



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



WATER QUALITY REPORT – YEAR 2022

MESSAGE COMMANDING OFFICER Naval Submarine Base New London (SUBASENLON)



This SUBASENLON Consumer Confidence Report (CCR) is a snapshot of the quality of your drinking water in 2022. 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.

Dear SUBASENLON drinking water consumers,

SUBASENLON is committed to being a good steward of the environment and a proponent of safe and healthy drinking water. The men and women of the SUBASENLON Public Works Department (PWD) Utilities Branch and Environmental Division are dedicated to delivering clean water to the personnel, residents, and guests of the Main Base and all base public-private venture housing areas. Our work protects public health and provides fire protection. We take great pride in delivering safe, seamless, and satisfying water services, so you can focus on your family, work, and community.

Our Environmental Division staff lead our efforts ensuring water quality that meets all Navy, federal, and state regulatory requirements. Skilled scientists at state-certified contract laboratories support them in maintaining this level of excellence. We never take for granted the importance of what we do, and we thank you for the opportunity to help provide the one essential that 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 \(1-800-426-4791\)](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 2022 demonstrated compliance with these standards.

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 2022 CCR is available online at https://grotonutilities.com/download/water/water_quality_reports/2022.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 2022.



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 constructed a new water filtration plant that includes new Dissolved Air Flotation (DAF)/Granulated Activated Carbon (GAC) filters, manganese contactors, intermediate and high lift pumping systems, water storage tanks, yard piping, utility piping, and renovation of the existing water filtration plant. The plant was commissioned in 2022 after five years of construction. The plant is designed to remove contaminants from the source water in the reservoirs. GU also treats the water at its WTP to maintain disinfectant residual and protect against pipe corrosion in its distribution system to prevent releases of lead and copper.

WATER SOURCE ASSESSMENT



GROTON UTILITIES

The CTDPH performed a one-time assessment of the GU water source reservoir system in 2003. 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.cnrc.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 \(1-800-426-4791\)](https://www.epa.gov/safewater) 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:



Microbial Contaminants	Such as viruses, bacteria, and protozoa, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife
Inorganic Contaminants	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
Pesticides and Herbicides	Which may come from a variety of sources, such as agriculture, urban stormwater runoff, and residential uses
Organic Chemical Contaminants	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
Radioactive Contaminants	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 \(1-800-426-4791\)](tel:1-800-426-4791).

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 2022 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 2022 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 2022

PARAMETER	UNITS	MCL	MCLG	TEST RESULTS		MAJOR SOURCES	MET STANDARD?
				HIGHEST DETECTED LEVEL	RANGE		
Barium	ppm	2	2	0.01	N/A ⁽¹⁾	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	YES
Chloride	ppm	250	N/A	56	29 - 56	Stormwater runoff containing road salt; erosion of natural deposits	YES
Fluoride	ppm	4	4	0.80	0.59 - 0.80	Erosion of natural deposits; water additive that promotes strong teeth	YES
Nitrate	ppm	10	10	0.07	0.02 - 0.07	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 ≥ 1.0	N/A	1.5	1.3 - 1.7	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 ⁽²⁾	NTU	95% of Samples Must Be ≤ 0.3	N/A	0.19	100%	Soil runoff	YES

The following table lists unregulated contaminants⁽³⁾.

PARAMETER	UNITS	MCL	MCLG	TEST RESULTS		MAJOR SOURCE(S)	MET STANDARD?
				AVERAGE	RANGE		
Sodium ⁽⁴⁾	ppm	Notification Level = 100	None	21	14 - 29	Stormwater runoff containing road salt, erosion of natural deposits	N/A
Sulfate	ppm	None	None	5	4 - 6	Naturally occurring	N/A

Notes:

⁽¹⁾ Barium was measured only once in 2022; therefore, a range of test results is not presented.

⁽²⁾ Turbidity is a measure of the cloudiness of water and is a good indicator of the effectiveness of GU's filtration system. Turbidity samples are not allowed to exceed 1 NTU.

⁽³⁾ 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.

⁽⁴⁾ When the sodium level in tap water exceeds 100 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
≤	Less Than or Equal to	ppm	parts per million (equal to milligrams per liter)
≥	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



2022 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:

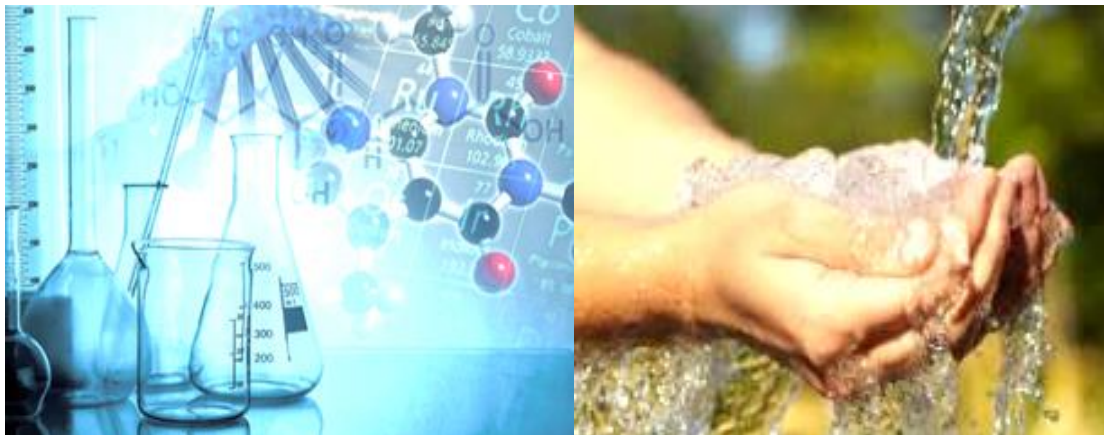
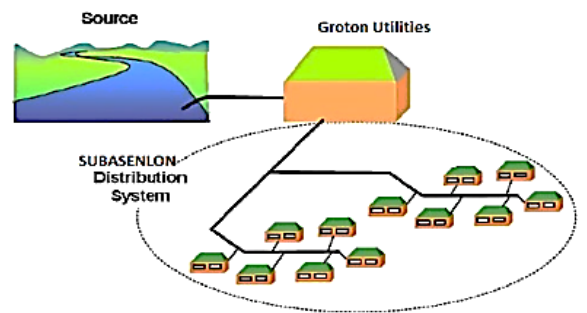
Total residual chlorine (TRC) monitoring is performed to ensure that disinfectant levels are not too high, as higher levels would lead to a higher potential for disinfection byproduct formation. An added benefit of disinfectant monitoring is that if disinfectant levels are too low, flushing can be performed 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.

The **2022 MONITORING PROGRAM** consists of **FIVE (5)** separate water distribution systems:

1. Main Base
2. Nautilus Park
(areas south of Gungywamp Road)
3. Trident Park
4. Conning Towers
5. Polaris Park





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

What are per- and polyfluoroalkyl substances and where do they come from?

PFAS are a group of thousands of man-made chemicals. PFAS have been used in a variety of industrial and consumer products around the globe, including in the U.S., for decades. Due to their widespread use and environmental persistence, most people in the United States have been exposed to certain PFAS. 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 (aqueous film-forming foam or AFFF) used for fighting petroleum fires.

Is there a federal or CT regulation for PFAS in drinking water?

There is currently no federal drinking water standard for any PFAS compounds. In May 2016, the U.S. Environmental Protection Agency (EPA) established a lifetime drinking water 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.

In CT, there is not a PFAS drinking water regulation. The Department of Defense (DoD) issued a policy in 2020 to monitor drinking water for PFAS at all DoD owned and operated water systems at a minimum of once every three years. The DoD policy states that if water sampling results confirm that drinking water contains PFOA and PFOS at individual or combined concentrations greater than the 2016 EPA HA level of 70 ppt, water systems would 1) take immediate action to reduce exposure to PFOS or PFOA, to include providing alternative drinking water; and 2) undertake additional sampling to assess the level, scope, and localized source of contamination.

What about the EPA's 2022 interim Health Advisories or proposed regulations?

EPA issued interim Health Advisories for PFOS and PFOA in 2022. However, these newer levels are below quantifiable limits (i.e., below detection levels). EPA is expected to issue a proposed regulation on PFAS drinking water standards for public comment in the next few months. DoD looks forward to the clarity that a nationwide regulatory standard for PFOS and PFOA in drinking water will provide.

In anticipation of this EPA drinking water regulation and to account for emerging science that shows potential health effects of PFOS and PFOA at levels lower than 70 ppt, DoD is evaluating its efforts to address PFAS in drinking water, and what actions we can take to be prepared to incorporate this standard, such as reviewing our current data and collecting additional sampling where necessary. DoD remains committed to communicating and engaging with our communities throughout this process.

Has SUBASENLON tested its water for PFAS?

Yes. In 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 2022



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 2022

MAIN BASE

SUBASENLON MAIN BASE - DETECTED REGULATED CONTAMINANTS								
BACTERIOLOGICAL								
PARAMETER	UNITS	DETECTION LEVEL		MCL ⁽¹⁾	MCLG ⁽²⁾	MET STANDARD? ⁽³⁾	MAJOR SOURCE IN DRINKING WATER	
Total Coliforms	P/A	Absent		1 present	0	YES	Naturally present in the environment	
DISINFECTANTS AND DISINFECTION BYPRODUCTS								
PARAMETER	UNITS	DETECTION LEVEL		MCL ⁽¹⁾ OR MRDL ⁽⁶⁾	MCLG ⁽²⁾ OR MRDLG ⁽⁷⁾	MET STANDARD? ⁽³⁾	MAJOR SOURCE IN DRINKING WATER	
		HIGHEST LRAA OR RAA ⁽⁴⁾	RANGE ⁽⁵⁾					
TTHM	µg/L	79.7	38.2 - 61.9	80	N/A	YES ^(3a)	Byproduct of drinking water chlorination	
HAA5	µg/L	30.2	16.4 - 33.0	60	N/A	YES	Byproduct of drinking water chlorination	
TRC	mg/L	0.90	Non-Detect (<0.02) - 1.83	4	4	YES	Drinking water disinfectant	
LEAD AND COPPER								
PARAMETER	UNITS	DETECTION LEVEL			AL ⁽⁸⁾	MCLG ⁽²⁾	MET STANDARD? ⁽³⁾	MAJOR SOURCE IN DRINKING WATER
		90th PERCENTILE	SITES ABOVE AL	RANGE ⁽⁵⁾				
Copper	mg/L	0.125	0	0.0185 - 0.683	1.3	1.3	YES (See note ^(3b))	Corrosion of pipes; erosion of natural deposits
Lead	µg/L	2.9	0	<1.0 - 3.3	15	0	YES (See note ^(3b))	Corrosion of household plumbing systems; erosion of natural deposits

Notes:

- ⁽¹⁾ Maximum Contaminant Level, the highest level of a contaminant that is allowed in drinking water.
- ⁽²⁾ Maximum Contaminant Level Goal, a non-enforceable standard.
- ⁽³⁾ Indicates whether the drinking water monitoring results meet the associated SDWA water quality standards.
 - ^(a) The monitoring program requires collection of one TTHM sample per quarter. All quarterly samples were collected in 2022. Additionally, a total of four samples were collected at the approved sampling location during the 1st quarter of 2022 (only one sample was required). All four 1st quarter samples were used to calculate the LRAA and ranges shown in this table.
 - ^(b) Lead and copper sampling is on a triennial schedule (i.e., conducted once every 3 years). Data presented in this table is from 2021. The next lead and copper sampling event will be in 2024.
- ⁽⁴⁾ The values indicated for TTHM and HAA5 were the highest quarterly locational RAA (LRAA) values calculated at each of the sample sites in 2022. The highest level indicated for TRC was based on the RAA calculated for each of the 4 quarters in 2022. The LRAA and RAA are the values that are compared against the MCLs for compliance.
- ⁽⁵⁾ The highest and the lowest values found in the individual samples.
- ⁽⁶⁾ Maximum Residual Disinfectant Level, the highest level of a disinfectant allowed in drinking water (for TRC).
- ⁽⁷⁾ Maximum Residual Disinfectant Level Goal, the level of drinking water disinfectant below which there is no known or expected health risk (for TRC).
- ⁽⁸⁾ The highest level at which a violation occurs when exceeded by the 90th percentile result.



NAUTILUS PARK

SUBASENLON WATER QUALITY DATA - YEAR 2022

SUBASENLON NAUTILUS PARK - DETECTED REGULATED CONTAMINANTS

BACTERIOLOGICAL								
PARAMETER	UNITS	DETECTION LEVEL		MCL ⁽¹⁾	MCLG ⁽²⁾	MET STANDARD? ⁽³⁾	MAJOR SOURCE IN DRINKING WATER	
Total Coliforms	P/A	Present in routine and 1st repeat samples at 1 location (absent in 2nd repeat sample and all 32 other samples)		1 present	0	See note ^(3a)	Naturally present in the environment	
DISINFECTANTS AND DISINFECTION BYPRODUCTS								
PARAMETER	UNITS	DETECTION LEVEL		MCL ⁽¹⁾ OR MRDL ⁽⁶⁾	MCLG ⁽²⁾ OR MRDLG ⁽⁷⁾	MET STANDARD? ⁽³⁾	MAJOR SOURCE IN DRINKING WATER	
		HIGHEST LRAA OR RAA ⁽⁴⁾	RANGE ⁽⁵⁾					
TTHM	µg/L	79.7	44.6 - 101.3	80	N/A	See note ^(3b)	Byproduct of drinking water chlorination	
HAA5	µg/L	35.2	23.3 - 41.0	60	N/A	See note ^(3c)	Byproduct of drinking water chlorination	
TRC	mg/L	1.01	Non-Detect (<0.02) - 1.70	4	4	See note ^(3d)	Drinking water disinfectant	
LEAD AND COPPER								
PARAMETER	UNITS	DETECTION LEVEL			AL ⁽⁸⁾	MCLG ⁽²⁾	MET STANDARD? ⁽³⁾	MAJOR SOURCE IN DRINKING WATER
		90th PERCENTILE	SITES ABOVE AL	RANGE ⁽⁵⁾				
Copper	mg/L	0.051	0	0.006 - 0.122	1.3	1.3	See note ^(3e)	Corrosion of pipes; erosion of natural deposits
Lead	µg/L	<1.0	0	<1.0	15	0	See note ^(3e)	Corrosion of household plumbing systems; erosion of natural deposits

Notes:

⁽¹⁾ Maximum Contaminant Level, the highest level of a contaminant that is allowed in drinking water.

⁽²⁾ Maximum Contaminant Level Goal, a non-enforceable standard.

⁽³⁾ 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.

^(a) The monitoring program requires 3 total coliform samples (and corresponding TRC samples) each month; however, <3 samples were collected in January (1), February (1), March (2), and April (2). One sample collected on 25 October 2022 at 30 Magnolia Drive tested positive for total coliforms (*E. coli* was absent in this sample). A follow-up resample at this location collected on 27 October 2022 also tested positive for total coliforms (*E. coli* was absent in this resample as well). Upstream/downstream samples were also collected on 27 October 2022, which both tested negative for total coliforms. The positive detections at 30 Magnolia Drive were both taken from an exterior water fixture. A 2nd resample was taken on 7 November 2022 at 30 Magnolia Drive from an interior water fixture, which tested absent for total coliforms. Additionally, since *E. coli* was absent from both total coliform detections, these results are not in violation of the total coliform standards. For the remaining 32 samples, none were positive for total coliforms.

^(b) The monitoring program requires quarterly TTHM samples. All quarterly samples were collected in 2022; however, there was missing sampling data from the approved sampling location in 2021 (impacting LRAA calculations for the 1st two quarters 2022). Missing sampling data from 2021 was due to access limitations at the designated sampling site.

^(c) The monitoring program requires quarterly HAA5 samples. All quarterly samples were collected in 2022; however, only 1 HAA5 sample was collected in 2021, during the 4th quarter (impacting LRAA calculations for the 1st two quarters of 2022). Missing sampling data from 2021 was due to access limitations at the designated sampling site.

^(d) The monitoring program requires 3 TRC samples (and corresponding total coliform samples) each month; however, <3 samples were collected in January (1), February (1), March (2), and April (2). Additionally, <3 samples were collected in several months of 2021 (impacting quarterly RAA calculations for 2022).

^(e) The monitoring program requires at least 10 lead and copper samples annually, and these samples are to be collected from June – September. All 10 annual samples were collected in 2022; however, the 10 samples were collected in November and December 2022, outside the required June – September sampling period.

⁽⁴⁾ 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 2022. The highest level found for TRC was based on the RAA calculated for each of the four quarters in 2022. The LRAA and RAA are the values that are compared against the MCLs for compliance.

⁽⁵⁾ The highest and the lowest values found in the individual samples.

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

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

⁽⁸⁾ The highest level at which a violation occurs when exceeded by the 90th percentile result.



TRIDENT PARK

SUBASENLON WATER QUALITY DATA - YEAR 2022

SUBASENLON TRIDENT PARK - DETECTED REGULATED CONTAMINANTS

BACTERIOLOGICAL

PARAMETER	UNITS	DETECTION LEVEL	MCL ⁽¹⁾	MCLG ⁽²⁾	MET STANDARD? ⁽³⁾	MAJOR SOURCE IN DRINKING WATER
Total Coliforms	P/A	Absent	1 present	0	See note ^(3a)	Naturally present in the environment

DISINFECTANTS AND DISINFECTION BYPRODUCTS

PARAMETER	UNITS	DETECTION LEVEL		MCL ⁽¹⁾ OR MRDL ⁽⁶⁾	MCLG ⁽²⁾ OR MRDLG ⁽⁷⁾	MET STANDARD? ⁽³⁾	MAJOR SOURCE IN DRINKING WATER
		HIGHEST LRAA OR RAA ⁽⁴⁾	RANGE ⁽⁵⁾				
TTHM	µg/L	52.4	47.5 - 55.5	80	N/A	See note ^(3b)	Byproduct of drinking water chlorination
HAA5	µg/L	35.0	21.6 - 35.0	60	N/A	See note ^(3c)	Byproduct of drinking water chlorination
TRC	mg/L	1.37	0.75 - 1.52	4	4	See note ^(3d)	Drinking water disinfectant

LEAD AND COPPER

PARAMETER	UNITS	DETECTION LEVEL			AL ⁽⁸⁾	MCLG ⁽²⁾	MET STANDARD? ⁽³⁾	MAJOR SOURCE IN DRINKING WATER
		90th PERCENTILE	SITES ABOVE AL	RANGE ⁽⁵⁾				
Copper	mg/L	0.051 (spring) Insufficient data (fall)	0 (spring) 0 (fall)	0.016 - 0.060 (spring) 0.015 - 0.071 (fall)	1.3	1.3	See note ^(3e)	Corrosion of pipes; erosion of natural deposits
Lead	µg/L	<1.0 (spring) Insufficient data (fall)	1 (spring) ⁽⁹⁾ 0 (fall)	<1.0 - 17.2 (spring) <1.0 - 6.2 (fall)	15	0	See note ^(3e)	Corrosion of household plumbing systems; erosion of natural deposits

- Notes:**
- ⁽¹⁾ Maximum Contaminant Level, the highest level of a contaminant that is allowed in drinking water.
 - ⁽²⁾ Maximum Contaminant Level Goal, a non-enforceable standard.
 - ⁽³⁾ 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.
 - ^(a) The monitoring program requires 1 total coliform sample (and corresponding TRC sample) each month; however, no samples were collected in February and March. For the remaining 10 samples, none were positive for total coliforms.
 - ^(b) The monitoring program requires quarterly TTHM samples. Only 1 TTHM sample was collected in 2021 (4th quarter sample) at the same location as the 2022 samples. No TTHM sample was collected during the 1st quarter of 2022. Both of these events impacted quarterly LRAA calculations for 2022.
 - ^(c) The monitoring program requires quarterly HAA5 samples. No HAA5 samples were collected in 2021 or the 1st quarter of 2022 (impacting quarterly LRAA calculations for 2022).
 - ^(d) The monitoring program requires 1 TRC sample (and corresponding total coliform sample) each month; however, no samples were collected in February and March 2022. Additionally, no samples were collected from April through September 2021 (impacting quarterly RAA calculations for 2022).
 - ^(e) The monitoring program requires at least 20 lead and copper samples semiannually (events designated as "spring" and "fall"). All samples were collected during the 1st semiannual (spring) event; however, only 10 samples were collected during the 2nd semiannual (fall) event.
 - ⁽⁴⁾ 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 2022. The highest level found for TRC was based on the RAA calculated for each of the four quarters in 2022. The LRAA and RAA are the values that are compared against the MCLs for compliance.
 - ⁽⁵⁾ The highest and the lowest values found in the individual samples.
 - ⁽⁶⁾ Maximum Residual Disinfectant Level, the highest level of a disinfectant allowed in drinking water (for TRC).
 - ⁽⁷⁾ Maximum Residual Disinfectant Level Goal, the level of drinking water disinfectant below which there is no known or expected health risk (for TRC).
 - ⁽⁸⁾ The highest level at which a violation occurs when exceeded by the 90th percentile result.
 - ⁽⁹⁾ A sample collected on 3 May 2022 at 8 Florida Street exceeded the lead AL of 15 µg/L with a result of 17.2 µg/L. The location was resampled on 6 June 2022, and results of both repeat samples (1st-draw and 5-minute flush) were below the lead and copper ALs. Additionally, the kitchen faucet was subsequently replaced at this location. Summary of 6 June 2022 resample results: 1st draw (copper) = 0.051 mg/L; 1st draw (lead) = 3.0 µg/L; 5-min flush (copper) = 0.010 mg/L; 5-min flush (lead) = <1.0 µg/L.



SUBASENLON WATER QUALITY DATA - YEAR 2022

CONNING TOWERS

SUBASENLON CONNING TOWERS - DETECTED REGULATED CONTAMINANTS								
BACTERIOLOGICAL								
PARAMETER	UNITS	DETECTION LEVEL		MCL ⁽¹⁾	MCLG ⁽²⁾	MET STANDARD? ⁽³⁾	MAJOR SOURCE IN DRINKING WATER	
Total Coliforms	P/A	Absent		1 present	0	See note ^(3a)	Naturally present in the environment	
DISINFECTANTS AND DISINFECTION BYPRODUCTS								
PARAMETER	UNITS	DETECTION LEVEL		MCL ⁽¹⁾ OR MRDL ⁽⁶⁾	MCLG ⁽²⁾ OR MRDLG ⁽⁷⁾	MET STANDARD? ⁽³⁾	MAJOR SOURCE IN DRINKING WATER	
		HIGHEST LRAA OR RAA ⁽⁴⁾	RANGE ⁽⁵⁾					
TTHM	µg/L	51.7	40.0 - 65.2	80	N/A	YES ^(3b)	Byproduct of drinking water chlorination	
HAA5	µg/L	34.3	23.0 - 29.0	60	N/A	YES ^(3c)	Byproduct of drinking water chlorination	
TRC	mg/L	1.35	0.25 - 1.55	4	4	See note ^(3d)	Drinking water disinfectant	
LEAD AND COPPER								
PARAMETER	UNITS	DETECTION LEVEL			AL ⁽⁸⁾	MCLG ⁽²⁾	MET STANDARD? ⁽³⁾	MAJOR SOURCE IN DRINKING WATER
		90th PERCENTILE	SITES ABOVE AL	RANGE ⁽⁵⁾				
Copper	mg/L	Insufficient data	0	0.042 - 0.141	1.3	1.3	See note ^(3e)	Corrosion of pipes; erosion of natural deposits
Lead	µg/L	Insufficient data	0	<1.0 - 1.80	15	0	See note ^(3e)	Corrosion of household plumbing systems; erosion of natural deposits

Notes:

- ⁽¹⁾ Maximum Contaminant Level, the highest level of a contaminant that is allowed in drinking water.
- ⁽²⁾ Maximum Contaminant Level Goal, a non-enforceable standard.
- ⁽³⁾ 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.
 - ^(a) The monitoring program requires 1 total coliform sample (and corresponding TRC sample) each month; however, no sample was collected in February. For the remaining 11 samples, none were positive for total coliforms.
 - ^(b) The monitoring plan requires one annual TTHM sample to be collected during the month of warmest temperature. However, four quarterly TTHM samples were collected in 2022. All four quarterly samples were reported in this table.
 - ^(c) The monitoring plan requires one annual HAA5 sample to be collected during the month of warmest temperature. However, four quarterly HAA5 samples were collected in 2022. All four quarterly samples were reported in this table.
- ⁽⁴⁾ The monitoring program requires 1 TRC sample (and corresponding total coliform sample) each month; however, no sample was collected in February 2022. Additionally, no samples were collected from April through October 2021 (impacting quarterly RAA calculations for 2022).
- ⁽⁵⁾ The monitoring program requires at least 5 lead and copper samples annually, and these samples are to be collected from June – September; however, only 4 samples were collected in 2022. These four samples were also collected in November and December 2022, outside the required June – September sampling period.
- ⁽⁶⁾ The highest level found for TRC was based on the RAA calculated for each of the four quarters in 2022. The annual result and RAA are the values that are compared against the MCLs for compliance.
- ⁽⁷⁾ The highest and the lowest values found in the individual samples.
- ⁽⁸⁾ Maximum Residual Disinfectant Level, the highest level of a disinfectant allowed in drinking water (for TRC).
- ⁽⁷⁾ Maximum Residual Disinfectant Level Goal, the level of drinking water disinfectant below which there is no known or expected health risk (for TRC).
- ⁽⁸⁾ The highest level at which a violation occurs when exceeded by the 90th percentile result.



POLARIS PARK

SUBASENLON WATER QUALITY DATA - YEAR 2022

SUBASENLON POLARIS PARK - DETECTED REGULATED CONTAMINANTS

BACTERIOLOGICAL

PARAMETER	UNITS	DETECTION LEVEL	MCL ⁽¹⁾	MCLG ⁽²⁾	MET STANDARD? ⁽³⁾	MAJOR SOURCE IN DRINKING WATER
Total Coliforms	P/A	Absent	1 present	0	See note ^(3a)	Naturally present in the environment

DISINFECTANTS AND DISINFECTION BYPRODUCTS

PARAMETER	UNITS	DETECTION LEVEL		MCL ⁽¹⁾ OR MRDL ⁽⁶⁾	MCLG ⁽²⁾ OR MRDLG ⁽⁷⁾	MET STANDARD? ⁽³⁾	MAJOR SOURCE IN DRINKING WATER
		HIGHEST LRAA OR RAA ⁽⁴⁾	RANGE ⁽⁵⁾				
TTHM	µg/L	44.4	32.4 – 49.9	80	N/A	YES ^(3b)	Byproduct of drinking water chlorination
HAA5	µg/L	39.6	24.6 – 52.2	60	N/A	YES ^(3c)	Byproduct of drinking water chlorination
TRC	mg/L	1.19	0.22 - 1.24	4	4	See note ^(3d)	Drinking water disinfectant

LEAD AND COPPER

PARAMETER	UNITS	DETECTION LEVEL			AL ⁽⁸⁾	MCLG ⁽²⁾	MET STANDARD? ⁽³⁾	MAJOR SOURCE IN DRINKING WATER
		90th PERCENTILE	SITES ABOVE AL	RANGE ⁽⁵⁾				
Copper	mg/L	0.0794 (spring) Insufficient data (fall)	0 (spring) 0 (fall)	0.007 - 0.114 (spring) 0.035 - 0.162 (fall)	1.3	1.3	See note ^(3e)	Corrosion of pipes; erosion of natural deposits
Lead	µg/L	<1.0 (spring) Insufficient data (fall)	0 (spring) 0 (fall)	<1.0 (spring) <1.0 - 1.5 (fall)	15	0	See note ^(3e)	Corrosion of household plumbing systems; erosion of natural deposits

Notes:

⁽¹⁾ Maximum Contaminant Level, the highest level of a contaminant that is allowed in drinking water.

⁽²⁾ Maximum Contaminant Level Goal, a non-enforceable standard.

⁽³⁾ 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.

^(a) The monitoring program requires 1 total coliform sample (and corresponding TRC sample) each month; however, no samples were collected in January and March through May. For the remaining 8 samples, none were positive for total coliforms.

^(b) The monitoring plan requires one annual TTHM sample to be collected during the month of warmest temperature. However, four quarterly TTHM samples were collected in 2022. All four quarterly samples were reported in this table.

^(c) The monitoring plan requires one annual HAA5 sample to be collected during the month of warmest temperature. However, 2nd, 3rd, and 4th quarter HAA5 samples were collected in 2022. All three quarterly samples were reported in this table.

^(d) The monitoring program requires 1 TRC sample (and corresponding total coliform sample) each month; however, no samples were collected in January 2022 and March through May 2022. Additionally, no samples were collected from April through October 2021 (impacting quarterly RAA calculations for 2022).

^(e) The monitoring program requires at least 10 lead and copper samples semiannually (events designated as “spring” and “fall”). All samples were collected during the 1st semiannual (spring) event; however, only 6 samples were collected during the 2nd semiannual (fall) event.

⁽⁴⁾ The highest level found for TRC was based on the RAA calculated for each of the four quarters in 2022. The annual result and RAA are the values that are compared against the MCLs for compliance.

⁽⁵⁾ The highest and the lowest values found in the individual samples.

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

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

⁽⁸⁾ 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-Quality-Information/Lead-in-Priority-Area-Sampling-Program/SUBASE-New-London/>

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

