

## *2019 Annual Drinking Water Quality Report*

# **Montville Water Supply**

**Montville, CT**  
**PWSID# CT0864011**

We're pleased to present to you our Annual Drinking Water Quality Report, also known as the Consumer Confidence Report. This report, a requirement of the 1996 amendments to the Safe Drinking Water Act, is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

### **Water Source**

Our water is purchased from the Groton Utilities Water Treatment Plant. This facility uses surface water and filters the water prior to distribution. Groton Utilities also uses chlorine dioxide to oxidize and remove manganese from our drinking water. Our system serves an estimated population of 1140 residents and maintains 456 service connections.

Our regularly scheduled meetings are held on the first Monday of every month at the Montville Town Hall at 6:00 pm. If you have any questions about this report or concerning your water system, please contact Jon Lilly at mailing address 83 Pink Row, Uncasville, CT 06382. We want our valued customers to be informed about their water system.

### **Source Water Protection**

Source water is untreated water from streams, rivers, lakes, or underground aquifers that is used to supply public drinking water. Preventing drinking water contamination at the source makes good public health sense, good economic sense, and good environmental sense. You can be aware of the challenges of keeping drinking water safe and take an active role in protecting drinking water. There are lots of ways that you can get involved in drinking water protection activities to prevent the contamination of the ground water source. Dispose properly of household chemicals, help clean up the watershed that is the source of your community's water, attend public meetings to ensure that the community's need for safe drinking water is considered in making decisions about land use. Contact our office for more information on source water protection, or contact the Environmental Protection Agency (EPA) at 1.800.426.4791. You may also find information on EPA's website at <http://cfpub.epa.gov/safewater/sourcewater/>.

The Connecticut Department of Public Health has performed an assessment of our drinking water sources. The completed assessment report is available for access on the Drinking Water Division's web site at <https://portal.ct.gov/dph>. Click on Topics A-Z, Drinking Water, Drinking Water Topics A-Z, and then Source Water Assessment Program. The assessment found that Groton Utilities' drinking water sources have an overall **low** susceptibility to potential sources of contamination.

Additional source water assessment information can be found at the Environmental Protection Agency's website: <http://cfpub.epa.gov/safewater/sourcewater/>.

### **Water Quality**

Montville Water Supply and Groton Utilities routinely monitors for contaminants in your drinking water according to Federal and State laws. The following table shows any detection resulting from our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2019. It's important to remember that the presence of these contaminants does not necessarily pose a health risk.

The sources of drinking water include rivers, lakes, ponds and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and radioactive material and can pick up substances resulting from human or animal activity. All sources of drinking water are subject to potential contamination by substances that are naturally occurring, or manmade. Contaminants that may be present in source water include:

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

**Inorganic contaminants**, such as salts and metals, can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

**Pesticides and herbicides** may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

**Organic chemical contaminants**, including synthetic and volatile organic chemicals, are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

**Radioactive contaminants** 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, U.S. Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

The table below lists all of the drinking water contaminants that were detected throughout water quality monitoring and testing. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk.

<b>TEST RESULTS</b>						
Unless otherwise noted, testing was done in 2019						
<b>Contaminant</b>	<b>Violation Y/N</b>	<b>Level Detected</b>	<b>Unit Measurement</b>	<b>MCLG</b>	<b>MCL</b>	<b>Likely Source of Contamination</b>
<b>Microbiological Contaminants</b>						
Total Coliform Bacteria (2019)	N	<b>Absent</b>	Highest monthly # of positive samples	Absent	1 positive	Naturally present in the environment
Turbidity (2/19/2019)	N	<b>0.65</b>	ntu	n/a	TT	Soil runoff
<b>Inorganic Contaminants</b>						
Copper* (11/20/19)	N	<b>0.068</b>	ppm	1.3	AL = 1.3	Corrosion of household plumbing systems
Lead* (11/20/19)	N	<b>7.5</b>	ppb	0	AL = 15	Corrosion of household plumbing systems
Nitrate [as Nitrogen] (2019)	N	<b>0.16</b>	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
* = Reported results are the 90 <sup>th</sup> percentile value (the value that 90% of all samples are less than). Of the ten samples collected for Lead, we had only one sample that detected Lead, which was found to be 1.3ppb. All samples for Lead and Copper were below their respective action levels.						
<b>Disinfection By-Products</b>						
Chlorine Residual (2019)	N	<b>RAA: 1.00</b> (0.51-1.37)	ppm	MRDLG = 4	MRDL = 4	Water additive used to control microbes
HAA5 [Total Haloacetic Acids] (2019)	N	<b>RAA:27.80</b> (23.0-47.0)	ppb	0	60	By-product of drinking water chlorination
TTHM [Total Trihalomethanes] (2019)	N	<b>RAA: 63.30</b> (51.1-93.6)	ppb	0	80	By-product of drinking water chlorination

**Note:** The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Not all contaminants are tested for every year due to monitoring waivers and therefore we must use the most recent round of sampling. Some of our data is more than one year old, however, is limited to no older than 5 years.

**Units:**

*Parts per million (ppm) or Milligrams per liter (mg/l)* - one part per million corresponds to one minute in two years or a single penny in \$10,000.

*Parts per billion (ppb) or Micrograms per liter* - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

*Picocuries per liter (pCi/L)* - picocuries per liter is a measure of the radioactivity in water.

*Micrograms per Liter (µg/l)* – a measure of radioactivity in water.

*Millirems per year (mrem/year)* – a measure of radiation absorbed by the water.

*Nephelometric Turbidity Unit (NTU)* - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**Definitions:**

*Action Level (AL)* - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

*Treatment Technique (TT)* - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

*Million Fibers per Liter (MFL)* - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

*Maximum Contaminant Level (MCL)* - The MCL is 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.

*Maximum Contaminant Level Goal (MCLG)* - The MCLG is 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.

*Drinking Water Equivalent Level (DWEL)* – A lifetime exposure concentration protective of adverse, non-cancer health effects, that assumes all of the exposure to a contaminant is from a drinking water source.

*Maximum Residual Disinfectant Level (MRDL)* - 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.

*Maximum Residual Disinfectant Level Goal (MRDLG)* - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

*Running Annual Average (RAA)* - The average of all monthly or quarterly samples for the last year at all sample locations. *Non*

*Detect (ND)* - The contaminant was not detected.

*Not Applicable, Not Established (N/A)*

**IMPORTANT INFORMATION**

***Lead - Major Sources in Drinking Water:*** Corrosion of household plumbing systems; erosion of natural deposits.

***Health Effects Statement:*** Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities.

Adults who drink this water over many years could develop kidney problems or high blood pressure.

***Copper - Major Sources in Drinking Water:*** Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

***Health Effects Statement:*** Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount 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 personal doctor.

***Fluoride:*** Fluoride levels must be maintained between 1-2 ppm, for those water systems that fluoridate the water.

***Lead/Copper:*** Action levels are measured at consumer's tap. 90% of the tests must be equal to or below the action level; therefore, the listed results above have been calculated and are listed as the 90<sup>th</sup> percentile.

***Sodium:*** The reason for this notification is so that consumers on low or restricted sodium diets may take into account their sodium intake from the drinking water. If you have been placed on a sodium restricted diet, please inform your physician that your water contained approximately 28 mg/L of sodium as a result of testing completed in 2018.

***Total Coliform Bacteria*** - Reported as the highest monthly number of positive samples, for water systems that take < 40 samples per month. Coliforms are bacteria which are naturally present in the environment and are used as an indicator that other, potentially-harmful bacteria may be present. Our tests have all been negative.

***TTHM/HAA5:*** Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5) are formed as a by-product of drinking water chlorination. This chemical reaction occurs when chlorine combines with naturally occurring organic matter in water.

***Turbidity:*** Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

## IMPORTANT INFORMATION

Since our system chlorinates its water, we are required to report our annual average for chlorine residual. **Chlorine residual** was found to be **1.00 ppm**, with a range of 0.51 ppm to 1.37 ppm.

The Groton Utilities (water supplier) detected a range of sodium from 27-30mg/L. Because we exceeded the 28 mg/L threshold. To Our Water Customers: If you have been placed on a sodium-restricted diet, please inform your physician that our water contains 30 mg/L of sodium.

## GROTON UTILITIES VIOLATION JUNE 2019

On June 18, 2019 the on-line turbidimeter for filter #6 at the Groton Utilities Water Treatment Plant ceased to read accurately due to a problem with the turbidimeter. The filter remained in operation, but the problem with the meter was not detected until June 19, 2019, at which time it was corrected. The on-line turbidimeter for the Combined Filter Effluent (that is, the measurement of the filtered water from all filters which were in operation at that time) operated normally during that whole time and did not show any deviation or exceedance in turbidity during that time, and showed that the combined filter effluent turbidities met drinking water standards. Nonetheless, Groton Utilities is required to continuously monitor turbidity from all filters in operation, and on June 18-19, 2019, they failed to do so for filter #6. Groton Utilities received a Notification of Violation from CT DPH for failure to continuously monitor the turbidity of #6 filter effluent and, as required, we are notifying you of that violation as per our responsibility to you, our valued customers. Just to be clear, this **was not** a violation that was given to Montville Water Supply. If you have any questions or concerns about this incident please feel free to contact Jon Lilly mailing address 83 Pink Row, Uncasville, CT 06382.

## GROTON UTILITIES WATER QUALITY DATA

The two tables below are the Water Quality Data provided by our water supplier, Groton Utilities, for the year 2019:

### Groton Utilities 2019 Annual Water Quality Data for Consecutive Water Systems

#### *Regulated Contaminants*

Parameter	Units	MCL	MCGL	Highest Detected Level	Range	Major source	Meets Standards
Barium	ppm	2	2	0.009	-----	Discharge of drilling wastes, discharge from metal refineries, erosion of natural deposits.	YES
Chloride	ppm	250	N/A	44	17-44	Stormwater runoff containing road salt, erosion of natural deposits.	YES
Fluoride	ppm	4	4	0.94	0.23-0.94	Erosion of natural deposits, water additive which promotes strong teeth.	YES
Nitrate	ppm	10	10	0.16	0.02-0.16	Runoff from fertilizer use, leachate from septic tanks, sewage, erosion of natural deposits.	YES
Parameter	Units	TT	MCGL	Lowest RAA	Range	Major Source	Meets Standards
Total Organic Carbon	N/A	Removal ratio must be $\geq 1.00$	N/A	1.6	1.4-1.9	Naturally present in the environment.	YES
Parameter	Units	TT	MCGL	Highest Detected Level	Lowest % of samples meeting Limit	Major Source	Meets Standards
Turbidity	NTU	95% of monthly samples must be $\leq 0.3$ NTU	N/A	0.36	99%	Soil Runoff.	YES

Parameter	Units	MCL	MCGL	Highest Monthly Average	Range	Major Source	Meets Standards
Chlorite	ppm	1	0.8	0.15	0.02-0.15	By-product of chlorine dioxide, which is used to remove manganese.	YES

### Unregulated Contaminants

Parameter	Units	MCL	MCGL	Average	Range	Major Source	Meets Standards
Sodium	ppm	Notification level = 28	None	20	17 - 25	Stormwater runoff containing road salt, erosion of natural deposits.	YES
Sulfate	ppm	None	None	6	4 - 7	Naturally Occurring	YES

### Unregulated Contaminant Monitoring Rule 4

Groton Utilities, along with other Community Water Systems across the country, has been participating in sampling for UCMR4. The purpose of this is for the EPA to evaluate currently unregulated contaminants, to determine the prevalence of these contaminants in drinking water and evaluate if this may warrant their regulation. The attached table only lists contaminants that were detected. For more information on UCMR4, go to <https://www.epa.gov/ground-water-and-drinking-water>, look under the heading "Drinking Water Regulations," and click on Unregulated Contaminant Monitoring. The table below contains the results for the 2019 Monitoring Period.

### Groton Utilities UCMR4 data

(Unregulated Contaminants Monitoring Rule 4)

Location	Analyte	Average	Range	Source
Point of Entry	Manganese	20.3	10.7 - 35.1	Naturally Occurring
Poquonnock Reservoir	Bromide	26	21 - 29	Naturally Occurring
Poquonnock Reservoir	TOC	3533	3510 - 3560	A measurement of naturally occurring organics
Distribution System	HAAS	26.4	11.7 - 52.7	By-products occurring from the reaction between disinfectants and organic matter
Distribution System	HAA6Br	9	5.9 - 12.9	
Distribution System	HAA9	34.8	17.2 - 65	

All results are reported in parts per billion.

TOC = Total Organic Carbon

HAA = Haloacetic Acid

All 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 Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

For most people, the health benefits of drinking plenty of water outweigh any possible health risk from these contaminants. However, some people may be more vulnerable to contaminants 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 about drinking water from their health care providers. EPA/Center of Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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. We are 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 thirty (30) seconds to two (2) 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. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

We at Montville Water Supply, work hard to provide top quality water to every tap. Water is a limited resource, so it is vital that we all work together to maintain it and use it wisely. We ask that all our customers help us to protect and preserve our drinking water resources, which are the heart of our community, our way of life and our children's future. Please contact us with any questions. Thank you for working together for safe drinking water.