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October 8, 2021

New York American Water – Merrick Operations District
PWS ID No. NY2902840
MCL Deferral for 1,4-dioxane
Quarterly Report – Third Quarter 2021

Introduction

On behalf of New York American Water (NYAW), 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 deferrals from maximum contaminant level (MCL) violations for 1,4-dioxane. NYAW's Merrick Operations District was granted an MCL deferral for 1,4-dioxane in 2020. NYAW was granted a deferral due to its proactive efforts toward the implementation of treatment for this compound.

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

Corrective Action Plan Milestones

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

Pilot testing to prove the efficacy of the AOP/UV treatment process was completed in the fourth quarter of 2020. Following completion of the pilot test, the Basis of Design Report (BODR) was completed and submitted by NYAW to the Nassau County Department of Health (NCDOH) and the NYSDOH in the first quarter of 2021.

NYAW received Zoning Approval from the Town of Hempstead Board of Appeals for the project in February of 2021. NYAW applied for building permits for the project in August of 2020 and received building permits in July of 2021.

Detailed design documents were submitted in August 2021 to the NYSDOH and the NCDOH. Following review and approval of the design documents by the Health Departments, NYAW anticipates commencing construction activities in Q1 of 2022.

In accordance with the approved Deferral Schedule, construction is scheduled to commence in early 2022 upon receipt of approval of Design Plans from the Health Departments. NYAW is

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currently working on construction contract development in anticipation of receipt of regulatory approval to construct.

Public Notification

Public notification regarding the presence and regulation of emerging compounds, as well as the deferral, was included in NYAW's 2020 Annual Water Quality Report/Consumer Confidence Report released in June. The report was posted on NYAW's website and publicized via newspaper ads and bill insert. The report specific to the Merrick Operations District is available at <https://www.amwater.com/ccr/merrick.pdf>. In addition, NYAW has uploaded this quarterly report to its website at <https://www.amwater.com/nyaw/water-quality/Emerging-Compounds/seamans-neck>. Documentation of public notification is contained in **Attachment B**.

Analytical Sampling

Sample results for the wells for which deferrals were granted (Seaman's Neck Wells 3A and 4) taken during the third quarter of 2021 are contained in the below table. Jefferson Street Well 11 is included as 1,4-dioxane levels were reported in NYAW's Q1 report at 1.0 ug/L, and in NYAW's Q2 report at 0.021 ug/L. As shown below, resampling of Well 11 on September 9, 2021 yielded results of <0.020 ug/L. NYAW will continue to report on 1,4-dioxane concentrations detected in Well 11. Full laboratory reports for each sample are contained in **Attachment C**.

Q3 2021 1,4-Dioxane Water Quality Monitoring Results (ug/l or ppb)

Merrick OPS District (PWS# NY 2902840)				
Location	Well ID #	Date	Lab Utilized	1-4, Dioxane (ug/L)
		Sampled		
Seaman Neck Well 4	N-09338	7/15/2021	AW Central Lab	1.5
Seaman Neck Well 3A	N-14347	7/15/2021	AW Central Lab	1.7
Seaman Neck Well 4	N-09338	4/15/2021	AW Central Lab	1.6
Seaman Neck Well 3A	N-14347	5/07/2021	AW Central Lab	2.0
Jefferson St. Well 11	N-07407	9/09/2021	AW Central Lab	<0.020

Conclusion

As demonstrated above, NYAW is actively working to preserve the quality of water for its customers and comply with the requirements put forth by the NYSDOH. NYAW looks forward

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to continuing to work towards completion of its treatment facilities for the Merrick Operations District.

Should you have any questions, please contact New York American Water at (877) 426-6999 or visit the website, <https://www.amwater.com/nyaw/>.

Very truly yours,



Philip Sachs, P.E.
Vice President

PRSt/kb

Enclosures

cc: K. Wheeler (NYSDOH)
B. Rogers (NYSDOH)
W. Provoncha (NCDH)
P. Young (NCDH)
R. Putnam (NCDH)
L. DiMenna (NYAW)
J. Kilpatrick (NYAW)
G. Sachs (NYAW)

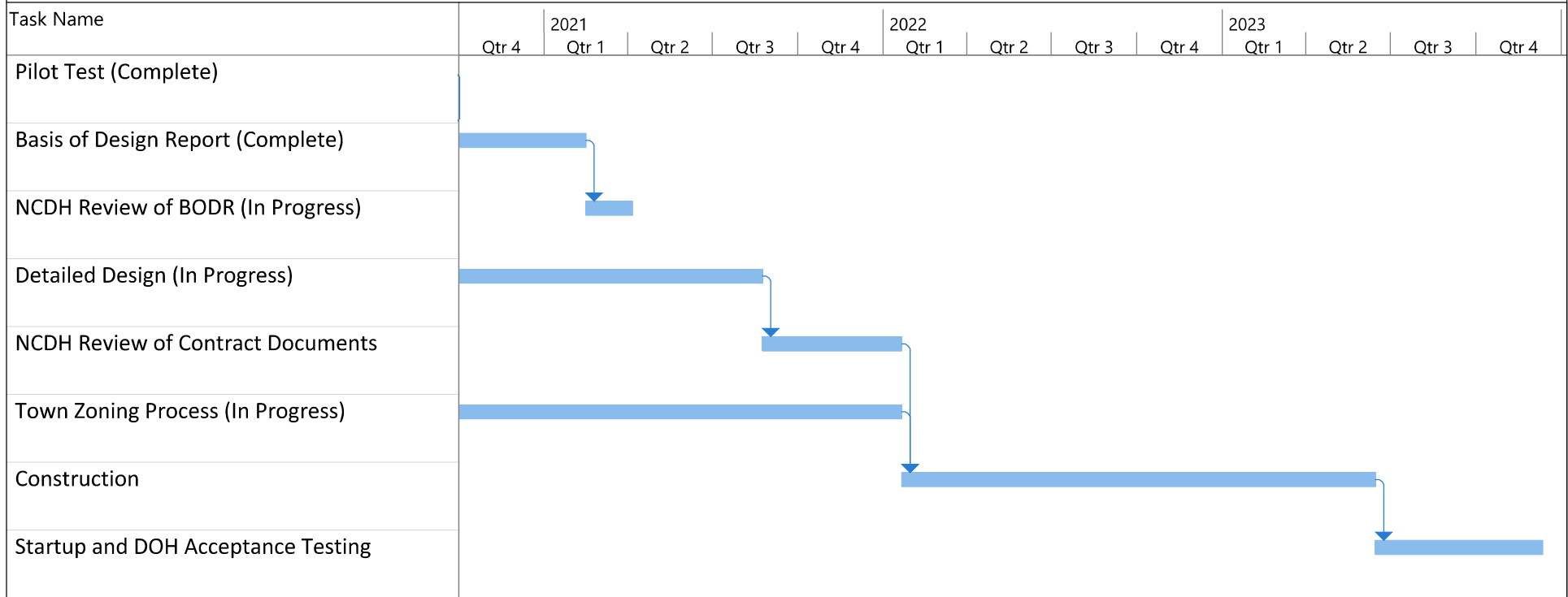
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ATTACHMENT A

MCL Deferral Project Schedule

New York American Water
 Merrick Operations District
 MCL Deferral - Quarterly Report

Seamans Neck Road
 Wells 3A and 4
 AOP Project Schedule



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 NYCRR) and federal Consumer Confidence Report regulations (40 CFR Part 141, Subpart O).

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

本报告与您的饮用水有关。
如果您不了解其内容，应请别人为您翻译解说。

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

A Message from the New York American Water President



To Our Valued Customer:

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.

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

Sincerely,

Lynda DiMenna
President, New York American Water

Public Participation – How You Can Get Involved

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

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



Be Water Smart – Think Conservation

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

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

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

What is a Water Quality Report?

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

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

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

Share This Report:

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

How to Contact Us

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all our customers protect our water sources, which are the heart of our community. Please call our Customer Call Center toll-free 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.wqa.org

About NYAW

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

About American Water

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



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

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

Communities Served

Bellmore
East Massapequa*
Levittown*
Massapequa*
Merrick
North Bellmore
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.

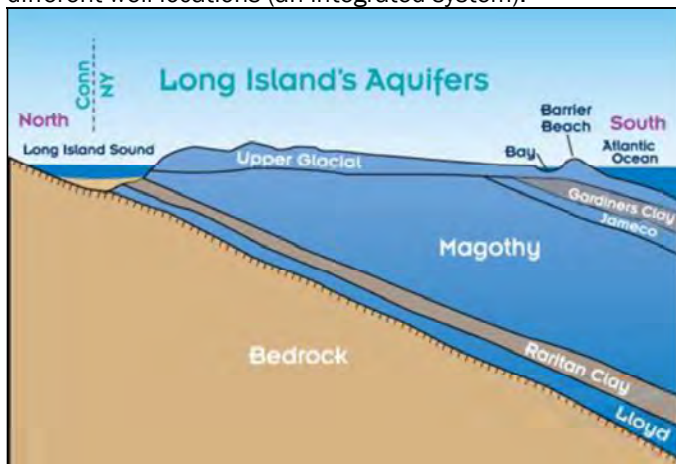
Source, Quality & Quantity

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

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)



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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-drinking-water

System Improvements

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

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

Improvements planned for 2021 include:

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

Do I Need to Take Special Precautions?

To ensure that tap water is safe to drink, the USEPA prescribes regulations limiting the number of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish

limits for contaminants in bottled water, which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Although our drinking water meets all state and federal regulations, some people may be more vulnerable to disease-causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care provider about their drinking water.

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

Substances Expected to be in Drinking Water

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

Substances that may be present in source water include:

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



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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 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 0.5 parts per million, indicating that the company's corrosion control treatment processes continue to be effective. The same tests were done roughly every three years from 1997 through 2020 with similar results. We are on an approved reduced monitoring schedule, and the next round of homeowner monitoring for the Lead and Copper Rule was completed in the summer of 2023. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. New York American Water is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in drinking water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

How do I read the Water Quality Table?

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

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

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

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

Definitions of Terms Used in This Report

- **Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible.
- **Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- **MGD = Million Gallons per Day**
- **90th Percentile Value:** The values reported in the “Lead and Copper Rule” section represent the 90th percentile. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90 percent of the lead and copper values detected in your water system.
- **N/A:** Not applicable



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

the company and to the Health Department. NYS allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year-to-year. Some of the data, though representative of the water quality, are more than one year old.

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

2020 STATISTICS AT-A-GLANCE	
Wells Closed/Restricted	None
Violations of Standards	None
Typical Well Depth	500 Feet
Aquifers	Magothy
Pumping Stations	12
Service Area	20 Square Miles
Total Water Withdrawn	5,055,053,000 Gal.
Total Water Sales	4,837,659,000 Gal.
Total Water Lost from System*	259,890,000 Gal.
Population Served (approx.)	135,000
Customers Served (accounts)	45,018
Miles of Mains	433

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

Water Quality 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

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 2020	80	0	4.8	<1.0 – 4.8	No	By-product of drinking water disinfection
HAA5's (Total Haloacetic acids) (ppb) ³		60	0	<2.0	<2.0 - <2.0	No	
Disinfectants							
Chlorine (ppm) ⁴	2020	N/A	N/A	2.20	<0.10 - 2.20	No	Water additive used to control microbes
Radiological⁵							
Gross Alpha Activity (pCi/L)	10/2018	15	0	8.06	ND – 8.06	No	Erosion of natural deposits
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	
Uranium (ug/L)	10/2018	30	0	0.187	ND – 0.187	No	



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

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

Metals & Inorganic Substances

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

Organic Substances

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

Physical Parameters & Unregulated Substances

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

Footnotes:

- ¹ A total of 1,449 distribution system bacteriological samples were taken in 2020, with 3 positive Total Coliform results = 0.21% positives for the year.
- ² TTHM'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.



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.

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

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

Unregulated Contaminant Monitoring Rule (UCMR4):

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

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

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

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

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

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

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:

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

Pesticides and byproducts:

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

Semi-Volatile Chemicals:

Butylated hydroxyanisole (BHA)
o-toluidine
Quinolone

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.



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 non-enforceable 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

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)
Dichlorodifluoromethane
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 1,2,2-trifluoroethane
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
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
Carbaryl
Dalapon
Di (2-Ethylhexyl) adipate
Di (2-Ethylhexyl) phthalate
Dicamba
Dieldrin
Dinoseb
Diquat
Endothall
Glyphosate
Hexachlorobenzene
Hexachlorocyclopentadiene
3-Hydroxycarbofuran
Methomyl
Metolachlor
Metribuzin
Oxamyl (Vydate)
Picloram
Propachlor
Simazine
2,3,7,8-TCDD (Dioxin)

** 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 "Non-detected" (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

UCMR# Perfluorinated Compounds Group (all ND):

Perfluorooctanesulfonic acid (PFOS)
Perfluorooctanoic 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
Ethinylestradiol (ethinyl estradiol)
Hydroxyestradiol
Testosterone





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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](https://www.newyorkamwater.com). Under Water Quality, select Water Quality Reports.

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ATTACHMENT C

Water Quality Data



575 Broad Hollow Road, Melville, NY 11747
 TEL: (631) 694-3040 FAX: (631) 420-8436
www.pacelabs.com

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

Sample Information:

Type: Drinking Water
 Origin: Raw Well
 Routine

New York American Water - Merrick OPS
60 Brooklyn Avenue
Merrick, NY 11566

Lab No. : 70180660001
Client Sample ID.: N-09878

Attn To : Natasha Niola
 Federal ID : 2902840
 Collected : 07/15/2021 06:30 AM Point N-09878
 Received : 07/15/2021 01:22 PM Location Newbridge 4 Well
 Collected By CLIENT

Sample Comments:

Samples were received outside of the recommended temperature range of 0-6 degrees Celsius. The samples were received from the field on ice and the cooling process has begun.

Analytical Method: EPA 522		Prep Method: EPA 522			Prep Date: 07/20/2021 11:33		
Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Analyzed:	Container:
1,4-Dioxane (p-Dioxane)	0.21		1	ug/L	1	07/21/2021 4:32 AM	001 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	87%		1	%REC		07/21/2021 4:32 AM	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

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.

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

Date Reported: 07/26/2021



575 Broad Hollow Road, Melville, NY 11747
 TEL: (631) 694-3040 FAX: (631) 420-8436
www.pacelabs.com

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

Sample Information:

Type: Drinking Water
 Origin: Raw Well
 Routine

New York American Water - Merrick OPS
60 Brooklyn Avenue
Merrick, NY 11566

Lab No. : 70180660002
Client Sample ID.: N-10195

Attn To : Natasha Niola
 Federal ID : 2902840
 Collected : 07/15/2021 08:40 AM Point N-10195
 Received : 07/15/2021 01:22 PM Location Jerusalem 5 Well
 Collected By CLIENT

<u>Analytical Method:</u> EPA 522		<u>Prep Method:</u> EPA 522			<u>Prep Date:</u> 07/20/2021 11:33		
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	<u>Analyzed:</u>	<u>Container:</u>
1,4-Dioxane (p-Dioxane)	0.15		1	ug/L	1	07/21/2021 4:48 AM	002 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	89%		1	%REC		07/21/2021 4:48 AM	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

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.

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

Date Reported: 07/26/2021



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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

Sample Information:

Type: Drinking Water
 Origin: Raw Well
 Routine

New York American Water - Merrick OPS
60 Brooklyn Avenue
Merrick, NY 11566

Lab No. : 70180660003
Client Sample ID.: N-14347

Attn To : Natasha Niola
 Federal ID : 2902840
 Collected : 07/15/2021 08:05 AM Point N-14347
 Received : 07/15/2021 01:22 PM Location Seaman Neck #3
 Collected By CLIENT

<u>Analytical Method:</u> EPA 522		<u>Prep Method:</u> EPA 522			<u>Prep Date:</u> 07/20/2021 11:33		
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	<u>Analyzed:</u>	<u>Container:</u>
1,4-Dioxane (p-Dioxane)	1.7*		1	ug/L	1	07/21/2021 5:05 AM	003 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	87%		1	%REC		07/21/2021 5:05 AM	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

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.

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

Date Reported: 07/26/2021



575 Broad Hollow Road, Melville, NY 11747
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www.pacelabs.com

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

Sample Information:

Type: Drinking Water
 Origin: Raw Well
 Routine

New York American Water - Merrick OPS
60 Brooklyn Avenue
Merrick, NY 11566

Lab No. : 70180660004
Client Sample ID.: N-09338

Attn To : Natasha Niola
 Federal ID : 2902840
 Collected : 07/15/2021 07:45 AM Point N-09338
 Received : 07/15/2021 01:22 PM Location Seamanneck 4 Well
 Collected By CLIENT

<u>Analytical Method:</u> EPA 522		<u>Prep Method:</u> EPA 522			<u>Prep Date:</u> 07/20/2021 11:33		
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	<u>Analyzed:</u>	<u>Container:</u>
1,4-Dioxane (p-Dioxane)	1.5*		1	ug/L	1	07/21/2021 5:21 AM	004 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	88%		1	%REC		07/21/2021 5:21 AM	004 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

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.

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

Date Reported: 07/26/2021



575 Broad Hollow Road, Melville, NY 11747
 TEL: (631) 694-3040 FAX: (631) 420-8436
www.pacelabs.com

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

Sample Information:

Type: Drinking Water
 Origin: Raw Well
 Routine

New York American Water - Merrick OPS
60 Brooklyn Avenue
Merrick, NY 11566

Lab No. : 70180660005
Client Sample ID.: N-05767

Attn To : Natasha Niola
 Federal ID : 2902840
 Collected : 07/15/2021 07:00 AM Point N-05767
 Received : 07/15/2021 01:22 PM Location Demott 4 Well
 Collected By CLIENT

<u>Analytical Method:</u> EPA 522		<u>Prep Method:</u> EPA 522			<u>Prep Date:</u> 07/22/2021 8:06 AM		
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	<u>Analyzed:</u>	<u>Container:</u>
1,4-Dioxane (p-Dioxane)	0.073		1	ug/L	1	07/22/2021 5:03 PM	005 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	92%		1	%REC		07/22/2021 5:03 PM	005 AG2R1/2

Qualifiers:

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 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

Jennifer Aracri

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

Date Reported: 07/26/2021



WorkOrder :

70180660

Laboratory Certifications

Pace Analytical Services Long Island

575 Broad Hollow Rd, Melville, NY 11747

Connecticut Certification #: PH-0435

Delaware Certification # NY 10478

Maryland Certification #: 208

Massachusetts Certification #: M-NY026

New Hampshire Certification #: 2987

New Jersey Certification #: NY158

New York Certification #: 10478 Primary Accrediting Body

Pennsylvania Certification #: 68-00350

Rhode Island Certification #: LAO00340

Virginia Certification # 460302



Sample Condition Upon Rec

WO#: 70180660

Client Name: NYAW

Project PM: JSA Due Date: 07/29/21 CLIENT: NYAW

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No

Packing Material: Bubble Wrap Bubble Bags Ziploc None Other

Thermometer Used: TH091 Correction Factor: +0.0

Cooler Temperature: 7.9 Cooler Temperature Corrected: 7.9

Temp should be above freezing to 6.0°C USDA Regulated Soil

Temperature Blank Present: Yes No

Type of Ice: Wet Blue None

Samples on ice, cooling process has begun

Date/Time 5035A kits placed in freezer

Date and Initials of person examining contents: CH 7/15/21

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA

Did samples originate from a foreign source including Hawaii and Puerto Rico? Yes No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

Table with 17 rows and 3 columns. Columns: Question, Yes/No/N/A, Comments. Includes items like Chain of Custody Present, Samples Arrived within Hold Time, etc.

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:



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Laboratory Results

Results for the samples and analytes requested
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Sample Information:

Type: Drinking Water
 Origin: Raw Well
 Routine

New York American Water - Merrick OPS
60 Brooklyn Avenue
Merrick, NY 11566

Lab No. : 70186879001
Client Sample ID.: N-07407

Attn To : Natasha Niola
 Federal ID : 2902840
 Collected : 09/09/2021 07:05 AM Point N-07407
 Received : 09/09/2021 12:32 PM Location Jefferson 11 Well
 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 522		Prep Method: EPA 522			Prep Date: 09/15/2021 11:10		
Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Analyzed:	Container:
1,4-Dioxane (p-Dioxane)	<0.020		1	ug/L	1	09/16/2021 6:12 AM	001 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	101%		1	%REC		09/16/2021 6:12 AM	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

Jennifer Aracri

Test results meet the requirements of NELAC unless otherwise noted.

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

Date Reported: 09/17/2021



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 TEL: (631) 694-3040 FAX: (631) 420-8436
www.pacelabs.com

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

Sample Information:

Type: Drinking Water
 Origin: Raw Well
 Routine

New York American Water - Merrick OPS
60 Brooklyn Avenue
Merrick, NY 11566

Lab No. : 70186879002
Client Sample ID.: N-08253

Attn To : Natasha Niola
 Federal ID : 2902840
 Collected : 09/09/2021 07:35 AM Point N-08253
 Received : 09/09/2021 12:32 PM Location Jefferson 12 Well
 Collected By CLIENT

<u>Analytical Method:</u> EPA 522		<u>Prep Method:</u> EPA 522			<u>Prep Date:</u> 09/15/2021 11:10		
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	<u>Analyzed:</u>	<u>Container:</u>
1,4-Dioxane (p-Dioxane)	<0.020		1	ug/L	1	09/16/2021 6:29 AM	002 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	103%		1	%REC		09/16/2021 6:29 AM	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

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.

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

Date Reported: 09/17/2021



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WorkOrder :
70186879

Laboratory Certifications

Pace Analytical Services Long Island

575 Broad Hollow Rd, Melville, NY 11747
Connecticut Certification #: PH-0435
Delaware Certification # NY 10478
Maryland Certification #: 208
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987
New Jersey Certification #: NY158
New York Certification #: 10478 Primary Accrediting Body
Pennsylvania Certification #: 68-00350
Rhode Island Certification #: LAO00340
Virginia Certification # 460302



Sample Condition Upon Receipt

WO#: 70186879
PM: JSA Due Date: 09/23/21
CLIENT: NYAW

Client Name: NYAW - Merrick

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: _____

Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No

Packing Material: Bubble Wrap Bubble Bags Ziploc None Other

Thermometer Used: TH091 Correction Factor: +0.0

Cooler Temperature[C]: 12.6 Cooler Temperature Corrected[C]: 12.6

Temp should be above freezing to 6.0C

USDA Regulated Soil [N/A, water sample]

Temperature Blank Present: Yes No

Type of Ice: Wet Blue None

Samples on ice, cooling process has begun

Date/Time 5035A kits placed in freezer

Date and Initials of person examining contents: MN 9/2/21

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? Yes No
Did samples originate from a foreign source including Hawaii and Puerto Rico? Yes No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

Table with 17 rows and 3 columns. Columns: Question, Yes/No/N/A, and Comments. Rows include Chain of Custody Present, Samples Arrived within Hold Time, Short Hold Time Analysis, Sufficient Volume, Correct Containers Used, Filtered volume received for Dissolved tests, All containers needing preservation have been checked?, Samples checked for dechlorination, etc.

Client Notification/ Resolution: _____ Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

* PM (Project Manager) review is documented electronically in LIMS