

Noank Fire District

NOANK WATER SYSTEM

2019 ANNUAL WATER QUALITY REPORT

The Noank Fire District is pleased to present this year's Annual Water Quality Report. We are proud to report that the water we supply **meets all established Federal and State drinking water standards.**

This report contains information about the source and treatment of your water, lists the results of our 2019 testing, and contains information about what you can do to conserve and protect your valuable water supply.

The Water Quality Data chart on the last page of this report lists only the compounds that were detected in the water. It does not contain the contaminants that were tested for, but not found in our water. You will note that some of the results, though representative, were from samples collected prior to 2019. That is because the CT Department of Public Health (CTDPH) allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently.

If you have any questions about this report, please call the Noank Fire District Water Company at (860) 536-7366 or (860) 823-8910 (cell).

You are encouraged to attend the Noank Fire District Executive Committee's regularly scheduled meetings which are held at 7:00 PM on the second Tuesday of each month at the Noank Fire House on Ward Avenue in Noank.

What is the Source of Our Water?

The Noank Fire District water system is a consecutive system of Groton Utilities, which means that we purchase our water from Groton Utilities after the water has undergone full conventional treatment.

The Groton Utilities water source is supplied by surface water from a series of five interconnected reservoirs. Their staff includes reservoir patrol staff, who with local and state police, maintain a high level of security, monitor the watershed for potential sources of contamination, and routinely collect water samples for laboratory analysis.

How is the Water Treated?

All of Groton Utilities water treatment plant operators are certified (as required by the CT Department of Public Health), and are responsible for producing water that meets all State and Federal drinking water regulations. The water is treated through a process called “conventional treatment” which consists of coagulation, flocculation, sedimentation and filtration. Chlorine dioxide may be added during the summer months to help remove iron and manganese. Lime and phosphate are added to inhibit corrosion of plumbing. Chlorine is added for disinfection and to maintain the quality of water as it travels throughout the piping network to your home. Fluoride is added to reduce the formation of cavities, as required by State of Connecticut Public Health regulations.

Source Water Assessment

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

Sources of Drinking Water Contaminants

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 radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Listed below are some examples of such contaminants:

- Microbiological contaminants such as viruses and bacteria, which may come from septic systems, agriculture and livestock operations, and wildlife;
- Inorganic contaminants, such as salts and metals that can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, or farming;
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses;
- Organic chemicals, including synthetic and volatile organic compounds which are byproducts of industrial processes, and can come from gas stations, urban storm water runoff, and septic systems;
- Radioactive contaminants that can be naturally occurring.

How You Can Help to Protect Your Source Water Quality

- ❖ Don't flush medications or over-the-counter products down the toilet or sink. Put them in the trash (and not in the recycling bin). For information on safely disposing them in the trash, visit the CT DEEP's website at www.ct.gov/deep. Under Environmental Quality, click on Pollution Prevention; and then Proper Medication Disposal.
- ❖ **Go Green** - Seek alternatives to caustic household cleaners, pesticides, paint removers, and other products containing toxic chemicals. Go to the CT DEEP's website at www.ct.gov/deep. Under Environmental Quality, click on Pollution Prevention; and then Reducing Toxic Products in the Home. Alternative "recipes" (as well as other helpful tips) are given for many toxic products commonly used in the house and garden.
- ❖ Properly dispose of paints, motor oil, pesticides and other hazardous household waste by bringing it to a household hazardous waste collection site. Visit scrrra.org and under Discover SCRRRA (left column), and click on "Household Hazardous Waste" for a complete list of the Regional Household Hazardous Waste Days Schedule in 2018.

Health Effects Information

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 EPA's Safe Drinking Water Hotline (800-426-4791).

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/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).

Important Information about Lead and Copper in Drinking Water

Due to Groton Utilities' watershed protection measures and their active program to control corrosion in water pipes, our water system has remained in compliance with drinking water regulations. However, it is possible that lead or copper levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. 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 water containing lead in excess of the action level over many years could develop kidney problems or high blood pressure.

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.

Lead and copper 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. Following are steps that can be taken to minimize potential exposure to lead:

- ✓ **If the water has sat unused in your pipes for more than several hours, flush your cold water tap for a few minutes (or until it gets cold) before using for drinking, cooking or making baby formula.**
- ✓ **Use cold water (not water from the hot water tap) for drinking, cooking, making formula, hot cocoa, tea, instant foods, etc.**
- ✓ **Periodically remove and clean the aerator or screen from the end of each faucet and rinse to remove any debris.**
- ✓ **Ensure that any updates to household plumbing are done with lead-free solder and fixtures.**

If you are concerned about lead or copper 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 (800-426-4791) or at www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water.

Corrosion Control in Drinking Water

As one of the many things Groton Utilities does to provide us with the best drinking water quality possible, they add a corrosion inhibitor to the drinking water. The purpose is to keep lead and copper in one's household plumbing from dissolving into the tap water when water is not in use (overnight, or during other extended periods of non-use). They use a blended phosphate—an ortho phosphate and a polyphosphate: the ortho phosphate keeps the lead and copper from coming into solution in household piping, and the poly phosphate acts to bind with minerals such as iron and manganese that may be in the water, to prevent “red water” issues. To be clear, there is no lead or copper in the water coming from Groton's reservoirs, the purpose of the corrosion inhibitor is just to restrict the natural tendency of water (known as the “universal solvent”) to dissolve metal plumbing materials into the tap water. As with all the treatment in use at their water treatment plant, this blended phosphate is approved specifically for use in potable water, in a dosage approved by the Connecticut Department of Public Health, Drinking Water Section.

What about sodium?

Sodium is an element that is naturally occurring and is essential for life. Sodium is naturally present in Groton's reservoirs, and in some of their reservoirs it is at a higher level than others, possibly due to stormwater runoff from the roads. At various times, ranging from the spring to the fall, it is advantageous to blend water from one of our reservoirs into our main reservoir to improve certain aspects of the water quality. Unfortunately, that reservoir is one which has a higher sodium content and this will sometimes cause our tap water to have sodium in excess of the 28 mg/L notification level (our maximum level last year was 25 mg/L). For most of our customers, this will not be an issue, but for customers who have been put on a very restrictive diet (less than 500 mg of sodium per day) this may be something they will want to discuss with their doctor. To put things in perspective, 25 mg/L of sodium is equal to 6 mg of sodium in an 8 ounce glass of water; in comparison, an 8 ounce glass of 1 % milk contains 104 mg of sodium. So if you have any concerns about sodium in drinking water please consult your physician, but for most people on a normal (i.e., non-sodium restricted) diet it would not be of concern.

Water Conservation Tips

- ❖ Fix leaky faucets, showerheads and toilets.
- ❖ Consider replacing older toilets with a WaterSense labeled high efficiency toilet. These must pass rigorous performance criteria and can't use more than 1.28 gallons per flush in order to earn the WaterSense label. (Older toilets can use up to four times more water than WaterSense toilets).
- ❖ Install aerators on your faucets. They reduce the flow and use air to maintain good water pressure. (and remember to periodically remove and clean faucet aerators because they can trap debris).
- ❖ Take shorter showers. High efficiency WaterSense showerheads automatically use less water without compromising the quality of your shower.
- ❖ Consider replacing your old washing machine with a high-efficiency Energy Star labeled model, which uses up to 50% less water and electricity.
- ❖ Run the dishwasher and washing machine only when full.
- ❖ Don't over-water your lawn or garden - use a timer, and water early in the morning or at night to avoid excess evaporation.
- ❖ Clean your sidewalk or driveway with a broom instead of a hose.



Unregulated Contaminant Monitoring Rule (UCMR4) Results

In 2019 Groton Utilities began 4 quarters of monitoring required for this drinking water regulation. We were required to test for 6 different groups of analytes, some in our Point of Entry (a sample faucet after full treatment, but before our first customer), some in Poquonnock Reservoir, and some in the distribution system. Two items, Total Organic Carbon (TOC) and 5 Haloacetic Acids (HAA5) are currently regulated, the remainder are unregulated, meaning there are no regulatory standards for any of these contaminants. The purpose of this monitoring is to assist the EPA in determining the occurrence of these contaminants in U.S. water supplies and whether or not to establish standards. Below are the results of this monitoring:

<i>Groton Utilities UCMR4 data</i>				
(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	HAA5	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

Noank 2019 Annual Water Quality Data

Regulated Contaminants

Highest Level Allowed		Noank Water			Major Source	Met Standards?
Parameter	MCL	MCLG	Highest Detected Level	Range (a)		
Barium (ppm)	2	2	0.009	-----	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits Stormwater runoff containing road salt, erosion of natural deposits. Erosion of natural deposits; water additive which promotes strong teeth Runoff from fertilizer use, leachate from septic tanks; sewage, erosion of natural deposits.	YES
Chloride (ppm)	250	N/A	44	17 - 44		YES
Fluoride (ppm)	4	4	0.94	0.23 - 0.94		YES
Nitrate (ppm)	10	10	0.16	0.02 - 0.16		YES
Parameter	TT	MCLG	Lowest RAA	Range	Major Source	
Total Organic Carbon (N/A)	Removal ratio must be >=1	N/A	1.6	1.4 - 1.9	Naturally present in the environment.	YES
Parameter	TT	MCLG	Highest detected level	Lowest % of samples meeting limit	Major Source	
Turbidity (NTU) (b)	95% of samples must be <=0.3 NTU	N/A	0.36	99%	Soil runoff	YES
Parameter	Action Level	MCLG	90th percentile (e)	# of sites above AL	Major Source	
Lead (ppb)	15	0	2.6	0	Corrosion of household plumbing systems; erosion of natural deposits Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	YES
Copper (ppm)	1.3	1.3	0.08	0		YES
Parameter	MCL	MCLG	Highest LRAA (d)	Range	Major Source	
Haloacetic Acids (ppb)	60	N/A	27.9	18.4 - 45.9	By-product of drinking water disinfection	YES
Total Trihalomethanes (ppb)	80	N/A	67.4	37.7 - 108.0	By-product of drinking water disinfection	YES
Parameter	MRDL	MRDLG	Average	Range	Major Source	
Chlorine (ppm)	4	4	1.05	0.31 - 1.71	Water additive used to control microbes	YES
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 (e)

Parameter	MCL	MCLG	Average	Range	Major Source	Met Standards?
Sodium (ppm)	Notification level = 28	None	20	17 - 25	Stormwater runoff containing road salt, erosion of natural deposits.	N/A
Sulfate (ppm)	None	None	6	4 - 7	Naturally occurring	N/A

Notes

Only detected contaminants are listed in this table. Analyses were performed in 2019 unless noted otherwise.

(a) A range of values is not presented for those parameters which were measured only once in 2019.

(b) Turbidity is a measure of the cloudiness of water and is a good indicator of the effectiveness of Groton's filtration system. Turbidity cannot exceed 1 NTU.

(c) Of the 21 homes tested in 2019, 90% had lead levels below 2.6 ppb and 90% had copper below 0.08 ppm; since these values are below the respective Action Levels, our system is in compliance. Next analyses due in 2020.

(d) Highest Locational Running Annual Average (LRAA) of samples taken in the distribution system. Values in the range are individual sample results.

(e) EPA has not established drinking water standards for unregulated contaminants. We are required to monitor for them to assist the EPA in their occurrence and whether future regulation is warranted.

Key to Table

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

MCL = Maximum Contaminant Level: the highest level of a contaminant that is allowed in drinking water.

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. (MCLs are set as close to the MCLGs as feasible using best available technology.)

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.

N/A = Not Applicable

NTU = Nephelometric Turbidity Units

< = Less than

> = Greater than

ppm = parts per million

ppb = parts per billion

pCi/L = picoCuries per Liter

P/A = presence/absence

ND = Not detected

RAA = Running Annual Average

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