Chlorine (ppm) ¹	No	2022	4	N/A	0.05 – 2.20	1.44	Drinking water disinfectant added for treatment.	
Disinfection By- Products ²	Violation? (Yes/No)	Date of Sample	Primary MCL	MCLG	MCLG Dete		Typical Source of Constituent	
TTHMs (ppb)	No	Quarterly 2022	80	N/A		– 4.3 . 2.73	Byproduct of drinking water disinfection.	

Lead & Copper ³	Violation? (Yes/No)	Date of Sample	AL	MCLG	Sample Data	Range of Detection	90th % Level	Typical Source of Constituent
Copper (ppm)	No	07-09/	1.3	1.3	0 of the 32 samples collected	0.02 – 0.34	0.27	Internal corrosion of household plumbing systems; discharges from
Lead (ppb)	No	2020	15	0	exceeded the action level.	ND – 6.6	1.4	industrial manufacturers; erosion of natural deposits

RAW WELLS						
Radiological Constituents ⁴	Violation? (Yes/No)	Date of Sample	Primary MCL	MCLG	Range of Detections	Typical Source of Constituent
Combined Radium-226 & 228 (pCi/L)	No	07/2021	5	0	ND – 2.2	
Gross Beta (pCi/L)	No	07/2021	50 ^a	0	ND – 4.65	Erosion and decay of natural deposits.
Uranium (ppb)	No	07/2021	30 ^b	0	0.02 – 0.18	
Gross Alpha activity (pCi/L)	No	07/2021	15	0	ND – 2.2	Erosion and decay of natural deposits.

Inorganic Constituents	Violation? (Yes/No)	Date of Sample	Primary MCL	MCLG	Range of Detections	Typical Source of Constituent
Barium (ppm)	No	08/2022	2	2	ND – 0.01	Erosion of natural deposits; runoff from orchards, glass and electronics production wastes.
Nitrate (ppm)	No	08/2022	10	10	ND – 0.11	Erosion of natural deposits, fertilizers, sanitary waste systems.
Copper (ppm)	No	06/2022	1.3	1.3	ND – 0.04	Erosion of natural deposits.
Lead (ppb)	No	Monthly 08/2022	15	0	Avg- 1.6 ND – 2.2	Erosion of natural deposits.
Thallium (ppb)	No	Monthly 08/2022	2	0.5	Avg- 0.39 ND – 0.48	Leaching from ore processing sites; Discharge from electronics, glass, and drug factories.



Chloride (ppm)	No	08/2022	250	N/A	Avg- 9.8 3.0 – 22.2	Natural occurring or indicative of road salt contamination.
Sulfate (ppm)	No	08/2022	250	N/A	ND – 34.1	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
Cyanide (ppb) ⁵	No	08/2022	200	200	ND – 78.5	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories.
Turbidity (NTU)	No	05/2022	5	N/A	ND – 3.2	Soil runoff.
Zinc (ppm)	No	10/2022	5	N/A	ND – 0.06	Naturally occurring.
Fluoride (ppm) ⁶	No	07/2022	2.2	N/A	ND – 0.21	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories.

Organic Constituents	Violation? (Yes/No)	Date of Sample	Primary MCL	MCLG	Range of Detection	Typical Source of Constituent
1,4 dioxane (ppb) ⁷	No	Quarterly 2022	1	N/A	ND – 2.3	Released into the environment from commercial and industrial sources and is associated with inactive and hazardous waste sites.
Trichloroethene (TCE) (ppb) ⁸	No	06/2022	5	0	ND – 27.9	Discharges from metal degreasing sites and other factories.

SECONDARY STANDARDS - Aesthetics								
RAW WELLS								
Constituent	Violation? (Yes/No)	Date of Sample	Secondary MCL	MCLG	Average/ Range	Typical Source of Constituent		
Sodium (ppm) ⁹	No	08/2022	N/A	N/A	ND – 44.8	Naturally occurring; Road salt; Water softeners.		
Iron (ppm) ¹⁰	No	07/2022	0.3	N/A	ND – 0.95	Naturally occurring.		
Manganese (ppm) ¹¹	No	06/2022	0.3	N/A	ND – 0.05	Naturally occurring.		
Color (units)	No	08/2022	15	N/A	ND - 8	Natural color may be caused by decaying leaves, plants, and soil organic matter.		
Odor (units) ¹²	No	06/2022	3	N/A	ND - 8	Organic or inorganic pollutants originating from municipal and industrial waste discharges; natural sources.		

UNREGULATED CHEMICAL MONITORING							
RAW WELLS							
Constituent	Violation? (Yes/No)	Date of Sample	Notification Level	Range of Detection	Typical Source of Constituent		
Nickel (ppm)	N/A	08/2022	N/A	ND – 0.01	Naturally occurring.		
Alkalinity (ppm)	N/A	08/2022	N/A	ND – 56.3	N/A		
Calcium Hardness (ppm)	N/A	06/2022	N/A	ND – 15.1	N/A		
Calcium (ppm)	N/A	06/2022	N/A	ND – 6.0	N/A		
Corrosivity (LSI) ¹³	N/A	08/2022	N/A	(-7.48) – (-1.99)	N/A		
Total Hardness (ppm)	N/A	06/2022	N/A	ND – 23.3	N/A		
Magnesium (ppm)	N/A	06 & 08/2022	N/A	ND – 2.0	N/A		
pH (units) ¹⁴	N/A	03/2022	N/A	6.16 – 8.73	N/A		
TDS (ppm)	N/A	08/2022	N/A	ND - 169	N/A		
Germanium (ppb)	N/A	06/2018	N/A	0.41	N/A		

Notes:

1- Chlorine residual results in the table above represent averages of samples taken at the treatment plant Point-of-Entry location to the distribution system.



- 2- The Highest Level Detected from the table above for TTHM's and HAA's represent the highest level from the three distribution locations sampled. TTHMs (trihalomethanes) include chloroform, bromodichloromethane, dibromochloromethane, and bromoform. HAA5 (haloacetic acids) include mono-, di-, and trichloroacetic acid, and mono- and di-bromoacetic acid). HAA5's were not detected.
- 3- 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. 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.
- 4- Radiological results are from raw water wells, and not distribution locations, as required by the NCDOH. (a) The State considers 50 pCi/L to be the level of concern for beta particles. (b) 30 μg/l of uranium is approximately 20.1 pCi/L
- 5- Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid. The wells where cyanide were detected, were resampled, and found to be not detected.
- 6- Fluoride was detected in two wells. The wells were resampled, and fluoride was not detected.
- 7- On August 26, 2020, New York State adopted new drinking water standards for public water systems that set maximum contaminant levels (MCLs) of 10 parts per trillion (10 ppt) each for perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS), and 1 part per billion (1 ppb) for 1,4-dioxane. One plant in the Merrick Operations district has 1,4 dioxane levels above the MCL. NYSDOH granted Merrick Operations District a deferral. Please see public notification on last page of this report.
- 8- TCE-Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer. Please note that the raw wells with detections of TCE are treated with Granular Activated Carbon (GAC). The water being distributed to the customers does not contain TCE.
- 9- Sodium (mg/l): Water containing more than 20 mg/l of sodium should not be used for drinking by people on a severely restricted sodium diet. Water more than 270 mg/l of sodium should not be used for drinking by people on a moderately restricted diet.
- 10- 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 Merrick Operations district. The Total of iron and manganese should not exceed 500 ppb, unless allowed by the state, as is the case with Merrick Operations district. The maximum level detected above is on a well that has iron removal filtration prior to distribution. Iron is essential for maintaining good health. However, too much iron can cause adverse health effects. Drinking water with very large amounts of iron can cause nausea, vomiting, diarrhea, constipation and stomach pain. These effects usually diminish once the elevated iron exposure is stopped. A small number of people have a condition called hemochromatosis, in which the body absorbs and stores too much iron. People with hemochromatosis may be at greater risk for health effects resulting from too much iron in the body (sometimes called "iron overload") and should be aware of their overall iron intake.
- 11- Manganese is an essential nutrient that is necessary to maintain good health. However, exposure to too much manganese can cause adverse health effects. There is some evidence from human studies that long-term exposure to manganese in drinking water is associated with nervous system effects in adults (e.g., weakness, stiff muscles and trembling of the hands) and children (learning and behavior). The results of these studies only suggest an effect because the possible influences of other factors were not adequately assessed. There is supporting evidence that manganese causes nervous system effects in humans from occupational studies of workers exposed to high levels of manganese in air, but the relevance of these studies to long term drinking water exposure is less clear because the exposures were quite elevated and by inhalation, not by ingestion.
- 12- The odor result of 8 units was in one well. That well was removed from service and resampled. There was 1 unit of odor in the resample.
- 13- The NCDOH recommends that the Langelier Saturation Index (for corrosivity) be as close to zero as possible.
- 14- NCDOH guidelines recommend a pH range of 7.5 8.5. The running annual average of all pH readings in the distribution system was 7.36 units in 2022.



Definitions, Terms and Abbreviations

90th percentile: For Lead and Copper testing. 10% of test results are above this level and 90% are below this level. **AL**: Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

MCLG: Maximum Contaminant Level Goal, or 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.

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

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

MRDLG: Maximum Residual Disinfectant Level Goal, or 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.

NA: not applicable.



ND: not detectable at testing limits.

NTU: Nephelometric Turbidity Unit, used to measure cloudiness in drinking water.

pCi/L: picocuries per liter, a measure of radioactivity.

ppb: parts per billion or micrograms per liter.

ppm: parts per million or milligrams per liter.

RAA: Running Annual Average, or the average of sample analytical results for samples taken during the previous four calendar quarters.

Total Dissolved Solids (TDS): An overall indicator of the amount of minerals in the water.

What Does This Information Mean?

As you can see by the table, our system had no sample limit violations in 2022. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below New York State requirements.

Why Save Water? How To Avoid Wasting It.

Although our system has an adequate amount of water to meet present and future demands, there are several reasons why it is important to conserve water:

- Saving water saves energy and some of the costs associated with both of these necessities of life;
- Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and
- Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential firefighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less. More efficient water use protects our valuable natural resource and conservation is easy. Useful tips for conserving include:

- Turn off the tap when brushing your teeth.
- Consider water and energy-efficient appliances. Upgrade to EPA certified Energy Star and WaterSense appliances to save both on water and energy without sacrificing performance. The USEPA reports that EPA-certified Energy Star washing machines may use 35% less water per load.
- Check every faucet, toilet and showerhead in your home for leaks 10 percent of homes have leaks that waste 90 gallons or more per day; don't be part of the 10%.

Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and save more than 30,000 gallons a year. More conservation tips and leak detection tools can be found at <u>www.libertyenergyandwater.com</u>.

Closing

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. For questions concerning this report call Liberty Customer Service at 1-877-426-6999 TDD:711; or on the web at <u>www.libertyenergyandwater.com</u>.

Liberty - New York Water 60 Brooklyn Avenue Merrick, NY 11566



Spanish	<i>French</i>
Este informe contiene información muy importante sobre su	Ce rapport contient des informations importantes sur votre eau
agua beber. Tradúzcalo ó hable con alguien que lo entienda	potable. Traduisez-le ou parlez en avec quelqu'un qui le comprend
bien.	bien.
Korean	Chinese
아리의 보고는 귀하께서 드시는 식수에 대한 중요한 정보가 포함되어 있습	這份教告念有非常重要有閑悠喝的水
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양,ⓒ타4기를 바랍니다.	或解釋於悠施

Listing of Non-Detected (ND) Contaminants – 2022 (Merrick 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 Total Coliforms

Inorganics & Physical:

Ammonia as N Nitrite as N Perchlorate Surfactants (as MBAS)

Metals:

Antimony Arsenic Beryllium Cadmium Chromium Mercury Selenium Silver

Miscellaneous: Asbestos fibers

Volatile Organic Compounds (VOC's):

Benzene Bromobenzene Bromochloromethane Bromomethane n-Butylbenzene sec-Butylbenzene 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-Xvlene O-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 Carbarvl Dalapon Di (2-Ethylhexyl) adipate Di (2-Ethylhexyl) phthalalte Dicamba Dieldrin Dinoseb Diquat Endothall Glyphosate Hexachlorobenzene Hexachlorocyclopentadiene 3-Hydroxycarbofuran Methomyl Metolachlor Metribuzin Oxamyl (Vydate) Picloram Propachlor Simazine 2,3,7,8-TCDD (Dioxin)

Newly regulated

compounds Perfluorooctanoic acid (PFOA) Perfluorooctanesulfonic acid (PFOS)

Unregulated compounds:

Perfluorobutanesulfonic acid (PFBS) Perfluoronononoic Acid (PFNA) Perfluorodeconoic Acid (PFDA) Perfluorohexanoic Acid (PFHxA)

Perfluoroheptanoic Acid (PFHpA) Perfluorododecanoic Acid (PFDoA) Perfluorohexanesulfonic acid (PFHxS) Perfluorotridecanoic Acid (PFTrDA) Perfluorotetradecanoic Acid (PFTA) Perfluoroundecanoic Acid (PFUnA) 11-Chloroeicosafluoro-3oxaundecane-1-sulfonic acid (11CI-PF3OUdS) 4:2 Fluorotelomer sulfonic acid (4:2 FTS) 6:2 Fluorotelomer sulfonic acid (6:2 FTS) 8:2 Fluorotelomer sulfonic acid (8:2 FTS) 9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9CI-PF3ONS) 4.8-dioxa-3Hperfluorononanoic acid (ADONA) HFPO-DA (Gen-X) Nonafluoro-3,6dioxaheptanoic acid (NFDHA) Perfluorobutanoic acid (PFBA) Perfluoro(2ethoxyethane)sulphonic acid (PFEESA) Perfluoroheptane sulfonic acid (PFHpS) Perfluoro-4-methoxybutanoic acid (PFMBA) Perfluoro-3methoxypropanoic acid (PFMPÁ) Perfluoropentanoic acid (PFPeA) Perfluoropentane sulfonic acid (PFPeS)



IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER Deferral Renewal Issued for 1,4-Dioxane to Liberty New York Water Merrick Operations District

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 Liberty New York Water Merrick Operations District has submitted, and the New York State Department of Health (Department) has issued, a deferral to Liberty. 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 step should be taken by the water system to reduce contaminant levels.

What is being done to remove these contaminants?

Liberty New York Water is in the process of finalizing the contract for the construction of an advanced oxidation process (AOP) facility at its Seamans Neck Road Wells 3A and 4 facility. Iron Removal Facility (IRF) improvements are also being implemented at this well station, which are required in order for AOP treatment to be implemented. Regulatory review of two (2) booster pumping facilities needed to satisfy pressure requirements in the Seamans Neck Road vicinity is underway.

Liberty New York Water will operate the impacted wells in the Merrick Operations District in a last on first off sequence to the greatest extent practicable 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, 2023.

Where can I get more information?

For more information, please contact Liberty New York Water at (877) 426-6999 or 60 Brooklyn Avenue, Merrick, NY 11566. You can also contact the Nassau County Health Department at (516) 227-9697. 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 September 22, 2022



IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER Exemption from 1,4-dioxane MCL

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 the 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 Liberty New York Water, Merrick Operations District has requested, and the New York State Department of Health (Department) has conditionally granted, an exemption from the MCL for 1,4-dioxane. Exemptions are issued with mandatory compliance strategies which include control measures required by the Department. In exchange, the Department agrees to defer enforcement actions, such as assessing fines, if the water district is meeting the established deadlines. We are required to update the Department and the Nassau County Department of Health each calendar quarter on the status of our projects. If we do not meet the mandated compliance strategies, 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 has adopted a drinking water regulation that requires all public water systems to test for 1,4-dioxane. If found above the MCL of 1 ppb, 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 meet the MCL?

Liberty New York Water, Merrick Operations District is working with the Nassau County Department of Health on a compliance schedule that includes steps to reduce levels of 1,4-dioxane.

The effected wells within Liberty New York Water's Merrick District, which have 1,4-Dioxane levels above the MCL, are Wells 3A and 4 at the Seaman's Neck Road Plant. To remove 1,4-Dioxane from the water produced from these wells, Liberty New York Water is currently constructing an advanced oxidation process ("AOP") treatment facility at the Seamans Neck Road Plant. To supplement water supply to the Seamans Neck vicinity during construction of the AOP treatment system, Liberty will construct two (2) booster pumping stations within its system that will sustain water pressures to Seamans Neck vicinity customers. Liberty continues to promote conservation and reduced irrigation usage to its customers to both protect the health of our aquifers and reduce reliance on effected wells during peak irrigation demands.

Liberty New York Water will operate the impacted wells in the Merrick Operations District in a last on first off sequence to minimize their use. 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 due to exceedance of an MCL. The compliance timetable will ensure that your drinking water will meet the MCL as rapidly as possible.

Where can I get more information?

For more information, please contact Liberty New York Water at (877) 426-6999 or by mail at 60 Brooklyn Avenue, Merrick, NY 11566. You can also contact the Nassau County Health Department at (516) 227-9697. Copies of the quarterly updates submitted to the Department and to Nassau County Department of Health will be available on Liberty Utility's New York Water website at <u>Emerging Compounds - New York Water - Residential (libertyutilities.com)</u>.

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 August 31, 2023

Attachment C

Water Quality Data

P	Pace
1	575 Broad Hollow Road, Melville, NY 11747

Laboratory Results

Results for the samples and analytes requested The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Client Sample ID.: N-07407

Lab No. : 70285226001

Type: Drinking Water Origin: Raw Well Routine

Liberty-NY - Merrick OPS 60 Brooklyn Avenue

TEL: (516) 370-6000 FAX: (516) 886-5526

www.pacelabs.com

Point

N-07407

Location Jefferson 11 Well

Merrick, NY 11566

Attn To: Natasha Niola

Federal ID :

2902840

Collected : 01/24/2024 09:10 AM Received : 01/24/2024 04:54 PM

Collected By CLIENT

Sample Comments:

Samples were received on the same day of collection on ice and are above 6 degrees Celcius. Samples were placed on ice by the lab and the cooling process has begun.

Analytical Method:EPA 300.0							
Parameter(s)	<u>Results</u>	Qualifier	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	Analyzed:	Container:
Chloride	4.0		1	mg/L	250	02/03/2024 2:43 AM	001 BP4U1/1
Analytical Method: EPA 522		Prep Method:	EPA 522		Prep Dat	e: 01/25/2024 7:09 PM	
Parameter(s)	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	Analyzed:	Container:
1,4-Dioxane (p-Dioxane)	<0.020		1	ug/L	1	01/26/2024 5:43 PM	001 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	111%		1	%REC		01/26/2024 5:43 PM	001 AG2R1/2
Analytical Method:EPA 524.2							
Parameter(s)	Results	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	Analyzed:	Container:
1,1,1,2-Tetrachloroethane	<0.50		1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
1,1,1-Trichloroethane	<0.50		1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
1,1,2,2-Tetrachloroethane	<0.50		1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
1,1,2-Trichloroethane	<0.50		1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
,1,2-Trichlorotrifluoroethane	<0.50	N3,L1	1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
I,1-Dichloroethane	<0.50		1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
,1-Dichloroethene	<0.50		1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
1,1-Dichloropropene	<0.50		1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
1,2,3-Trichlorobenzene	<0.50		1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
1,2,3-Trichloropropane	<0.50		1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
1,2,4-Trichlorobenzene	<0.50		1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
1,2,4-Trimethylbenzene	<0.50		1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
1,2-Dichlorobenzene	<0.50		1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
1,2-Dichloroethane	<0.50		1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
1,2-Dichloropropane	<0.50		1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
1,3,5-Trimethylbenzene	<0.50		1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
1,3-Dichlorobenzene	<0.50		1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
I,3-Dichloropropane	<0.50		1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
I,4-Dichlorobenzene	<0.50		1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
2.2-Dichloropropane	<0.50		1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
2-Chlorotoluene	<0.50		1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
I-Chlorotoluene	<0.50		1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
Benzene	<0.50		1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
Bromobenzene	<0.50		1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
Bromochloromethane	<0.50		1	ug/L	5	01/26/2024 1:53 PM	001 VG9C1/2
Bromodichloromethane	<0.50		1	ug/L	0	01/26/2024 1:53 PM	001 VG9C1/2
Bromoform	<0.50		1	ug/L		01/26/2024 1:53 PM	001 VG9C1/2

Qualifiers:

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting

limit.Estimated value - below calibration range

U - Indicates the compound was analyzed for, but not detected

See qualifiers page for additional qualifier definitions.

Result(s) reported meet(s) NYS Regulatory Limit(s).

Result(s) flagged with * Exceed NYS Regulatory Limit(s). Limit Noted.

page 1 of 39

Jennifer Aracri Test results meet the requirements of NELAC unless otherwise noted.

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Project: SEAMANS NECK WELL 3A 2/26

Pace Project No.: 702885

lo.: 70288555

Sample: SP-1 1-3A	Lab ID:	70288555001	Collected	d: 02/26/24	14:27	Received: 02/	26/24 16:45 Ma	atrix: Drinking	Water
Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
522 MSS 1,4 Dioxane (SIM)	-	Method: EPA 5 ytical Services		tion Metho	d: EPA	522			
1,4-Dioxane (p-Dioxane)	2.9	ug/L	0.020		1	02/27/24 08:45	02/29/24 05:31	123-91-1	
<i>Surrogates</i> 1,4-Dioxane-d8 (S)	96	%	70-130		1	02/27/24 08:45	02/29/24 05:31		
353.2 Nitrogen, NO2/NO3 unpres	•	Method: EPA 3 ytical Services				. 1			
Nitrate as N Nitrate-Nitrite (as N)	0.15 0.16	mg/L mg/L	0.050 0.050	10	1 1	2	02/27/24 00:36 02/27/24 00:36		
353.2 Nitrogen, NO2		Method: EPA 3 ytical Services				X			
Nitrite as N	<0.050	mg/L	0.050	1	1		02/26/24 23:40	14797-65-0	
			2						



Project: SEAMANS NECK WELL 3A 2/26

Pace Project No.: 70288555

Sample: SP-1 2-3A	Lab ID:	70288555002	Collected	d: 02/26/24	4 15:02	Received: 02/	26/24 16:45 Ma	atrix: Drinking	Water
			Report	Reg.					
Parameters	Results	Units	Limit	Limit	DF	Prepared	Analyzed	CAS No.	Qual
522 MSS 1,4 Dioxane (SIM)	-	Method: EPA 5 lytical Services		tion Metho	d: EPA	522			
1,4-Dioxane (p-Dioxane)	2.6	ug/L	0.020		1	02/27/24 08:45	02/29/24 05:48	123-91-1	
<i>Surrogates</i> 1,4-Dioxane-d8 (S)	91	%	70-130		1	02/27/24 08:45	02/29/24 05:48		
353.2 Nitrogen, NO2/NO3 unpres	,	Method: EPA 3 lytical Services				. 1			
Nitrate as N	0.14	mg/L	0.050	10	1	-	02/27/24 00:41		
Nitrate-Nitrite (as N)	0.15	mg/L	0.050		1		02/27/24 00:41	7727-37-9	
353.2 Nitrogen, NO2	•	Method: EPA 3 lytical Services				X			
Nitrite as N	<0.050	mg/L	0.050	1	1		02/26/24 23:43	14797-65-0	
			25	2					



Project: SEAMANS NECK WELL 3A 2/26

Sample: SP-1 3-3A	Lab ID:	70288555003	Collected	: 02/27/24	15:30	Received: 02/	27/24 17:30 N	Aatrix: Drinking	Water
Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qua
522 MSS 1,4 Dioxane (SIM)	•	Method: EPA 5 lytical Services	•	ion Methoo	: EPA	522			
1,4-Dioxane (p-Dioxane)	1.3	ug/L	0.020		1	02/28/24 10:36	02/29/24 22:4	<mark>4 123-91-</mark> 1	
<i>Surrogates</i> 1,4-Dioxane-d8 (S)	93	%	70-130		1	02/28/24 10:36	02/29/24 22:4	4	
353.2 Nitrogen, NO2/NO3 unpres	,	Method: EPA 3 lytical Services				. 1			
Nitrate as N Nitrate-Nitrite (as N)	0.14 0.15	mg/L mg/L	0.050 0.050	10	1 1	2	02/28/24 00:0 02/28/24 00:0	7 14797-55-8 7 7727-37-9	
353.2 Nitrogen, NO2	•	Method: EPA 3 lytical Services				X			
Nitrite as N	<0.050	mg/L	0.050	1	1		02/27/24 22:3	3 14797-65-0	
		Ś	24						



Project: SEAMANS NECK WELL 3A 2/26

Pace Project No.: 70288555

Sample: SP-1 4-3A	Lab ID:	70288555004	Collected	d: 02/27/24	15:45	Received: 02/	27/24 17:30 Ma	atrix: Drinking	Water
			Report	Reg.					
Parameters	Results	Units	Limit	Limit	DF	Prepared	Analyzed	CAS No.	Qual
522 MSS 1,4 Dioxane (SIM)	•	Method: EPA 5 lytical Services		ation Methoo	d: EPA	522			
1,4-Dioxane (p-Dioxane)	2.3	ug/L	0.020		1	02/28/24 10:36	02/29/24 23:00	123-91-1	
<i>Surrogates</i> 1,4-Dioxane-d8 (S)	94	%	70-130		1	02/28/24 10:36	02/29/24 23:00		
353.2 Nitrogen, NO2/NO3 unpres	-	Method: EPA 3 lytical Services				. 1			
Nitrate as N Nitrate-Nitrite (as N)	0.13 0.14	mg/L mg/L	0.050 0.050	10	1 1	2	02/28/24 00:08 02/28/24 00:08		
353.2 Nitrogen, NO2	-	Method: EPA 3 lytical Services				X			
Nitrite as N	<0.050	mg/L	0.050	1	1		02/27/24 22:34	14797-65-0	
		Ś	S	1					



Project: SEAMANS NECK WELL 3A 2/26

Pace Project No.: 70288555

Sample: SP-1 C1-3A	Lab ID:	70288555005	Collected	d: 02/26/24	12:11	Received: 02/	26/24 16:45 Ma	atrix: Drinking	Water
			Report	Reg.					
Parameters	Results	Units	Limit	Limit	DF	Prepared	Analyzed	CAS No.	Qual
522 MSS 1,4 Dioxane (SIM)	•	Method: EPA 5 lytical Services	•	tion Metho	d: EPA	522			
1,4-Dioxane (p-Dioxane)	2.4	ug/L	0.020		1	02/27/24 08:45	02/29/24 06:05	123-91-1	
<i>Surrogates</i> 1,4-Dioxane-d8 (S)	80	%	70-130		1	02/27/24 08:45	02/29/24 06:05		
353.2 Nitrogen, NO2/NO3 unpres		Method: EPA 3 lytical Services				1			
Nitrate as N Nitrate-Nitrite (as N)	0.15 0.16	mg/L mg/L	0.050 0.050	10	1 1	2	02/27/24 00:31 02/27/24 00:31		
353.2 Nitrogen, NO2	-	Method: EPA 3 lytical Services				X			
Nitrite as N	<0.050	mg/L	0.050	1	1		02/26/24 23:36	14797-65-0	
			S						



Project: SEAMANS NECK WELL 3A 2/26

Pace Project No.: 70288555

Sample: SP-1 C2-3A	Lab ID:	70288555006	Collected	1: 02/26/24	4 14:00	Received: 02/	26/24 16:45 Ma	atrix: Drinking	Water
			Report	Reg.					
Parameters	Results	Units	Limit	Limit	DF	Prepared	Analyzed	CAS No.	Qual
522 MSS 1,4 Dioxane (SIM)	-	Method: EPA 5 lytical Services		tion Metho	d: EPA (522			
1,4-Dioxane (p-Dioxane)	2.7	ug/L	0.020		1	02/27/24 08:45	02/29/24 06:22	123-91-1	
<i>Surrogates</i> 1,4-Dioxane-d8 (S)	91	%	70-130		1	02/27/24 08:45	02/29/24 06:22		
353.2 Nitrogen, NO2/NO3 unpres	-	Method: EPA 3 lytical Services				. 1			
Nitrate as N	0.14	mg/L	0.050	10	1	-	02/27/24 00:34		
Nitrate-Nitrite (as N)	0.15	mg/L	0.050		1		02/27/24 00:34	7727-37-9	
353.2 Nitrogen, NO2	•	Method: EPA 3 lytical Services				X			
Nitrite as N	<0.050	mg/L	0.050	1	1		02/26/24 23:38	14797-65-0	
			S						

Results for the samples and analytes requested The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests Type: Drinking Water Origin: Treated Well Special

575 Broad Hollow Road, Melville, NY 11747 TEL: (516) 370-6000 FAX: (516) 886-5526

www.pacelabs.com

Liberty Utilities 60 Brooklyn Avenue Merrick, NY 11566

Attn To : Jason Tse

Federal ID : 2902827 Collected :

02/27/2024 12:35 PM Point Received : 02/27/2024 05:50 PM Location Collected By CLIENT

Lab No. : 70288693001 Client Sample ID.: SP-1 1-4

Analytical Method: EPA 522	Prep Method: EPA 522				Prep Date	Prep Date: 02/28/2024 8:43 AM			
Parameter(s)	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	Analyzed:	Container:		
1,4-Dioxane (p-Dioxane)	2.0*		1	ug/L	1	02/28/2024 5:22 PM	001 AG2R1/2		
Surr: 1,4-Dioxane-d8 (S)	92%		1	%REC		02/28/2024 5:22 PM	001 AG2R1/2		

Qualifiers:

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.Estimated value - below calibration range

U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s).

Result(s) flagged with * Exceed NYS Regulatory Limit(s). Limit Noted.

Jennifer Aracri

Test results meet the requirements of NELAC unless otherwise noted.

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page 1 of 18

			·····	I ype:	Drinking Water			
		Results for the	e samples and analytes requested	••	Treated Well			
(-Pace [®]			esponsible for the integrity of the sample be and is responsible only for the certified tests	etore	Special			
575 Broad Hollow Roa	d, Melville, NY 1174	7						
TEL: (516) 370-6000	FAX: (516) 886-552	6						
	www.pacelabs	s.com						
Liberty Utilities			Lab No. : 702886930	002				
60 Brooklyn Avenue		CI	Client Sample ID.: SP-1 2-4					
Merrick, NY 11566								
Attn To : Jason Tse								
Federal ID : 2902827	,							
Collected : 02/27/20	24 01:10 PM	Point						
Received : 02/27/20	24 05:50 PM	Location						
Collected By CLIENT								
Analytical Method:E	PA 522	Prep Method: EP	A 522	Prep Date: 02/28/2024 8:43 AM				

<u>Units</u>

ug/L

%REC

<u>Limit</u>

1

Analyzed:

02/28/2024 5:57 PM

02/28/2024 5:57 PM

<u>Qualifier</u>

<u>D.F.</u>

1

Results

2.1

91%

Laboratory Results

Qualifiers:

Parameter(s)

1,4-Dioxane (p-Dioxane)

Surr: 1,4-Dioxane-d8 (S)

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting U - Indicates the compound was analyzed for, but not detected U

Result(s) reported meet(s) NYS Regulatory Limit(s). Result(s) flagged with * Exceed NYS Regulatory Limit(s). Limit Noted.

page 2 of 18

Sample Information:

Container:

002 AG2R1/2

002 AG2R1/2

Jennifer Aracri Test results meet the requirements of NELAC unless otherwise noted.

This report shall not be reproduced except in full, without the written approval of the laboratory.

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

575 Broad Hollow Road, Melville, NY 11747 TEL: (516) 370-6000 FAX: (516) 886-5526 www.pacelabs.cc	Results for the samples and analytes requested The lab is not directly responsible for the integrity of the sample b receipt at the lab and is responsible only for the certified tests				
Liberty Utilities	Lab No. : 702886930	003			
60 Brooklyn Avenue	Client Sample ID.: SP-1 3-4				
Merrick, NY 11566					
Attn To : Jason Tse					
Federal ID : 2902827					
Collected : 02/27/2024 01:45 PM F	Point				
Received : 02/27/2024 05:50 PM L	ocation				
Collected By CLIENT					
Analytical Method:EPA 522	Prep Method: EPA 522	Prep Date: 02/28/2024 8:43 AM			

<u>Units</u>

ug/L

page 3 of 18

%REC

<u>Limit</u>

1

Analyzed:

02/28/2024 6:31 PM

02/28/2024 6:31 PM

Laboratory Results

Qualifiers:

Parameter(s)

1,4-Dioxane (p-Dioxane)

Surr: 1,4-Dioxane-d8 (S)

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

Results

2.1

92%

Qualifier

<u>D.F.</u>

1

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting U - Indicates the compound was analyzed for, but not detected U

Result(s) reported meet(s) NYS Regulatory Limit(s). Result(s) flagged with * Exceed NYS Regulatory Limit(s). Limit Noted.

Jennifer Aracri Test results meet the requirements of NELAC unless otherwise noted.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Container:

003 AG2R1/2

003 AG2R1/2

	Laboratory Resi	lits	Type:	Drinking Water
	Results for the samples and analytes	requested	•••	Treated Well
	The lab is not directly responsible for the integrity o receipt at the lab and is responsible only for the		Origin.	Special
575 Broad Hollow Road, Melville, NY 1174	7			
TEL: (516) 370-6000 FAX: (516) 886-552	26			
www.pacelab	<u>s.com</u>			
Liberty Utilities	Lab No. : 7	0288693004		
60 Brooklyn Avenue	Client Sample ID.: S	<mark>8P-1 4-4</mark>		
Merrick, NY 11566				
Attn To : Jason Tse				
Federal ID: 2902827				
Collected : 02/27/2024 02:15 PM	Point			
Received : 02/27/2024 05:50 PM	Location			
Collected By CLIENT				
	Dree Methods EDA coo	Drag Datas 00/00/2		
Analytical Method: EPA 522	Prep Method: EPA 522	Prep Date: 02/28/2	024 8:43 AM	

<u>Units</u>

ug/L

%REC

<u>Limit</u>

1

Laboratory Results

Sample Information:

Container:

004 AG2R1/2

004 AG2R1/2

Analyzed:

02/28/2024 6:49 PM

02/28/2024 6:49 PM

Qualifiers:

Parameter(s)

1,4-Dioxane (p-Dioxane)

Surr: 1,4-Dioxane-d8 (S)

Results

2.1

92%

Qualifier

<u>D.F.</u>

1

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting U - Indicates the compound was analyzed for, but not detected U

Result(s) reported meet(s) NYS Regulatory Limit(s). Result(s) flagged with * Exceed NYS Regulatory Limit(s). Limit Noted.

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Jennifer Aracri Test results meet the requirements of NELAC unless otherwise noted.

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DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

Results for the samples and analytes requested The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests Type: Drinking Water Origin: Treated Well Special

575 Broad Hollow Road, Melville, NY 11747 TEL: (516) 370-6000 FAX: (516) 886-5526

www.pacelabs.com

Liberty Utilities 60 Brooklyn Avenue Merrick, NY 11566

Attn To: Jason Tse

Federal ID : 2902827

Collected : 02/27/2024 11:00 AM Point Received : 02/27/2024 05:50 PM Location Collected By CLIENT

Lab No.: 70288693005

Client Sample ID.: SP-1 C1-4

Analytical Method: EPA 522 Prep Method: EPA 522 Prep Date: 02/28/2024 8:43 AM Results Parameter(s) Qualifier D.F. <u>Units</u> <u>Limit</u> Analyzed: Container: 1,4-Dioxane (p-Dioxane) 2.0* 02/28/2024 7:06 PM 005 AG2R1/2 ug/L Surr: 1,4-Dioxane-d8 (S) 91% %REC 02/28/2024 7:06 PM 005 AG2R1/2 1

Qualifiers:

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.Estimated value - below calibration range

U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s).

Result(s) flagged with * Exceed NYS Regulatory Limit(s). Limit Noted.

Jennifer Aracri Test results meet the requirements of NELAC unless otherwise noted.

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Results for the samples and analytes requested The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests Type: Drinking Water Origin: Treated Well Special

575 Broad Hollow Road, Melville, NY 11747 TEL: (516) 370-6000 FAX: (516) 886-5526

www.pacelabs.com

Point

Location

Liberty Utilities 60 Brooklyn Avenue Merrick, NY 11566

Attn To: Jason Tse

Federal ID : 2902827 02/27/2024 11:38 AM Collected : Received : 02/27/2024 05:50 PM

Collected By CLIENT

Lab No.: 70288693006 Client Sample ID.: SP-1 C2-4

Analytical Method: EPA 522 Prep Method: EPA 522 Prep Date: 02/28/2024 8:43 AM Results Parameter(s) Qualifier D.F. <u>Units</u> <u>Limit</u> Analyzed: Container: 1,4-Dioxane (p-Dioxane) 2.0* 02/28/2024 7:41 PM 006 AG2R1/2 ug/L Surr: 1,4-Dioxane-d8 (S) 92% %REC 02/28/2024 7:41 PM 006 AG2R1/2 1

Qualifiers:

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.Estimated value - below calibration range

U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s).

Result(s) flagged with * Exceed NYS Regulatory Limit(s). Limit Noted.

page 6 of 18

Jennifer Aracri Test results meet the requirements of NELAC unless otherwise noted.

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Results for the samples and analytes requested The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Lab No. : 70291175001

Client Sample ID.: SP-1 1-3A

Type: Drinking Water Origin: Influent Special

575 Broad Hollow Road, Melville, NY 11747 TEL: (516) 370-6000 FAX: (516) 886-5526

www.pacelabs.com

Philip Ross Industries 88 Duryea Road Siute 204

Melville, NY 11747

Collected By

Attn To : Philip Carlucci

Federal ID: 2902827

Collected : 03/19/2024 02:00 PM Received : 03/19/2024 03:33 PM

CLIENT

Point SP-1 1-3A Location AOP#1 INFLUENT

Analytical Method: EPA 522 Prep Method: EPA 522 Prep Date: 03/20/2024 6:23 PM Parameter(s) **Results** <u>Qualifier</u> <u>D.F.</u> <u>Units</u> <u>Limit</u> Analyzed: Container: 1,4-Dioxane (p-Dioxane) 2.9* 03/21/2024 12:29 ug/L 001 AG2R1/2 1 Surr: 1,4-Dioxane-d8 (S) 100% 1 %REC 03/21/2024 12:29 001 AG2R1/2

Qualifiers:

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit. Estimated value - below calibration range

U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s).

Result(s) flagged with * Exceed NYS Regulatory Limit(s). Limit Noted.

Jennifer Aracri Test results meet the requirements of NELAC unless otherwise noted.

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page 1 of 10



Results for the samples and analytes requested The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Lab No. : 70291175002

Client Sample ID.: SP-1 2-3A

Type: Drinking Water Origin: Influent Special

575 Broad Hollow Road, Melville, NY 11747 TEL: (516) 370-6000 FAX: (516) 886-5526

www.pacelabs.com

Philip Ross Industries 88 Duryea Road Siute 204

Melville, NY 11747

Attn To: Philip Carlucci

Federal ID : 2902827

Collected : 03/19/2024 02:00 PM Received : 03/19/2024 03:33 PM

Collected By CLIENT

SP-1 2-3A Location AOP#2 INFLUENT

Point

Analytical Method:EPA 522	Prep Method: EPA 522				Prep Date: 03/20/2024 6:23 PM		
Parameter(s)	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	Analyzed:	Container:
1,4-Dioxane (p-Dioxane)	3.0*		1	ug/L	1	03/21/2024 12:47	002 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	101%		1	%REC		03/21/2024 12:47	002 AG2R1/2

Qualifiers:

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.Estimated value - below calibration range

U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s).

Result(s) flagged with * Exceed NYS Regulatory Limit(s). Limit Noted.

Jennifer Aracri Test results meet the requirements of NELAC unless otherwise noted.

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Results for the samples and analytes requested The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Lab No. : 70291175003

Client Sample ID.: SP-1 3-3A

Type: Drinking Water Origin: Influent Special

575 Broad Hollow Road, Melville, NY 11747 TEL: (516) 370-6000 FAX: (516) 886-5526

www.pacelabs.com

Philip Ross Industries 88 Duryea Road Siute 204

Melville, NY 11747

Collected By

Attn To : Philip Carlucci

Federal ID: 2902827

Collected : 03/19/2024 02:00 PM Received : 03/19/2024 03:33 PM

CLIENT

Point SP-1 3-3A Location AOP#3 INFLUENT

Analytical Method: EPA 522 Prep Method: EPA 522 Prep Date: 03/20/2024 6:23 PM Parameter(s) **Results** <u>Qualifier</u> <u>D.F.</u> <u>Units</u> <u>Limit</u> Analyzed: Container: 1,4-Dioxane (p-Dioxane) 2.9* ug/L 03/21/2024 1:21 PM 003 AG2R1/2 1 Surr: 1,4-Dioxane-d8 (S) 104% 1 %REC 03/21/2024 1:21 PM 003 AG2R1/2

Qualifiers:

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit. Estimated value - below calibration range

U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s).

Result(s) flagged with * Exceed NYS Regulatory Limit(s). Limit Noted.

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