



# NAVAL SUBMARINE BASE NEW LONDON, CONNECTICUT (SUBASENLON, CT)



## WATER QUALITY REPORT – YEAR 2021



[This SUBASENLON Consumer Confidence Report \(CCR\) is a snapshot of the quality of your drinking water in 2021. The purpose of this annual report is to advise consumers of where their water comes from, provide water quality data, and provide greater understanding of drinking water that is delivered to SUBASENLON residents and staff.](#)

### MESSAGE COMMANDING OFFICER Naval Submarine Base New London (SUBASENLON)

*Dear SUBASENLON drinking water consumers,*

SUBASENLON Public Works Department (PWD) has proudly served safe and healthy drinking water to the SUBASENLON Main Base and all base housing areas for years. The men and women of SUBASENLON PWD Utilities Branch and Environmental Division are dedicated to delivering clean water to the residents and workers of SUBASENLON.

Our work protects public health and provides fire protection, so you can focus on your family, work, and community. Our Environmental Division staff are focused on ensuring water quality that meets all Navy, federal, and state regulatory requirements. Skilled scientists at our state-certified contract laboratories support SUBASENLON in maintaining this level of excellence.

We take great pride in delivering safe, seamless, and satisfying water services and never take for granted the importance of what we do. Thank you for the opportunity to deliver to you the one essential we cannot live without.

*Sincerely,  
Captain Kenneth M. Curtin Jr.  
Commanding Officer*



### Important **HEALTH** Information from the United States Environmental Protection Agency (EPA)

Drinking water, including bottled water, may contain small amounts of some contaminants; this doesn't necessarily mean the water poses a health risk.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons; such as those with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with human immunodeficiency virus/acquired immunodeficiency syndrome 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/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the [EPA Safe Drinking Water Hotline \(800-426-4791\)](https://www.epa.gov/ground-water-and-drinking-water) or at: <https://www.epa.gov/ground-water-and-drinking-water>

LEARN MORE ABOUT YOUR DRINKING WATER



For information regarding **DRINKING WATER** analysis or **DRINKING WATER** sampling results, please call Richard Massad at the SUBASENLON PWD Environmental Division at 860-694-5140.



For information regarding the **DRINKING WATER** provided to Beacon Point Homes, please call Beacon Point at 860-446-5934 or 860-446-5913.



For information regarding **DRINKING WATER** source and/or treatment, please call Groton Utilities (GU) at 860-446-4000 or visit <https://grotonutilities.com/our-company/water-operations/>.



**DOES MY DRINKING WATER MEET STANDARDS?** SUBASENLON water systems are tested to assess for compliance with standards regarding bacteriological contaminants, disinfectant levels, disinfection byproducts, and metals. Test results for 2021 demonstrated compliance with these standards with the exception of four (4) tests that indicated slightly elevated levels of total trihalomethanes (TTHM) at the Main Base, Nautilus Park, and Trident Park systems, resulting in TTHM Maximum Contaminant Level (MCL) exceedances for those systems. The TTHM exceedances have been addressed and all systems currently meet EPA standards. SUBASENLON's response to all exceedances are documented on the system-specific water quality data sheets included in this CCR.

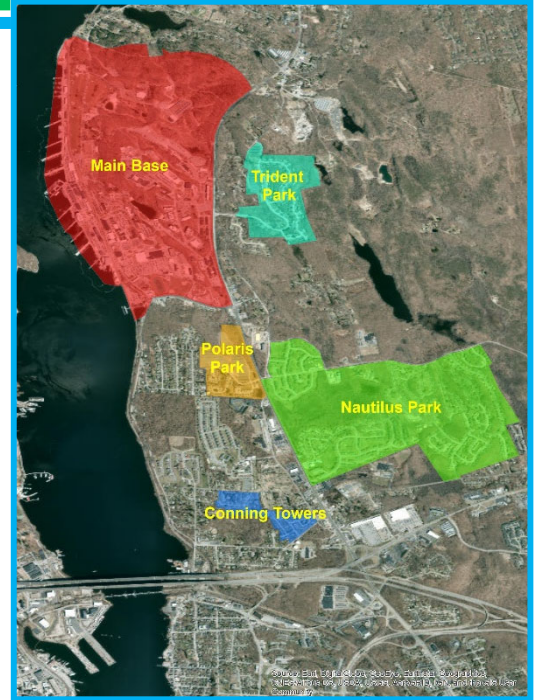
**WHAT TESTING HAS BEEN DONE ON MY DRINKING WATER?** SUBASENLON works with GU to ensure that your tap water meets all EPA and CT Department of Public Health (CTDPH) drinking water health standards. The GU 2021 CCR is available online at [https://grotonutilities.com/download/water/water\\_quality\\_reports/2021.pdf](https://grotonutilities.com/download/water/water_quality_reports/2021.pdf). The GU report and this Navy report show the results of testing performed at the GU water treatment plant (WTP) and in the SUBASENLON distribution system. The SUBASENLON PWD Environmental Division is committed to providing drinking water consumers with up-to-date information to ensure that all consumers can make informed decisions with regard to **DRINKING WATER** use.



# EPA-REQUIRED INFORMATIONAL COMPONENTS

## SUBASENLON WATER SYSTEM

Water is conveyed to the Main Base and most of the SUBASENLON housing areas (Nautilus Park, Conning Towers, Trident Park, and Polaris Park) by Navy-owned distribution system lines that receive water from the GU system. The SUBASENLON PWD Utilities Branch continues to perform work on the SUBASENLON distribution system as part of an overall maintenance and repair program. There were no major physical changes to the system in 2021.



## WHERE MY WATER COMES FROM

SUBASENLON purchases water from GU. The GU water source is surface water from a series of five reservoirs covering a watershed of 15.6 square miles. Four reservoirs (Morgan, Ledyard, Poheganut, and Smith Lake) flow into the GU terminal reservoir, Poquonnock. GU pumps water from the Poquonnock Reservoir to its WTP, while the other four reservoirs are used to maintain an appropriate water level in the Poquonnock Reservoir. GU also has three deep wells that are used to supplement these reservoirs. GU takes its job of stewardship very seriously and, to that end, has a spill response trailer and a trained team that responds to any threat of contamination that could impact its watershed. GU has recently installed manganese adsorbers at its WTP (to replace chlorine dioxide for manganese reduction) and received CTDPH approval in 2022 to operate these units. GU treats the water at its WTP to protect against pipe corrosion in its distribution system and prevent releases of lead and copper.

## WATER SOURCE ASSESSMENT



The CTDPH performed a one-time assessment of the GU water source reservoir system in 2002. This assessment found that the GU system has a low overall susceptibility to potential sources of contamination. The complete assessment report can be accessed at:

<https://www.dir.ct.gov/dph/Water/SWAP/Community/CT0590011.pdf>

Additional source water assessment information can be obtained from the following websites:

<https://www.epa.gov/sourcewaterprotection>

<https://portal.ct.gov/DPH/Drinking-Water/DWS/Source-Water-Assessment-and-Protection>

<https://grotonutilities.com/our-company/water-operations/source-water-protection-measures/>

All CCRs/water quality assessment reports are available for public review on the Commander, Navy Region Mid-Atlantic (<https://cnrma.cnic.navy.mil/Operations-and-Management/Environmental-Support/Drinking-Water-Quality-Information/>) and GU (<https://grotonutilities.com/our-company/water-operations/>) websites.

## EPA INFORMATION ON LEAD IN DRINKING WATER

Infants and children who drink water containing lead in excess of the action level (AL) 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. **IF PRESENT**, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is caused primarily by materials and components associated with service lines and home plumbing. GU 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 to 60 seconds and placing a hand into the running water until feeling a change in water temperature** before using that 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 **EPA Safe Drinking Water Hotline (800-426-4791)** or at the following EPA website:



<https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water>



## EPA INFORMATION ON **COPPER** IN DRINKING WATER



Copper is an essential nutrient, but some people who drink water containing copper in excess of the AL over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the AL over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor to determine if copper levels in drinking water could present a health risk.

### ARE THERE ANY CONTAMINANTS IN MY DRINKING WATER SOURCE?

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or human activity. The following contaminants *may be present* in source water:



<b>Microbial Contaminants</b>	Such as viruses, bacteria, and protozoa, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife
<b>Inorganic Contaminants</b>	Such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming
<b>Pesticides and Herbicides</b>	Which may come from a variety of sources, such as agriculture, urban stormwater runoff, and residential uses
<b>Organic Chemical Contaminants</b>	Including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production; can also come from gas stations, urban stormwater runoff, and septic systems
<b>Radioactive Contaminants</b>	Which occur naturally or as the result of oil and gas production and mining activities

### WATER IS TREATED TO EPA STANDARDS

In order to ensure that tap water is safe to drink, the EPA prescribes regulations limiting the number of certain contaminants in water provided by public water systems. United States Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. 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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the [EPA Safe Drinking Water Hotline \(800-426-4791\)](tel:800-426-4791).

## INFORMATION ON SUBASENLON DRINKING WATER ACTIVITIES

At SUBASENLON, contaminants could come from the corrosion of distribution system piping and interior building plumbing as the water makes its way from the GU water points of entry through the SUBASENLON distribution system to your tap. Although tests show that drinking water distributed on base and in housing areas met EPA lead and copper standards, some areas of these systems may be more susceptible to lead and copper contamination than others. For this reason, SUBASENLON has taken steps to improve the water quality in these areas (either by flushing water lines and/or replacing piping and/or fixtures).

The SUBASENLON PWD Utilities Branch flushes hydrants on the Main Base and in the housing areas to prevent the buildup of rust (which contains iron and possibly manganese) and sediment in the distribution system. If you notice any discoloration in your water after flushing has occurred, simply run your faucets until the water runs clear. Clean your faucet aerators after flushing. For questions or concerns surrounding hydrant flushing, please call the **Naval Facilities Engineering Systems Command (NAVFAC) Mid-Atlantic Service Center, Facilities Work Reception, at 866-477-7206**, or have your building manager contact the SUBASENLON PWD Facilities Management Specialist to discuss the issue.

The SUBASENLON PWD Environmental Division is committed to providing consumers with up-to-date information to ensure that all consumers can make informed decisions with regard to drinking water use.



The following are drinking water quality data published in the GU 2021 annual water quality report (also known as the CCR). The data reflect water samples taken at the GU WTP (finished water) and in the GU distribution system for contaminants that may be present in their distribution network. Only detected contaminants are listed in these tables. Analyses were performed in 2021 unless otherwise noted. These tables represent the water quality that is provided to the SUBASENLON systems. Safe Drinking Water Act (SDWA) standards and goals, as well as major sources of each parameter, are provided. The last column notes whether the results for each parameter violated or met the SDWA standard.

## GROTON UTILITIES WATER QUALITY - YEAR 2021

PARAMETER	UNITS	MCL	MCLG	TEST RESULTS		MAJOR SOURCES	MET STANDARD?
				HIGHEST DETECTED LEVEL	RANGE		
Barium	ppm	2	2	0.01	N/A <sup>(1)</sup>	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	YES
Chloride	ppm	250	N/A	43	25 - 43	Stormwater runoff containing road salt; erosion of natural deposits	YES
Fluoride	ppm	4	4	0.80	0.52 - 0.80	Erosion of natural deposits; water additive that promotes strong teeth	YES
Nitrate	ppm	10	10	0.05	<0.02 - 0.05	Runoff from fertilizer use; leachate from septic tanks; sewage; erosion of natural deposits	YES
PARAMETER	UNITS	TT	MCLG	TEST RESULTS		MAJOR SOURCE	MET STANDARD?
				LOWEST RAA	RANGE		
TOC	N/A	Removal Ratio Must Be $\geq 1.0$	N/A	1.6	1.2 - 2.1	Naturally present in the environment	YES
PARAMETER	UNITS	TT	MCLG	TEST RESULTS		MAJOR SOURCE	MET STANDARD?
				HIGHEST DETECTED LEVEL	LOWEST % OF SAMPLES MEETING LIMIT		
Turbidity <sup>(2)</sup>	NTU	95% of Samples Must Be $\leq 0.3$	N/A	0.14	100%	Soil runoff	YES

The following table lists unregulated contaminants<sup>(3)</sup>.

PARAMETER	UNITS	MCL	MCLG	TEST RESULTS		MAJOR SOURCE(S)	MET STANDARD?
				AVERAGE	RANGE		
Sodium <sup>(4)</sup>	ppm	Notification Level = 28	None	23	17 - 32	Stormwater runoff containing road salt, erosion of natural deposits	N/A
Sulfate	ppm	None	None	5	4 - 7	Naturally occurring	N/A

**Notes:**

- <sup>(1)</sup> Barium was measured only once in 2021; therefore, a range of test results is not presented.
- <sup>(2)</sup> Turbidity is a measure of the cloudiness of water and is a good indicator of the effectiveness of GU's filtration system. Turbidity cannot exceed 1 NTU.
- <sup>(3)</sup> The EPA has not established drinking water standards for unregulated contaminants. GU is required to monitor for them to assist the EPA in determining their occurrence and whether future regulation is warranted.
- <sup>(4)</sup> When the sodium level in tap water exceeds 28 ppm, customers must be notified either by direct mail or via billing statements; however, this is **not** an MCL violation.

Key to Abbreviations:			
<	Less Than	N/A	Not Applicable
=	Equals	NTU	Nephelometric Turbidity Units
$\leq$	Less Than or Equal to	ppm	parts per million (equal to milligrams per liter)
$\geq$	Greater Than or Equal to	RAA	Running Annual Average
MCL	Maximum Contaminant Level	TOC	Total Organic Carbon
MCLG	Maximum Contaminant Level Goal	TT	Treatment Technique

# 2021 SUBASENLON WATER QUALITY MONITORING PROGRAM

Federal and state regulatory agencies consider the Navy-owned water distribution systems serving the SUBASENLON community extensions of the system operated by GU, not a separate regulated public water system; however, Navy policy requires SUBASENLON to monitor each of its five water distribution systems for contaminants that could be contributed by the water distribution system downstream of its connections to the GU drinking water distribution system. The pipelines providing water to the residents at the Dolphin Gardens and Nautilus Park 3 housing areas north of Gungywamp Road are owned and operated by GU; therefore, GU is responsible for monitoring these distribution systems, not the Navy.

The SUBASENLON Water Monitoring Program includes the following parameters:

## 1. Bacteriological

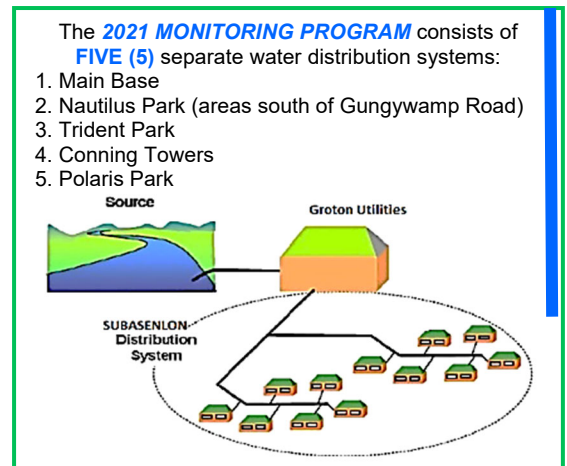
Total coliform monitoring is performed to ensure that water remains free of bacteria as it travels through the distribution system and disinfectant residuals decline. Total coliforms are not pathogenic, but their presence could indicate the potential for pathogenic bacteria. If total coliforms are detected, monitoring for *Escherichia coli* (*E. coli*) is required to determine whether these pathogenic bacteria are present.

## 2. Disinfectants and Disinfection Byproducts

Total residual chlorine (TRC) monitoring is performed to ensure that disinfectant levels are not too high, as higher levels would lead to a higher potential for disinfection byproduct formation. An added benefit of disinfectant monitoring is that if disinfectant levels are too low, flushing can be performed to maintain an adequate disinfectant residual for the prevention of bacteriological contamination. Total trihalomethanes (TTHM) and haloacetic acids (HAA5) monitoring is performed to ensure that elevated levels of these disinfection byproducts do not form as water travels through the distribution system.

## 3. Lead and Copper

Lead and copper monitoring is performed to ensure that levels of these metals do not increase above standards as water travels through the distribution system and building plumbing systems, because lead and copper have the potential to leach from plumbing materials into drinking water.



# SUBASENLON PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) WATER QUALITY ANALYSES



**What are PFAS, and where do they come from?** PFAS are a group of thousands of man-made chemicals. PFAS have been used in a variety of industries and consumer products around the globe, including in the United States, since the 1940s. PFAS have been used to make coatings and products that are used as oil and water repellents for carpets, clothing, paper packaging for food, and cookware. They are also contained in some foams (e.g., aqueous film-forming foam) used for fighting petroleum fires at airfields and in industrial fire suppression processes because they rapidly extinguish fires, saving lives and protecting property. PFAS chemicals are persistent in the environment and some are persistent in the human body, meaning that they do not break down and can accumulate over time.

**Is there a regulation for PFAS in drinking water?** There is currently no established federal water quality regulation for any PFAS compounds. In May 2016, the EPA established a health advisory (HA) level at 70 parts per trillion (ppt) for individual or combined concentrations of perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). Both chemicals are types of PFAS. Out of an abundance of caution for your safety, the United States Department of Defense's (DoD) PFAS testing and response actions go beyond current EPA SDWA requirements. In 2020, the DoD promulgated a policy to monitor drinking water for PFAS at all service owned and operated water systems at a minimum of every three years. The EPA's HA states that if water system sampling results confirm that drinking water contains PFOA and PFOS at individual or combined concentrations greater than 70 ppt, those systems should quickly undertake additional sampling to assess the level, scope, and localized source of contamination to inform next steps.

**Has SUBASENLON tested its water for PFAS?** Yes. On 3 November 2021, samples were collected from Building 135 (PWD). We are pleased to report that drinking water testing results were **below** the Method Reporting Limit (MRL) for all 18 PFAS compounds covered by the sampling method, including PFOA and PFOS. This means that PFAS were not detected in your water system. In accordance with DoD policy, the water system will be resampled every three years for your continued protection.

# SUBASENLON WATER QUALITY DATA - YEAR 2021



The following [Water Quality](#) test results are provided by SUBASENLON. Tables of all drinking water monitoring results obtained under the water monitoring program for each of the five separate SUBASENLON systems are provided below.

## SUBASENLON WATER QUALITY DATA - YEAR 2021

**MAIN BASE**

SUBASENLON MAIN BASE - DETECTED REGULATED CONTAMINANTS								
BACTERIOLOGICAL								
PARAMETER	UNITS	DETECTION LEVEL		MCL <sup>(1)</sup>	MCLG <sup>(2)</sup>	MET STANDARD? <sup>(3)</sup>	MAJOR SOURCE IN DRINKING WATER	
Total Coliforms	P/A	Absent		1 present	0	See note <sup>(3a)</sup>	Naturally present in the environment	
DISINFECTANTS AND DISINFECTION BYPRODUCTS								
PARAMETER	UNITS	DETECTION LEVEL		MCL <sup>(1)</sup> OR MRDL <sup>(6)</sup>	MCLG <sup>(2)</sup> OR MRDLG <sup>(7)</sup>	MET STANDARD? <sup>(3)</sup>	MAJOR SOURCE IN DRINKING WATER	
		HIGHEST LRAA OR RAA <sup>(4)</sup>	RANGE <sup>(5)</sup>					
TTHM	µg/L	85.2	64.4 - 109	80	N/A	NO <sup>(3b)</sup>	Byproduct of drinking water chlorination	
HAA5	µg/L	26.9	18.2 - 39.6	60	N/A	See note <sup>(3c)</sup>	Byproduct of drinking water chlorination	
TRC	mg/L	0.98	<0.02 - 1.73	4	4	See note <sup>(3d)</sup>	Drinking water disinfectant	
LEAD AND COPPER								
PARAMETER	UNITS	DETECTION LEVEL			AL <sup>(8)</sup>	MCLG <sup>(2)</sup>	MET STANDARD? <sup>(3)</sup>	MAJOR SOURCE IN DRINKING WATER
		90th PERCENTILE	SITES ABOVE AL	RANGE <sup>(5)</sup>				
Copper	mg/L	0.125	0	0.0185 - 0.683	1.3	1.3	YES	Corrosion of pipes; erosion of natural deposits
Lead	µg/L	2.9	0	<1.0 - 3.3	15	0	YES	Corrosion of household plumbing systems; erosion of natural deposits

**Notes:**

<sup>(1)</sup> Maximum Contaminant Level, the highest level of a contaminant that is allowed in drinking water

<sup>(2)</sup> Maximum Contaminant Level Goal, a non-enforceable standard

<sup>(3)</sup> Indicates whether the drinking water monitoring results meet the associated SDWA water quality standards - In some cases, the SUBASENLON PWD Environmental Division was unable to collect sufficient samples to satisfy the requirements of the SUBASENLON Drinking Water Monitoring Program due to access limitations, outages, and facility closures.

<sup>(3a)</sup> The monitoring program requires 10 total coliform samples (and corresponding TRC samples) each month; however, <10 samples were collected in January (9), March (8), July (9), and October (9). Of the 115 samples collected, none were positive for total coliforms.

<sup>(3b)</sup> The monitoring program requires quarterly TTHM samples. The TTHM MCL was exceeded during the 3rd and 4th quarters. Initial response included public notification and weekly system flushing in the impacted area. Subsequently, additional corrective actions were implemented, including in-person tenant communication, an enhanced weekly flushing program, installing point-of-use filters on water coolers, purchasing potable water upon tenant request, and initiating hydraulic model investigations. These corrective actions continued into 2022 until additional sampling indicated that the system was back in compliance (verified by monitoring results during the 1st quarter of 2022).

<sup>(3c)</sup> The monitoring program requires quarterly HAA5 samples. One (1) of 4 quarterly HAA5 samples for 2020 (4th quarter) was not collected (impacting quarterly LRAA calculations for 2021). All required quarterly HAA5 samples for 2021 were collected.

<sup>(3d)</sup> TRC samples are collected at the same times/locations as total coliform samples. In addition to the limited number of samples collected in 2021 (discussed above in Note 3a), <10 samples were collected in April (9), July (8), September (8), October (9), November (8), and December (8) of 2020 (impacting quarterly RAA calculations for 2021).

<sup>(4)</sup> The values indicated for TTHM and HAA5 were the highest quarterly locational RAA (LRAA) values calculated at each of the sample sites in 2021. The highest level indicated for TRC was based on the RAA calculated for each of the 4 quarters in 2021. The LRAA and RAA are the values that are compared against the MCLs for compliance.

<sup>(5)</sup> The highest and the lowest values found in the individual samples

<sup>(6)</sup> Maximum Residual Disinfectant Level, the highest level of a disinfectant allowed in drinking water (for TRC)

<sup>(7)</sup> Maximum Residual Disinfectant Level Goal, the level of drinking water disinfectant below which there is no known or expected health risk (for TRC)

<sup>(8)</sup> The highest level at which a violation occurs when exceeded by the 90th percentile result



**NAUTILUS PARK**

**SUBASENLON WATER QUALITY DATA - YEAR 2021**

SUBASENLON NAUTILUS PARK - DETECTED REGULATED CONTAMINANTS								
BACTERIOLOGICAL								
PARAMETER	UNITS	DETECTION LEVEL		MCL <sup>(1)</sup>	MCLG <sup>(2)</sup>	MET STANDARD? <sup>(3)</sup>	MAJOR SOURCE IN DRINKING WATER	
Total Coliforms	P/A	Absent		1 present	0	See note <sup>(3a)</sup>	Naturally present in the environment	
DISINFECTANTS AND DISINFECTION BYPRODUCTS								
PARAMETER	UNITS	DETECTION LEVEL		MCL <sup>(1)</sup> OR MRDL <sup>(6)</sup>	MCLG <sup>(2)</sup> OR MRDLG <sup>(7)</sup>	MET STANDARD? <sup>(3)</sup>	MAJOR SOURCE IN DRINKING WATER	
		HIGHEST LRAA OR RAA <sup>(4)</sup>	RANGE <sup>(5)</sup>					
TTHM	µg/L	84.2	31.4 - 114	80	N/A	NO <sup>(3b)</sup>	Byproduct of drinking water chlorination	
HAA5	µg/L	40.5	40.5	60	N/A	See note <sup>(3c)</sup>	Byproduct of drinking water chlorination	
TRC	mg/L	1.19	0.03 - 1.64	4	4	See note <sup>(3d)</sup>	Drinking water disinfectant	
LEAD AND COPPER								
PARAMETER	UNITS	DETECTION LEVEL			AL <sup>(8)</sup>	MCLG <sup>(2)</sup>	MET STANDARD? <sup>(3)</sup>	MAJOR SOURCE IN DRINKING WATER
		90th PERCENTILE	SITES ABOVE AL	RANGE <sup>(5)</sup>				
Copper	mg/L	0.036	0	0.004 - 0.052	1.3	1.3	YES	Corrosion of pipes; erosion of natural deposits
Lead	µg/L	<1.0	0	<1.0	15	0	YES	Corrosion of household plumbing systems; erosion of natural deposits

**Notes:**

<sup>(1)</sup> Maximum Contaminant Level, the highest level of a contaminant that is allowed in drinking water

<sup>(2)</sup> Maximum Contaminant Level Goal, a non-enforceable standard

<sup>(3)</sup> Indicates whether the drinking water monitoring results meet the associated SDWA water quality standards - In some cases, the SUBASENLON PWD Environmental Division was unable to collect sufficient samples to satisfy the requirements of the SUBASENLON Drinking Water Monitoring Program due to access limitations with some housing units.

<sup>(a)</sup> The monitoring program requires 3 total coliform samples (and corresponding TRC samples) each month; however, <3 samples were collected in all 12 months except October: January (2), February (2), March (0), April (2), May (0), June (1), July (0), August (0), September (2), October (3), November (2), and December (2). Of the 16 samples collected in 2021, none were positive for total coliforms.

<sup>(b)</sup> The monitoring program requires quarterly TTHM samples. No TTHM sample was collected in the 2nd quarter of 2020 (impacting quarterly LRAA calculations for 2021). Due to access limitations at the designated sampling site, TTHM samples were collected from an alternative location (Youth Center) not identified in the system monitoring plan from the 3rd quarter of 2020 through the 2nd quarter of 2021. Responses to an MCL exceedance during the 2nd quarter of 2021 at this location included public notification and weekly system flushing. No TTHM sample was collected during the 3rd quarter of 2021. TTHM samples resumed at the system monitoring plan-designated location (77 Magnolia Drive) during the 4th quarter of 2021, and results showed that the system was back in compliance.

<sup>(c)</sup> The monitoring program requires quarterly HAA5 samples. No HAA5 samples were collected in the 2nd and 4th quarters of 2020 (impacting quarterly LRAA calculations for 2021). Only 1 HAA5 sample was collected in 2021, during the 4th quarter; therefore, a range of test results is not presented.

<sup>(d)</sup> TRC samples are collected at the same time/locations as total coliform samples. In addition to the limited number of samples collected in 2021 (discussed above in Note 3a), <3 samples were collected in every month of 2020 (impacting quarterly RAA calculations for 2021).

<sup>(4)</sup> The highest levels indicated for TTHM and HAA5 were the LRAA found at each of the sample sites for each of the four quarters in 2021. The highest level found for TRC was based on the RAA calculated for each of the four quarters in 2021. The LRAA and RAA are the values that are compared against the MCLs for compliance.

<sup>(5)</sup> The highest and the lowest values found in the individual samples

<sup>(6)</sup> Maximum Residual Disinfectant Level, the highest level of a disinfectant allowed in drinking water (for TRC)

<sup>(7)</sup> Maximum Residual Disinfectant Level Goal, the level of drinking water disinfectant below which there is no known or expected health risk (for TRC)

<sup>(8)</sup> The highest level at which a violation occurs when exceeded by the 90th percentile result



**TRIDENT PARK**

**SUBASENLON WATER QUALITY DATA - YEAR 2021**

**SUBASENLON TRIDENT PARK - DETECTED REGULATED CONTAMINANTS**

BACTERIOLOGICAL								
PARAMETER	UNITS	DETECTION LEVEL		MCL <sup>(1)</sup>	MCLG <sup>(2)</sup>	MET STANDARD? <sup>(3)</sup>	MAJOR SOURCE IN DRINKING WATER	
Total Coliforms	P/A	Absent		1 present	0	See note <sup>(3a)</sup>	Naturally present in the environment	
DISINFECTANTS AND DISINFECTION BYPRODUCTS								
PARAMETER	UNITS	DETECTION LEVEL		MCL <sup>(1)</sup> OR MRDL <sup>(6)</sup>	MCLG <sup>(2)</sup> OR MRDLG <sup>(7)</sup>	MET STANDARD? <sup>(3)</sup>	MAJOR SOURCE IN DRINKING WATER	
		HIGHEST LRAA OR RAA <sup>(4)</sup>	RANGE <sup>(5)</sup>					
TTHM	µg/L	84.9	48.0 - 84.9	80	N/A	NO <sup>(3b)</sup>	Byproduct of drinking water chlorination	
HAA5	µg/L	40.7	No data	60	N/A	See note <sup>(3c)</sup>	Byproduct of drinking water chlorination	
TRC	mg/L	1.38	0.93 - 1.41	4	4	See note <sup>(3d)</sup>	Drinking water disinfectant	
LEAD AND COPPER								
PARAMETER	UNITS	DETECTION LEVEL			AL <sup>(8)</sup>	MCLG <sup>(2)</sup>	MET STANDARD? <sup>(3)</sup>	MAJOR SOURCE IN DRINKING WATER
		90th PERCENTILE	SITES ABOVE AL	RANGE <sup>(5)</sup>				
Copper	mg/L	0.0545 (spring) Insufficient data (fall)	1 (spring) <sup>(9)</sup> 0 (fall)	0.0063 - 2.03 (spring) 0.0081 - 0.0450 (fall)	1.3	1.3	See note <sup>(3e)</sup>	Corrosion of pipes; erosion of natural deposits
Lead	µg/L	0.9 (spring) Insufficient data (fall)	1 (spring) <sup>(9)</sup> 0 (fall)	<1.0 - 37.3 (spring) <1.0 (fall)	15	0	See note <sup>(3e)</sup>	Corrosion of household plumbing systems; erosion of natural deposits

**Notes:**

<sup>(1)</sup> Maximum Contaminant Level, the highest level of a contaminant that is allowed in drinking water

<sup>(2)</sup> Maximum Contaminant Level Goal, a non-enforceable standard

<sup>(3)</sup> Indicates whether the drinking water monitoring results meet the associated SDWA water quality standards - In some cases, the SUBASENLON PWD Environmental Division was unable to collect sufficient samples to satisfy the requirements of the SUBASENLON Drinking Water Monitoring Program due to access limitations with some housing units.

<sup>(a)</sup> The monitoring program requires 1 total coliform sample (and corresponding TRC sample) each month; however, no samples were collected January through September. Of the 3 samples collected in October, November, and December, none were positive for total coliforms.

<sup>(b)</sup> The monitoring program requires quarterly TTHM samples. Only 1 TTHM sample was collected in 2020, during the 3rd quarter (impacting quarterly LRAA calculations for 2021). No TTHM samples were collected during the 1st and 2nd quarters of 2021. Analysis of the sample collected in the 3rd quarter of 2021 indicated exceedance of the TTHM MCL. Although the 4th quarter sample was below the MCL, due to access limitations at the designated sampling site, the TTHM sample was collected from an alternate location not identified in the system monitoring plan during the 4th quarter of 2021. TTHM samples collected at the system monitoring plan-designated location (54 Michigan Drive) during the 2nd quarter of 2022 showed that the system was back in compliance.

<sup>(c)</sup> The monitoring program requires quarterly HAA5 samples. Only 1 HAA5 sample was collected in 2020, during the 3rd quarter. No HAA5 samples were collected in 2021; therefore, an LRAA could only be determined for the first two quarters of 2021 and is presented in the table.

<sup>(d)</sup> TRC samples are collected at the same time/locations as total coliform samples. In addition to the limited number of samples collected in 2021 (discussed above in Note 3a), no samples were collected in April, May, June, July, August, October, November, and December of 2020 (impacting quarterly RAA calculations for 2021).

<sup>(e)</sup> The monitoring program requires 20 lead and copper samples semiannually (events designated as "spring" and "fall"); however, only 12 samples were collected during the second (fall) semiannual event.

<sup>(4)</sup> The highest levels indicated for TTHM and HAA5 were the LRAA found at each of the sample sites for each of the four quarters in 2021. The highest level found for TRC was based on the RAA calculated for each of the four quarters in 2021. The LRAA and RAA are the values that are compared against the MCLs for compliance.

<sup>(5)</sup> The highest and the lowest values found in the individual samples

<sup>(6)</sup> Maximum Residual Disinfectant Level, the highest level of a disinfectant allowed in drinking water (for TRC)

<sup>(7)</sup> Maximum Residual Disinfectant Level Goal, the level of drinking water disinfectant below which there is no known or expected health risk (for TRC)

<sup>(8)</sup> The highest level at which a violation occurs when exceeded by the 90th percentile result

<sup>(9)</sup> A sample collected on 21 April 2021 at 36 Georgia Street exceeded the copper and lead ALs (2.03 mg/L copper; 37.3 µg/L lead). The location was resampled on 5 May 2021, and both repeat samples, first-draw and one-minute flush, contained copper and lead levels below the ALs (0.0312 mg/L copper, <1.0 µg/L lead [first-draw]; 0.0089 mg/L copper, <1.0 µg/L lead [one-minute flush]).





# SUBASENLON WATER QUALITY DATA - YEAR 2021

## CONNING TOWERS

### SUBASENLON CONNING TOWERS - DETECTED REGULATED CONTAMINANTS

BACTERIOLOGICAL								
PARAMETER	UNITS	DETECTION LEVEL			MCL <sup>(1)</sup>	MCLG <sup>(2)</sup>	MET STANDARD? <sup>(3)</sup>	MAJOR SOURCE IN DRINKING WATER
Total Coliforms	P/A	Absent			1 present	0	See note <sup>(3a)</sup>	Naturally present in the environment
DISINFECTANTS AND DISINFECTION BYPRODUCTS								
PARAMETER	UNITS	DETECTION LEVEL		MCL <sup>(1)</sup> OR MRDL <sup>(6)</sup>	MCLG <sup>(2)</sup> OR MRDLG <sup>(7)</sup>	MET STANDARD? <sup>(3)</sup>	MAJOR SOURCE IN DRINKING WATER	
		ANNUAL RESULT OR HIGHEST RAA <sup>(4)</sup>	RANGE <sup>(5)</sup>					
TTHM	µg/L	50.0	50.0	80	N/A	See note <sup>(3b)</sup>	Byproduct of drinking water chlorination	
HAA5	µg/L	45.5	45.5	60	N/A	See note <sup>(3b)</sup>	Byproduct of drinking water chlorination	
TRC	mg/L	1.53	1.07 - 1.59	4	4	See note <sup>(3c)</sup>	Drinking water disinfectant	
LEAD AND COPPER								
PARAMETER	UNITS	DETECTION LEVEL			AL <sup>(8)</sup>	MCLG <sup>(2)</sup>	MET STANDARD? <sup>(3)</sup>	MAJOR SOURCE IN DRINKING WATER
		90th PERCENTILE	SITES ABOVE AL	RANGE <sup>(5)</sup>				
Copper	mg/L	Insufficient data	0	0.0557 - 0.0715	1.3	1.3	See note <sup>(3d)</sup>	Corrosion of pipes; erosion of natural deposits
Lead	µg/L	Insufficient data	1 <sup>(9)</sup>	<1.0 - 286	15	0	See note <sup>(3d)</sup>	Corrosion of household plumbing systems; erosion of natural deposits

**Notes:**

<sup>(1)</sup> Maximum Contaminant Level, the highest level of a contaminant that is allowed in drinking water

<sup>(2)</sup> Maximum Contaminant Level Goal, a non-enforceable standard

<sup>(3)</sup> Indicates whether the drinking water monitoring results meet the associated SDWA water quality standards - In some cases, the SUBASENLON PWD Environmental Division was unable to collect sufficient samples to satisfy the requirements of the SUBASENLON Drinking Water Monitoring Program due to access limitations with some housing units.

<sup>(3a)</sup> The monitoring program requires 1 total coliform sample (and corresponding TRC sample) each month; however, no samples were collected March through October. Of the 4 samples collected in January, February, November, and December, none were positive for total coliforms.

<sup>(3b)</sup> The monitoring plan requires annual sampling of TTHM and HAA5 during the month of warmest temperature. The TTHM and HAA5 samples were not collected during the month of warmest water temperature (collected in December). Samples were collected to meet the annual sampling requirement and to have some available data to gauge system compliance. All results were below MCLs.

<sup>(3c)</sup> TRC samples are collected at the same time/locations as total coliform samples. In addition to the limited number of samples collected in 2021 (discussed above in Note 3a), no samples were collected in April, May, June, August, October, November, and December of 2020 (impacting quarterly RAA calculations for 2021).

<sup>(3d)</sup> The monitoring program requires 5 lead and copper samples annually; however, only 4 samples were collected.

<sup>(4)</sup> The highest level found for TRC was based on the RAA calculated for each of the four quarters in 2021. The annual result and RAA are the values that are compared against the MCLs for compliance.

<sup>(5)</sup> The highest and the lowest values found in the individual samples

<sup>(6)</sup> Maximum Residual Disinfectant Level, the highest level of a disinfectant allowed in drinking water (for TRC)

<sup>(7)</sup> Maximum Residual Disinfectant Level Goal, the level of drinking water disinfectant below which there is no known or expected health risk (for TRC)

<sup>(8)</sup> The highest level at which a violation occurs when exceeded by the 90th percentile result

<sup>(9)</sup> A sample collected on 15 September 2021 at 160 Lestertown Road exceeded the lead AL (286 µg/L). The location was resampled on 28 September 2021, and both repeat samples, first-draw and one-minute flush, contained lead levels below the AL (1.3 µg/L [first-draw]; <1.0 µg/L [one-minute flush]).



**POLARIS PARK**

**SUBASENLON WATER QUALITY DATA - YEAR 2021**

SUBASENLON POLARIS PARK - DETECTED REGULATED CONTAMINANTS								
BACTERIOLOGICAL								
PARAMETER	UNITS	DETECTION LEVEL			MCL <sup>(1)</sup>	MCLG <sup>(2)</sup>	MET STANDARD? <sup>(3)</sup>	MAJOR SOURCE IN DRINKING WATER
Total Coliforms	P/A	Absent			1 present	0	See note <sup>(3a)</sup>	Naturally present in the environment
DISINFECTANTS AND DISINFECTION BYPRODUCTS								
PARAMETER	UNITS	DETECTION LEVEL		MCL <sup>(1)</sup> OR MRDL <sup>(6)</sup>	MCLG <sup>(2)</sup> OR MRDLG <sup>(7)</sup>	MET STANDARD? <sup>(3)</sup>	MAJOR SOURCE IN DRINKING WATER	
		ANNUAL RESULT OR HIGHEST RAA <sup>(4)</sup>	RANGE <sup>(5)</sup>					
TTHM	µg/L	53.7	53.7	80	N/A	See note <sup>(3b)</sup>	Byproduct of drinking water chlorination	
HAA5	µg/L	27.0	27.0	60	N/A	See note <sup>(3b)</sup>	Byproduct of drinking water chlorination	
TRC	mg/L	1.42	1.20 - 1.28	4	4	See note <sup>(3c)</sup>	Drinking water disinfectant	
LEAD AND COPPER								
PARAMETER	UNITS	DETECTION LEVEL			AL <sup>(8)</sup>	MCLG <sup>(2)</sup>	MET STANDARD? <sup>(3)</sup>	MAJOR SOURCE IN DRINKING WATER
		90th PERCENTILE	SITES ABOVE AL	RANGE <sup>(5)</sup>				
Copper	mg/L	0.106 (spring)	0 (spring)	0.0062 - 0.106 (spring)	1.3	1.3	See note <sup>(3d)</sup>	Corrosion of pipes; erosion of natural deposits
		Insufficient data (fall)	0 (fall)	0.0188 - 0.112 (fall)				
Lead	µg/L	<1.0 (spring)	0 (spring)	<1.0 (spring)	15	0	See note <sup>(3d)</sup>	Corrosion of household plumbing systems; erosion of natural deposits
		Insufficient data (fall)	0 (fall)	<1.0 (fall)				

**Notes:**

<sup>(1)</sup> Maximum Contaminant Level, the highest level of a contaminant that is allowed in drinking water

<sup>(2)</sup> Maximum Contaminant Level Goal, a non-enforceable standard

<sup>(3)</sup> Indicates whether the drinking water monitoring results meet the associated SDWA water quality standards - In some cases, the SUBASENLON PWD Environmental Division was unable to collect sufficient samples to satisfy the requirements of the SUBASENLON Drinking Water Monitoring Program due to access limitations with some housing units.

<sup>(a)</sup> The monitoring program requires 1 total coliform sample (and corresponding TRC sample) each month; however, no samples were collected January through October. Of the 2 samples collected in November and December, neither was positive for total coliforms.

<sup>(b)</sup> The monitoring plan requires annual sampling of TTHM and HAA5 during the month of warmest temperature. The TTHM and HAA5 samples were not collected during the month of warmest water temperature (collected in December). Samples were collected to meet the annual sampling requirement and to have some available data to gauge system compliance. All results were below MCLs.

<sup>(c)</sup> TRC samples are collected at the same time/locations as total coliform samples. In addition to the limited number of samples collected in 2021 (discussed above in Note 3a), no samples were collected in April, May, June, July, August, September, November, and December of 2020 (impacting quarterly RAA calculations for 2021).

<sup>(d)</sup> The monitoring program requires 10 lead and copper samples semiannually (events designated as "spring" and "fall"); however, only 4 samples were collected during the second (fall) semiannual event.

<sup>(4)</sup> The highest level found for TRC was based on the RAA calculated for each of the four quarters in 2021. The annual result and RAA are the values that are compared against the MCLs for compliance.

<sup>(5)</sup> The highest and the lowest values found in the individual samples

<sup>(6)</sup> Maximum Residual Disinfectant Level, the highest level of a disinfectant allowed in drinking water (for TRC)

<sup>(7)</sup> Maximum Residual Disinfectant Level Goal, the level of drinking water disinfectant below which there is no known or expected health risk (for TRC)

<sup>(8)</sup> The highest level at which a violation occurs when exceeded by the 90th percentile result

## Table of Definitions

**<** - Less Than

**µg/L** - Micrograms per Liter - Equal to parts per billion - A measurement of the amount of contaminant per unit of water.

**AL** - Action Level - The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow (applicable for the 90th percentile of lead and copper sampling).

**HAA5** - Five Haloacetic Acids - A group of disinfection byproducts formed from the reaction of chlorine compounds used to disinfect water with other naturally occurring chemicals in the water - HAA5 includes bromoacetic acid, chloroacetic acid, dibromoacetic acid, dichloroacetic acid, and trichloroacetic acid.

**LRAA** - Locational Running Annual Average - The average of analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

**MCL** - Maximum Contaminant Level - The highest level of a contaminant that is allowed in drinking water - MCLs are set as close to 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.

**mg/L** - Milligrams per Liter - Equal to parts per million - A measurement of the amount of contaminant per unit of water.

**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

**P/A** - Present or Absent - A testing method for total coliform bacteria and *E. coli* bacteria that indicates the presence or absence of the bacteria in drinking water.

**RAA** - Running Annual Average - The average of analytical results for samples taken during the previous twelve months.

**TRC** - Total Residual Chlorine - The total amount of free and combined chlorine remaining in water after chlorination disinfection has been applied.

**TTHM** - Total Trihalomethanes - A group of disinfection byproducts formed from the reaction of chlorine compounds used to disinfect water with other naturally occurring chemicals in the water - TTHMs include bromodichloromethane, bromoform, chloroform, and dibromochloromethane.

*Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (e.g., people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.*

## YOU ARE IMPORTANT TO US!!



### LEAD IN PRIORITY AREAS (LIPA)

For sensitive areas (e.g., Child Development Center [CDC] and Youth Center), the LIPA program requires additional sampling at each water outlet. SUBASENLON completed its most recent LIPA sampling in December 2018 and corrected 4 identified trouble areas out of 113 outlets. The next sampling event will occur in 2023. All test results must be maintained for 12 years and be made available to the local preventative medicine service/medical treatment facility and all facilities where testing was conducted. Results for SUBASENLON can be found at the following website:

<https://cnrma.navy.afpims.mil/Operations-and-Management/Environmental-Support/Drinking-Water-Qualify-Information/Lead-in-Priority-Area-Sampling-Program/SUBASE-New-London/>

**Naval Submarine Base New London, NAVSUBASE NL, Box 00, Groton, CT 06349-5000**

