



NAVAL SUBMARINE BASE NEW LONDON 2014 CONSUMER CONFIDENCE REPORT (2014 Water Quality Data)

Where does my water come from?

Naval Submarine Base (SUBASE) New London purchases water from the City of Groton, Groton Utilities. (See <http://www.grotonutilities.com>.) Groton Utilities' water is supplied by surface water from a series of five reservoirs covering a watershed of 15.6 square miles and includes three deep wells. Four reservoirs (Morgan, Ledyard, Poheganut, and Smith Lake) flow into the Groton Utilities terminal reservoir, Poquonnock Reservoir. Groton Utilities pumps water from Poquonnock Reservoir to the water treatment plant, using the other four reservoirs to maintain an appropriate level in Poquonnock Reservoir. When full, all five reservoirs have a combined capacity of approximately 2.5 billion gallons. Because Groton Utilities treats almost 4 billion gallons of water per year, its reservoirs turn over twice annually. Groton Utilities has an excess capacity of over 4 million gallons per day. Groton Utilities takes its job of stewardship very seriously, and, to that end, it has a spill response trailer and a trained team that responds to any threat of contamination that could impact its watershed.

Is my water safe?

SUBASE New London works with Groton Utilities to ensure that your tap water meets all U.S. Environmental Protection Agency (USEPA) and State of Connecticut Department of Public Health (CTDPH) drinking water health standards.

The Groton Utilities **2014** Consumer Confidence Report may be viewed on-line at:

<http://www.grotonutilities.com/documents/water/2014.pdf> (generally uploaded to its website no later than July).

Groton Utilities conducts tests at SUBASE New London, to screen for bacteriological and physical characteristics of the drinking water. The Groton Utilities water quality sampling data have been used to report the quality of the drinking water at SUBASE New London. Groton Utilities uses its own certified lab to test its water for most test parameters but uses an independent certified lab for other specific parameters.

The SUBASE New London Public Works 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. A summary of the results of the water testing done by Groton Utilities at SUBASE New London is provided in the tables that follow at the end of this report.

Why are there contaminants in my drinking water?

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 from human activity.

Contaminants that may be present in source water include:

Microbial contaminants, such as viruses and bacteria, 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 storm water 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 storm water 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 storm water runoff, and septic systems.

Radioactive contaminants, which occur naturally or as the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the USEPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. 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 **USEPA Safe Drinking Water Hotline (800-426-4791)**.



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At SUBASE New London, contaminants would most likely come from corrosion of piping (mostly inside buildings) as the water makes its way from the Groton Utilities treatment plant to our taps. Although tests show that most areas on base are within USEPA action levels for lead and copper, some areas show more susceptibility to lead and copper contamination. For this reason, SUBASE has taken steps to improve the plumbing systems in those buildings (either by replacing piping or flushing water lines).

Do I need to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Fetuses, infants, and young children are typically more vulnerable to lead in drinking water than the general population. Immuno-compromised persons (such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, and persons with HIV/AIDS or other immune system disorders), and some elderly persons can be particularly at risk for adverse health effects. These people should seek advice from their health care providers about drinking water. USEPA/Centers for Disease Control (CDC) guidelines are available from the **USEPA Safe Drinking Water Hotline (800-426-4791)** regarding appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants.

Important information on lead in drinking water:

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. Groton Utilities 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 seconds to two minutes* before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the **USEPA Safe Drinking Water Hotline (800-426-4791)** or at: <http://www.epa.gov/safewater/lead>.

How can I get involved?

For information regarding the drinking water available to Balfour Beatty Community Housing, please call **Balfour Beatty, at 860-446-5934 or 860-446-5913**. For information regarding drinking water analysis or drinking water sampling results, please call **Rich Massad**, at the SUBASE New London Public Works Environmental Division (**860-694-5140**).

Water Source Assessment

In 2003, the CTDPH performed an assessment of Groton Utilities drinking water sources. The assessment found that Groton Utilities drinking water sources have a low susceptibility to potential sources of contamination. The completed assessment report can be accessed at:

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

Additional source water assessment information can be obtained from USEPA at:

<http://www.epa.gov/safewater/drinklink.html>.

Flushing of SUBASE New London Water System

The SUBASE New London Public Works Utilities Division flushes hydrants annually on lower base, and a contractor flushes hydrants on upper base and in the housing areas, every other year. Flushing is generally done in the spring and summer. Flushing prevents the build-up of rust and sediment in the water distribution system. If you notice any discoloration in the water after flushing has occurred, simply run your faucets until the water runs clear. For questions or concerns that arise during the hydrant flushing season, please call the **NAVFAC MIDLANT Service Center, Facilities Work Reception, at 866-477-7206, Option 1**.

Major Changes to SUBASE New London Water System

The SUBASE New London Public Works Utilities Division continued to perform work on the SUBASE New London water distribution system, as part of an overall maintenance and repair program, but there were no major physical changes to the system in 2014. The most notable change was the completion of renovations at a large barracks on base (B-534), which involved installation of new water pipes and restarting full water service in the building. Additionally, a major project was begun involving the complete renovation of a main water storage tank (#480) on base, located next to the Naval Branch Health Clinic Groton (B-449).



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Testing Performed by Groton Utilities: Procedures and Results:

<i>Parameter</i>	<i>Major Source</i>	<i>Range</i>	<i>Highest Detected Level</i>	<i>MCL</i>	<i>MCLG</i>	<i>Units</i>	<i>Violation</i>
Chlorine Residual, Free	Added to control microbes	0.15 - 1.84	1.84	N/A	N/A	mg/L	No
Total Coliforms	Naturally present in the environment	Absent	Absent	>0	0	col/100 mL	No
E. Coli	Naturally present in the environment	Absent	Absent	>0	0	N/A	No
Color	N/A	0 -42	42*	15	N/A	Color Units	YES*
Odor	N/A	0 - 0	0	2	N/A	TON	No
pH	N/A	7.2 - 9.3	9.3	10	N/A	pH units	No
Turbidity	Soil runoff and pipe sedimentation	0.12 - 2.8	2.8	5	N/A	NTU	No

*Sample taken at B-164 Dealey Center in the summer time and believed to have been influenced by problems reported at the Groton Utilities Water Treatment Plant which caused discoloration in the water throughout their system. As Groton Utilities made adjustments at their plant, discoloration ceased over time.

Key to Abbreviations:
col/100mL = coliforms per 100 milliliters
MCL = Maximum Contaminant Level
MCLG = Maximum Contaminant Level Goal
mg/L = milligrams per liter
N/A = Not Applicable
ND = Not Detected
NTU = Nephelometric Turbidity Units
TON - Threshold Odor Number
< = less than
> = greater than



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Site-Specific Water Testing Range of Results:

<i>Parameter</i>	<i>1/17/2014 Sample Test Results for Barracks B-534 (Renovated 2013- 2014)</i>	<i>Units</i>
BACTERIA:		
Coliform (total)	Absent	col/100mL
E. Coli (fecal)	Absent	N/A
PHYSICAL PARAMETERS:		
Residual Chlorine	1.38	ppm
pH	7.33	SU
Turbidity	1.38	NTU
Color	<1	Color Units
Odor	<1	TON
CHEMICALS:		
Chloride	25.4	mg/L
Nitrite Nitrogen	<0.01	mg/L
Nitrate Nitrogen	<0.05	mg/L
Sulfate	4.7	mg/L
Hardness	29.1	mg/L
Sodium	13.6	mg/L
Iron	0.136	mg/L
Manganese	0.010	mg/L
Calcium	9.33	mg/L
Magnesium	1.42	mg/L

Note: The above results table is for samples taken as part of a renovation project for barracks BEQ534.

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Site-Specific Water Testing Range of Results

Parameter	11/25/2014 Sample Test Results for Pier 31 South Water Riser	11/25/2014 Sample Test Results for Public Works B-135	11/25/2014 Sample Test Results for Dealey Center B-164	11/25/2014 Sample Test Results for Sub Sq HQ B-87	11/25/2014 Sample Test Results for Galley B-446	11/25/2014 Sample Test Results for Pier 6 South Water Riser	Units
BACTERIA:							
Coliform (total)	Absent	Absent	Absent	Absent	Absent	Absent	col/100mL
E. Coli (fecal)	Absent	Absent	Absent	Absent	Absent	Absent	N/A
PHYSICAL PARAMETERS:							
Residual Chlorine (Free)	1.11	1.65	1.32	1.33	1.84	1.19	mg/L
pH	7.6	7.4	7.5	N/A	N/A	N/A	SU
Turbidity	2.8	0.17	0.21	N/A	N/A	N/A	NTU
Color	14	1	3	N/A	N/A	N/A	Color Units
Odor	0	0	0	N/A	N/A	N/A	TON

Note: The above results table is for samples taken as part of an investigation of the drinking water quality at lower base facilities, on base, done in conjunction with Groton Utilities. The investigation was precipitated when field samples taken by Navy Preventive Medicine personnel, at select water risers on piers, showed potential for bacteria contamination. Samples were later taken by Groton Utilities, to ensure water used by boats at piers was safe to drink.

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Site-Specific Water Testing Range of Results:

6/5/2014 Sample Test Results for B-499 Bathroom Sinks	Lead mg/L (First Draw)	Lead mg/L (Flush)
1 st Floor Men's Bathroom Sink	0.0033	0.0020
2 nd Floor Men's Bathroom Sink	0.013	0.0072
3 rd Floor Women's Bathroom Sink	0.066	0.014
4 th Floor Men's Bathroom Sink	0.0087	0.024
5 th Floor Men's Bathroom Sink	0.028	0.051

Note: The above results table is for samples collected from bathroom sinks in Naval Submarine School Building 499, as part of an internal investigation of lead levels in water at that facility. Lead has historically been a concern for certain fixtures in B-499; and signs were posted, prohibiting drinking the water from those fixtures. Based on the latest test results for lead shown in the table above, 2014 lead data from some of the faucets in B-499 remain a concern; and signs will remain posted, prohibiting water consumption at these locations.

Priority Area Sampling:

In accordance with the Chief of Naval Operations' policy regarding the sampling and testing of lead in drinking water in priority areas (identified as primary and secondary schools, Child Development Centers (CDCs), Navy-operated 24/7 Group Homes, and youth centers), an extensive sampling initiative was conducted, beginning in October and November of 2013 at the off-base CDC. As previously reported in the Consumer Confidence Report for 2013, with the exception of only a small amount of sinks, the water was determined to be completely safe based on the results of the testing. Those sinks that did not meet EPA-recommended standards were immediately removed from service or replaced and re-tested until results were within acceptable levels. In accordance with CNO Policy, the results were shared and discussed by the SUBASENLON Commanding Officer (CO) with the CDC staff and the parents of the children using the facility.

Priority area sampling at SUBASENLON continued in 2014, with sampling performed at the off-base Youth Center. The sampling was done in two phases, the first focusing on water faucets installed at the new addition to the facility just prior to its opening and the second focusing on the remaining faucets that were already in service. While a majority of the faucets in the first phase tested within recommended standards, two faucets had to be removed from service due to high lead levels. As these two faucets were new as part of the addition, it was anticipated that these two sinks could be conditioned, over time, to prevent lead from leaching into the water, from pipes or solder used in plumbing fixtures, by developing a protective film as water runs through the faucets. While all faucets tested in the second phase showed low lead levels, the two faucets that were prohibited from use after the first phase were retested at that time, and the results showed lead levels below EPA-recommended standards. Consequently, testing at the Youth Center concluded, with all faucets showing safe levels of lead. As was done with testing at the CDC the previous year, all the results at the Youth Center were shared by the SUBASENLON CO with Youth Center staff and the parents of the children using the facility.

Any questions on the priority area sampling performed at the CDC or Youth Center can be directed to Rich Massad, at the SUBASE New London Public Works Environmental Division, at (860)694-5140.

Monthly Water Testing by Naval Branch Health Clinic Groton Preventive Medicine:

In addition to the water testing noted above, monthly testing of water from various ice machines, food preparation areas, and specific Navy facilities was conducted internally, by Naval Branch Health Clinic Groton Preventive Medicine. Testing was primarily for bacteria, in accordance with Navy Bureau of Medicine policy; however, pH and chlorine were also measured. Test results showed that no bacteria were present in 2014.