



**AQUARION**  
Water Company

*Stewards of the Environment™*

— **2022** —  
WATER  
**QUALITY**  
REPORT

*Water: it's too precious to waste*

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GREENWICH SYSTEM

PWS ID#: CT0570011

Este informe contiene información importante sobre su agua potable. Pida a alguien que lo traduzca para usted, o hable con alguien que lo entienda.

## LETTER FROM THE PRESIDENT



*Donald J. Morrissey*  
*Aquarion President*

Dear Aquarion Customer:

I have the pleasure of reporting that Aquarion Water Company continued its delivery of high-quality water to our customers in 2022. We met or exceeded all state and federal water quality standards, as measured by the 170,663 tests we conducted throughout the year. This includes voluntary tests for perfluoroalkyl and polyfluoroalkyl (PFAS), substances that, in high concentrations, can cause serious health effects. While the U.S. Environmental Protection Agency intends to announce new maximum contaminant levels for PFAS this

year, you can find our 2022 updates and test results at [www.aquarionwater.com/pfas](http://www.aquarionwater.com/pfas).

Last summer brought drought back to much of the state, but mandatory irrigation schedules in several cities we serve helped to maintain adequate water supplies, as did invaluable help from customers everywhere who not only reduced outdoor water use, but also fixed leaks and took other vital conservation measures.

Thank you for all you do to avoid wasting water — our most precious resource. For more ideason what you can do to conserve water, please see page 8 in this report or visit [www.aquarionwater.com/conserve](http://www.aquarionwater.com/conserve).

With Appreciation,

A handwritten signature in blue ink that reads "Donald J. Morrissey". The signature is fluid and cursive.

Donald J. Morrissey



### Questions About Your Water Quality Report?

Customers who have questions about water quality should call us at **800-832-2373**.

For discolored water, service problems or after-hours emergencies, or to participate in a public meeting, call **800-732-9678**.

Customers may also email us at [waterquality@aquarionwater.com](mailto:waterquality@aquarionwater.com), or visit [www.aquarionwater.com](http://www.aquarionwater.com).

Connecticut Department of Public Health Drinking Water Section:  
**860-509-7333** or [www.ct.gov/dph](http://www.ct.gov/dph).

U.S. Environmental Protection Agency's Safe Drinking Water Hotline:  
**800-426-4791** or [www.epa.gov/safewater](http://www.epa.gov/safewater).

# WATER QUALITY TABLE

Your water has been tested for more than 100 compounds that are important to public health. Only 17 of these were detected, all of which were below the amounts allowed by state and federal law. Most of these compounds are either naturally occurring or introduced as treatment to improve water quality. Monitoring frequency varies from daily to once every

nine years per EPA regulation, depending on the parameter. Our testing encompasses the full range of regulated inorganic, organic and radiological compounds and microbiological and physical parameters. Results shown here are for detected compounds only.

Substance (Units of Measure)	Likely Source	MCLG	MCL	Compliance	Test Date	Average	Range
<b>INORGANIC COMPOUNDS</b>							
<b>Barium (ppm)</b>	Erosion of natural deposits	2	2	<b>YES</b>	2022	0.030	0.028 - 0.036
<b>Copper (ppm)</b>	Corrosion of household plumbing systems	1.3	AL = 1.3	<b>YES</b>	2022	0.27*	
<b>Fluoride (ppm)</b>	Water additive that promotes strong teeth; erosion of natural deposits	4.0	4.0	<b>YES</b>	2022	0.69	0.64 - 0.75
<b>Lead (ppb)</b>	Corrosion of household plumbing systems	0	AL = 15	<b>YES</b>	2022	1**	
<b>Nitrate (ppm)</b>	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	10	10	<b>YES</b>	2022	0.128	0.075 - 0.314
<b>MICROBIALS</b>							
<b>Turbidity (NTU)</b>	Sediment particles; naturally occurring iron and manganese; soil runoff	NA	TT = 1 max	<b>YES</b>	2022	0.07+	0.01 - 0.77
<b>Turbidity (NTU)</b>	Sediment particles; naturally occurring iron and manganese; soil runoff	NA	TT = 95% of samples < 0.3	<b>YES</b>	2022		98.3%
<b>DISINFECTANT</b>							
<b>Chlorine (ppm)</b>	Water additive used to control microbes	MRDLG 4	MRDL 4	<b>YES</b>	2022	0.87	ND < 0.05 - 1.93
<b>Chlorine Dioxide (ppb)</b>	Water additive used to control microbes	MRDLG 800	MRDL 800	<b>YES</b>	2022	70++	20 - 290
<b>ORGANIC COMPOUNDS</b>							
<b>Total Organic Carbon [TOC]</b>	Naturally present in the environment	NA	TT Removal Ratio > 1#	<b>YES</b>	2022	1.5	1.0 - 2.2

Continued on page 4

# WATER QUALITY TABLE Continued from page 3

Substance (Units of Measure)	Likely Source	MCLG	MCL	Compliance	Test Date	Average	Range
<b>DISINFECTION BY-PRODUCTS</b>							
<b>Chlorite (ppm)</b>	By-product of drinking water disinfection	0.8	1	<b>YES</b>	2022	0.70 +++	0.27 - 1.08
<b>Total Trihalomethanes (ppb)</b>	By-product of drinking water chlorination	NA	80	<b>YES</b>	2022	55***	31 - 77
<b>Total Haloacetic Acids (ppb)</b>	By-product of drinking water chlorination	NA	60	<b>YES</b>	2022	41***	7 - 53
<b>STATE-REQUIRED TESTING — PHYSICAL CHARACTERISTICS<sup>^</sup></b>							
<b>Color (CU)</b>	Natural organic matter such as decaying leaves; naturally occurring iron and manganese	NA	15	<b>YES</b>	2022	2	0 - 13
<b>pH</b>	Naturally occurring; water treatment processes	NA	6.4 - 10.0	<b>YES</b>	2022	7.3	6.9 - 8.6
<b>Turbidity (NTU)</b>		NA	5	<b>YES</b>	2022	0.16	0.05 - 1.90
<b>STATE-REQUIRED TESTING — INORGANIC COMPOUNDS</b>							
<b>Chloride (ppm)</b>	Naturally present in the environment	NA	250	<b>YES</b>	2022	43.1	ND < 0.05 - 55.4
<b>Sodium (ppm)</b>	Water treatment processes; use of road salt; naturally present in the environment	NA	NL = 28	<b>NA</b>	2022	42.0	41.5 - 43.8
<b>Sulfate (ppm)</b>	Naturally present in the environment	NA	SMCL = 250	<b>NA</b>	2022	33.7	9.0 - 40.7

## Footnotes and Definitions

> Greater than

< Less than

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

**CU Color Units**

**MCL Maximum Contaminant Level:** 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.

**MCLG Maximum Contaminant Level Goal:** 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.

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

**MRDLG Maximum Residual Disinfectant Level Goal:**

The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

**NA Not Applicable**

**ND Not Detected**

**NL State of Connecticut customer notification level**

**NTU Nephelometric Turbidity Units,** a measure of the presence of particles. Low turbidity is an

indicator of high-quality water.

**ppb parts per billion,** or micrograms per liter (ug/L)

**ppm parts per million,** or milligrams per liter (mg/L)

**ppt parts per trillion,** or nanograms per liter (ng/L)

**SMCL Secondary Maximum Contaminant Level**

**TT Treatment Technique:** A required process intended to reduce the level of a contaminant in drinking water.

\* 90th percentile value in copper monitoring. Result is representative

of customer sampling stagnant water. No locations exceeded the action level for copper.

\*\* 90th percentile value in lead monitoring. Result is representative of customer sampling stagnant water. No locations exceeded the action level for lead.

\*\*\* Reported value is the highest locational, annual average of quarterly measurements for disinfection by-products in the distribution system. Values in the range are individual measurements.

+ Value is the highest monthly average for turbidity reported from the surface water treatment plant effluents. Values in the range are individual measurements.

++ Result is the highest monthly average for Chlorine Dioxide reported from one surface water treatment plant's effluent. Values in the range are individual measurements.

+++ Value is the highest monthly average for Chlorite in the distribution system. Values in the range are individual measurements.

# The monthly TOC removal ratio is calculated as the ratio between the actual TOC removed and the TOC rule removal requirements. This number should be greater than 1.

^ Measured at representative locations within the distribution system.

### HEALTH EFFECTS

Sodium: If you have been placed on a sodium-restricted diet, please inform your physician that our water may contain as much as 43.8 ppm of sodium.

# OTHER MONITORED SUBSTANCES

## Hardness in Your System

Hardness is a measure of naturally-occurring minerals, like calcium and magnesium, dissolved in the water. Hardness does not have any negative health effects, so it is not regulated by the federal Environmental Protection Agency or the state Department of Public Health. These minerals can create a buildup on fixtures and appliances. Please refer to fixture and appliance manufacturer recommendations on addressing buildup.

Hardness (gpg)	
Test Date	2022
Average	8.1
Range	5.7 - 10.4
Source	Erosion of natural deposits

**gpg** grains per gallon



## Monitoring Unregulated Contaminants

Unregulated contaminants are elements that currently have no health standards assigned for drinking water. This table shows only the compounds detected in your system. To learn about the full list of unregulated contaminants included in the monitoring program, please call our Water Quality Department at [800-832-2373](tel:800-832-2373).

PFAS results shown here are for detected compounds with action levels in Connecticut.

Substance (Units of Measure)	Detected Level			
	Unregulated Contaminants	Test Date	Average	Range
<b>Manganese (ppb)</b>	2020	0.77	ND < 0.01 - 1.73	Erosion of natural deposits
<b>Haloacetic Acids 6 Brominated (ppb)</b>	2020	11	6 - 15	By-product of drinking water chlorination
<b>Haloacetic Acids 9 (ppb)</b>	2020	51	29 - 64	By-product of drinking water chlorination
<b>PFOA (ppt)</b>	2022	6	4 - 7	Discharges and emissions from industrial sources; manufacturing and use of consumer products
<b>PFOS (ppt)</b>	2022	4	3 - 5	Discharges and emissions from industrial sources; manufacturing and use of consumer products
<b>PFHxS (ppt)</b>	2022	ND < 1	0 - 2	Discharges and emissions from industrial sources; manufacturing and use of consumer products

**ppb** parts per billion, or micrograms per liter (ug/L) • **ppt** parts per trillion, or nanograms per liter (ng/L) • **ND** Not detected

# YOUR HEALTH IS OUR PRIORITY

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at [800-426-4791](tel:800-426-4791).

*Here is some additional information of interest about Aquarion's drinking water.*

## Where Does Your Water Come From?

Your water is collected in reservoirs, treated, and delivered to you through an extensive underground piping system. The Greenwich System supply is drawn from the Putnam, Rockwood, Bargh and Brush reservoirs and the Mianus River in Greenwich, and the Laurel and North Stamford reservoirs in Stamford. The system serves about 55,020 people and has an average customer demand of 12.3 million gallons of water per day. Company-wide, an average of 17% of the demand is water drawn for firefighting, water main cleaning,

water main breaks and leaks, and unauthorized use.



## How Is Your Water Treated?

The water is filtered at the Mianus, Putnam, and Stamford water treatment plants, then disinfected, fluoridated, and further treated to protect the water supply piping system.

## Cryptosporidium

The EPA requires public water systems that use surface water sources to monitor for Cryptosporidium. This is a microbial pathogen found in lakes and rivers throughout the U.S. that can cause gastrointestinal illness if consumed. Aquarion continues to monitor its surface water sources and

did not detect Cryptosporidium in the reservoirs that served the Greenwich System in 2022.

## Source Water Assessment Report

Connecticut's Department of Public Health (DPH) states in its Source Water Assessment Report that the public drinking water sources in the Greenwich System have a moderate-to-high susceptibility to potential contamination. To read the DPH report, visit [www.ct.gov/dph](http://www.ct.gov/dph).

## Copper

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level\* over a relatively short period of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their doctor.

\* The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Major sources of copper in drinking water include corrosion of household plumbing systems and erosion of natural deposits.

## Immuno-Compromised People

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people such as those with cancer undergoing chemotherapy, people 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. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline [800-426-4791](tel:800-426-4791).

# LEAD IN DRINKING WATER: THE FACTS

The federal Environmental Protection Agency (EPA) and Connecticut's Department of Public Health have established extensive regulations for water utilities to follow regarding lead. If lead is present in drinking water, it can cause numerous harmful effects on a person's health. The EPA has determined there is no safe level of lead.

Aquarion maintains a regular schedule for lead monitoring.

## Health Effects

Lead is especially harmful for infants and young children, causing developmental delays, learning difficulties, irritability, loss of appetite, weight loss, sluggishness, fatigue, abdominal pain, vomiting, constipation and hearing loss.

Effects on adults may include high blood pressure, abdominal pain, constipation, joint pains, muscle pain, decline in mental functions such as abstract thinking and focus, numb or painful extremities, headache, memory loss, mood disorders, fertility issues in men, and miscarriage or premature birth in pregnant women.

## The EPA's Advice

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water comes primarily from materials and components associated with service lines and home plumbing. Aquarion Water Company is responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components.

Customers can minimize the potential for lead exposure when water has been sitting for several hours by running the tap for 3 to 5 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested.

## What to do About Lead in a Service Line

A service line is the pipe that connects a customer's premises to Aquarion's water main in the street (see illustration above). Homes built before 1986 may have lead service lines (with a few exceptions, most were installed in



Customer and Aquarion responsibilities shown are representative for most customers.

homes built before 1930), and those built before 1986 may have lead solder and brass fittings (which may have a lead content).

A lead service line can be the primary source of lead in your drinking water, because there is a much greater surface area where lead contacts the water, compared to lead-soldered pipe joints and leaded brass fixtures.

If your house or other structure was built prior to 1988, you should check the service line where it enters the wall of your basement to see if it is made of lead. If it is a lead line, contact Aquarion at [800-732-9678](tel:800-732-9678) for advice on replacing it.

This will help reduce your potential exposure to lead in drinking water.

## Other Precautions You Can Take

There are other ways to reduce the risk of lead exposure from your water pipes:

- ✓ If you have not used any of your faucets for a number of hours (for example, overnight or while you are at work), run the water for 3 to 5 minutes. This will bring in fresh water from our water main, which contains no lead.
- ✓ Always use cold water for drinking, cooking and preparing baby formula.
- ✓ Periodically remove and clean the faucet screens/aerators. While doing so, run the tap to eliminate debris.

Aquarion offers more detailed information on lead in drinking water and how to minimize exposure on our website at [www.aquarionwater.com/learnaboutlead](http://www.aquarionwater.com/learnaboutlead). You also can call the Safe Drinking Water Hotline at [800-426-4791](tel:800-426-4791) or go to [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

# WATER PROTECTION AND CONSERVATION

## How Aquarion Protects Your Drinking Water

Aquarion Water Company is committed to providing the highest quality water to our customers. Toward that end, we conducted 170,663 water quality tests in 2022 across all our Connecticut systems, and we regularly inspect businesses, farms, homes and other sites that could affect our water supply.

Here are some examples of pollutants that may wash into surface water or seep into groundwater:

- Microbial contaminants from septic systems
- Inorganic contaminants such as road salt or metals
- Pesticides and herbicides from residential uses
- Organic chemical contaminants, including synthetic and volatile organic chemicals



## You Can Protect Water Too:

- Ensure that your septic system works correctly
- Use chemicals and pesticides sparingly
- Dispose of waste chemicals and used motor oil properly
- Report illegal dumping, chemical spills or other polluting activities to the state Department of Energy and Environmental Protection's 24-hour hotline at 860-424-3338, call Aquarion at 800-732-9678, or call your local police

## Conservation

By reducing water consumption, Aquarion customers have made outstanding progress in ensuring that our area has enough water, no matter what the skies deliver. Many thanks to all the customers who cut back on outdoor sprinkler irrigation and other uses, helping to save more than 2 billion gallons of water across our systems over the last five years. There's still more to do, though. Here are some easy tips on what everyone can do to conserve the supply of this irreplaceable resource:

### Reduce excessive irrigation

Get rid of wasteful, "set 'em and forget 'em" timers. Water only when the ground feels dry. Use WaterSense labeled spray sprinkler bodies.

### Rely more on the sky

Put a rain barrel under a down-spout to capture rainwater for your garden.

### Forget fertilizing

Many use salts that make your lawn less drought-resistant.



### Jilt the jiggling

Fix leaky toilets. Watch our step-by-step video at [www.aquarionwater.com](http://www.aquarionwater.com) about finding and fixing leaks. Better yet, upgrade to a new, WaterSense-labeled model to save three or more gallons with every flush.

### Put scraps to work

Compost vegetable scraps to nourish your garden, instead of using water to grind them up in your garbage disposal.

For more tips, visit [www.aquarionwater.com/consERVE](http://www.aquarionwater.com/consERVE).



MYSTIC  
AQUARIUM



Stamford Museum  
& Nature Center



THE RIDGEFIELD  
PLAYHOUSE  
Non-profit 501 (c)(3)  
Diversity Film Series

## FREE Admission Tickets

Be sure to take advantage of the special 2-for-1 ticket deals and other offers that Aquarion has arranged for its customers at great Connecticut attractions. Learn more at [www.aquarionwater.com/freetickets](http://www.aquarionwater.com/freetickets).