



2022 Consumer Confidence Report for NSF Saratoga Springs

1. INTRODUCTION

To comply with Navy regulations, Naval Support Facility (NSF) Saratoga Springs provides an annual report (Consumer Confidence Report [CCR]) describing the quality of the drinking water supplied to the installation for consumption and use by all Navy personnel, visitors, and contractors that have access to installation facilities and services. The goal of the CCR is to provide information on where the water comes from and provide information on the results of water quality tests performed in 2022. Test results showed that the water at NSF Saratoga Springs met all State and Federal drinking water health standards in 2022.

2. CITY OF SARATOGA SPRINGS CONSUMER CONFIDENCE REPORT INFORMATION

NSF Saratoga Springs receives water from the City of Saratoga Springs. Excerpts (edited for clarity) from the City of Saratoga Springs 2022 CCR are provided in this section. The City of Saratoga Springs CCR can also be accessed at the following weblink:

<https://www.saratoga-springs.org/179/Annual-Drinking-Water-Quality-Report>

WHERE DOES THE CITY'S WATER COME FROM?

In general, 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 can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include microbial contaminants, inorganic contaminants, pesticides and herbicides, organic chemical contaminants, and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the Environmental Protection Agency (EPA) prescribe regulations which limit the amount of certain contaminants in water provided by public water systems (PWSs). The State Health Departments and Food and Drug Administration's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

The City of Saratoga Springs receives surface water from the Loughberry Lake Watershed and groundwater from the Geyser Crest system (located at the intersection of Hathorn Boulevard and Quevic Drive). Water is also pumped into Loughberry Lake from Bog Meadow Brook (located near Ingersoll Road) and three Bog Meadow groundwater wells during the high demand summer months to help maintain the lake level. During 2022, the City's system did not experience any restriction of its water sources.

The Loughberry Lake source is treated conventionally at the Excelsior Avenue Treatment Plant with flocculation, sedimentation, and filtration. It is disinfected with a combination of ultraviolet light and sodium hypochlorite application. Fluoride is added to attain the optimal level of fluoride in the finished water to aid in preventing tooth decay. Phosphate is added for corrosion control. The Geyser Crest wells are disinfected with sodium hypochlorite, and fluoride is added as well. Although all the systems are interconnected, Loughberry Lake is the primary source and supplies most of the City. The Geyser Crest wells supply the Geyser Crest Subdivision and a portion of the southwest section of the City.

SOURCE WATER ASSESSMENTS

The New York State (NYS) Department of Health (NYDOH) has completed source water assessments for the Bog Meadow Brook, Geyser Crest Subdivision, and Loughberry Lake Watershed systems based on available information. Possible and actual threats to these drinking water sources were evaluated. The assessments include a susceptibility rating based on the risk posed by each potential source of contamination and how easily contaminants can move through the environment. The susceptibility rating is an estimate of the potential for contamination of the source water; it does not mean that the water delivered to consumers is or will become contaminated. See "Are There Contaminants in the City's Drinking Water?" on the following page for a list of the contaminants that have been detected, if any. The source water assessments provide resource managers with additional information for protecting source waters into the future.



2022 Consumer Confidence Report for NSF Saratoga Springs

The Bog Meadow Brook assessment found a moderate susceptibility to contamination for this source of drinking water. The amount of row crops in the assessment area results in a medium susceptibility to pesticides, and there is reason to believe that land cover data may overestimate the percentage of pasture in the assessment area. No permitted discharges are found in the assessment area. There is also noteworthy contamination susceptibility associated with other discrete contaminant sources, including mines. Finally, it should be noted that relatively high flow velocities make river drinking water supplies highly sensitive to existing and new sources of microbial contamination.

The Geyser Crest Subdivision assessment rated the water source as having an elevated susceptibility to microbial, nitrates, industrial solvents, and other industrial contaminants. These ratings are due primarily to the close proximity of the wells to a permitted discharge facility (industrial/commercial facilities that discharge wastewater into the environment and are regulated by the State and/or Federal government), a hazardous waste site, and the residential land use in the assessment area. In addition, the wells draw from fractured bedrock, and the overlying soils may not provide adequate protection from potential contamination. While the assessment rates the City's wells as being susceptible to microbials, please note that the water is disinfected to ensure that the finished water delivered meets the State's drinking water standards for microbial contamination.

The Loughberry Lake Watershed assessment found an elevated susceptibility to contamination for this source of drinking water. The amount of pasture in the assessment area results in a medium potential for protozoa contamination, and the amount of residential lands in the assessment area results in an elevated potential for microbial contamination. A single non-sanitary wastewater discharge is unlikely to contribute to contamination. There are no noteworthy contamination threats associated with other discrete contaminant sources. Finally, it should be noted that hydrologic characteristics (e.g., basin shape, flushing rates) generally make reservoirs highly sensitive to existing and new sources of phosphorus and microbial contamination.

The NYDOH will use this information to direct future source water protection activities. These may include water quality monitoring, resource management, and planning and education programs. A copy of the assessment can be obtained by contacting the City.

ARE THERE CONTAMINANTS IN THE CITY'S DRINKING WATER?

As State regulations require, the City routinely tests its drinking water for numerous contaminants. These contaminants include total coliform bacteria, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes (TTHM), haloacetic acids (HAA5), radiological aspects, and synthetic organic compounds. The table presented on the following page depicts which compounds were detected in the City's drinking water. The State allows the City to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative, are more than 1 year old.

It should be noted that all drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791 or the NYDOH Glens Falls Regional Office at (518) 793-3893.

DEFINITIONS/ABBREVIATIONS:

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

HAA5 - Haloacetic Acids.

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

Maximum Contaminant Level Goal (MCLG) - 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.

Maximum Residual Disinfectant Level (MRDL) - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

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

Micrograms per liter (µg/L) - Corresponds to one part of liquid in one billion parts of liquid (parts per billion [ppb]).

Milligrams per liter (mg/L) - Corresponds to one part of liquid in one million parts of liquid (parts per million [ppm]).

N/A - Not Applicable.

Nanograms per liter (ng/L) - Corresponds to one part of liquid in one trillion parts of liquid (parts per trillion [ppt]).



2022 Consumer Confidence Report for NSF Saratoga Springs

DEFINITIONS/ABBREVIATIONS (CONTINUED):

Nephelometric Turbidity Unit (NTU) - A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Non-Detect (ND): Laboratory analysis indicates that the constituent is not present.

P/A - Present or Absent.

Picocuries per liter (pCi/L) - A measure of the radioactivity in water.

RAA - Running Annual Average (using values from testing performed in previous and current year).

TRC - Total Residual Chlorine.

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

TTHM - Total Trihalomethanes.

Table of Detected Contaminants – Loughberry Lake Watershed

Contaminant	Violation? (Yes/No)	Date(s) of Sample	Average Level Detected (Range)	Unit of Measure	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination
Microbiological Contaminants							
Turbidity ¹	No	8/16/22	0.278	NTU	N/A	TT = 1	Soil runoff
		2022	100% < 0.3	NTU	N/A	95% < 0.3	Soil runoff
Inorganic Contaminants							
Alkalinity, Total (Raw Water)	No	Monthly 2022	129 (96 - 160)	mg/L	N/A	N/A	Naturally occurring
Barium	No	12/7/22	0.032	mg/L	2	MCL = 2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper	No	2021	0.063 ² (ND - 0.139) ³	mg/L	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Chloride	No	12/7/22	130	mg/L	N/A	MCL = 250	Naturally occurring or indicative of road salt contamination
Lead	No	2021	1.8 ² (ND - 7.9) ³	µg/L	0	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits
Nickel	No	12/7/22	0.0014	mg/l	N/A	N/A	Naturally occurring
Nitrate (as Nitrogen)	No	12/6/22	0.54	mg/L	10	MCL = 10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Organic Carbon, Total	No	Monthly 2022	2.0 (1.1 - 2.6)	mg/L	N/A	N/A	Naturally occurring
Sodium	No	12/7/22	69 ⁴	mg/L	N/A	N/A	Naturally occurring; road salt; water softeners; animal waste
Fluoride	No	12/7/22	0.71	mg/L	N/A	MCL = 2.2	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Sulfate	No	12/7/22	19	mg/L	N/A	MCL = 250	Naturally occurring
Radiological Gross Alpha	No	12/6/22	0.792	pCi/L	0	MCL = 15	Erosion of natural deposits



2022 Consumer Confidence Report for NSF Saratoga Springs

Table of Detected Contaminants – Loughberry Lake Watershed (Continued)							
Contaminant	Violation? (Yes/No)	Date(s) of Sample	Average Level Detected (Range)	Unit of Measure	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination
Organic Contaminants							
Perfluorooctanoic Acid (PFOA)	No	1/12/21	2.36	ng/L	N/A	MCL = 10	Released into the environment from widespread use in commercial and industrial applications
Disinfection Byproducts							
Haloacetic Acids (HAA5)	No	Quarterly 2022	<u>Denny's</u> 34 ⁵ (23 – 31) ⁶ <u>Hilton Garden</u> 34 ⁵ (16 – 45.3) ⁶ <u>DPW</u> 32 ⁵ (20.1 – 38) ⁶ <u>Longfellows</u> 40 ⁵ (27 – 56) ⁶	µg/L	N/A	MCL = 60	Byproduct of drinking water disinfection needed to kill harmful organisms
Total Trihalomethanes (TTHM)	No	Quarterly 2022	<u>Denny's</u> 63 ⁵ (25-80) ⁶ <u>Hilton Garden</u> 66 ⁵ (36-95) ⁶ <u>DPW</u> 47 ⁵ (23-59) ⁶ <u>Longfellows</u> 67 ⁵ (25-89) ⁶	µg/L	N/A	MCL = 80	Byproduct of drinking water chlorination needed to kill harmful organisms; formed when source water contains large amounts of organic matter

NOTES:

1. Turbidity is a measure of the cloudiness of the water. It is tested because it is a good indicator of the effectiveness of the filtration system. The highest single turbidity measurement (0.278 NTU) for the year occurred on 16 August 2022. State regulations require that turbidity must always be below 1.0 NTU. The regulations also require that 95% of the turbidity samples collected have measurements below 0.3 NTU. In 2022, 100% of turbidity measurements met that requirement.
2. The level presented represents the 90th percentile of the sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the lead and copper values detected at your water system. In this case, 30 samples were collected in the City's water system, and the 90th percentile value was 0.063 mg/L for copper and 0.0018 mg/L for lead. The ALs for copper and lead were not exceeded at any of the sites tested.
3. The level presented represents the range of results.
4. Water containing more than 20 mg/L of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/L of sodium should not be used for drinking by people on moderately restricted sodium diets.
5. Compliance for TTHM and HAA5 MCLs is based on a locational running annual average (LRAA), computed quarterly, of quarterly averages of all samples. The highest LRAA for 2022 is shown for each sample site. The highest LRAA for HAA5 occurred during the 1st quarter for all sites tested. The highest LRAA for TTHM occurred during the 1st quarter for the Hilton and DPW and 3rd quarter for Denny's and Longfellows.
6. The level presented represents the range of results for the four quarterly samples collected at each site in 2022.



2022 Consumer Confidence Report for NSF Saratoga Springs

Table of Detected Contaminants – Geyser Crest Subdivision							
Contaminant	Violation? (Yes/No)	Date of Sample	Average Level Detected (Range)	Unit of Measure	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination
Inorganic Contaminants							
Barium	No	12/7/20	0.045	mg/L	2	MCL = 2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper	No	8/2021	0.051 ¹ (ND - 0.110) ²	mg/L	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Chloride	No	12/7/22	160	mg/L	N/A	MCL = 250	Naturally occurring or indicative of road salt contamination
Fluoride	No	12/8/20	0.661	mg/L	N/A	MCL = 2.2	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Lead	No	8/2021	1.1 ¹ (ND - 1.4) ²	µg/L	0	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits
Manganese	No	12/7/22	ND	ng/l	N/A	MCL=0.3	Naturally occurring; indicative of landfill contamination
Nitrate (as Nitrogen)	No	12/6/22	ND	mg/L	10	MCL = 10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium	No	12/7/22	78 ³	mg/L	N/A	N/A	Naturally occurring; road salt; water softeners; animal waste
Sulfate	No	12/7/22	27	mg/L	N/A	MCL = 250	Naturally occurring
Radiological Combined Radium- 226 and 228	No	8/25/22	0.838	pCi/L	0	MCL = 5	Erosion of natural deposits
Organic Contaminants							
Perfluorooctanoic Acid (PFOA)	No	4/6/21	0.656	ng/L	N/A	MCL = 10	Released into the environment from widespread use in commercial and industrial applications
Disinfection Byproducts							
Haloacetic Acids (HAA5)	No	7/25/22	<2.0	µg/L	N/A	MCL = 60	Byproduct of drinking water disinfection needed to kill harmful organisms
Total Trihalomethanes (TTHM)	No	7/25/22	8.40	µg/L	N/A	MCL = 80	Byproduct of drinking water chlorination needed to kill harmful organisms; formed when source water contains large amounts of organic matter.

NOTES:

1. The level presented represents the 90th percentile of the 20 sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the values detected at your water system. In this case, 20 samples were collected in the City’s water system, and the 90th percentile value was 0.051 mg/L for copper and 0.0011 mg/L for lead. The ALs for copper and lead were not exceeded at any of the sites tested.
2. The level presented represents the range of results.
3. Water containing more than 20 mg/L of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/L of sodium should not be used for drinking by people on moderately restricted sodium diets.



2022 Consumer Confidence Report for NSF Saratoga Springs

UNREGULATED CONTAMINANTS

The following chart contains the results of testing for a series of unregulated contaminants. Unregulated contaminants are those that do not yet have a drinking water standard set by the EPA. The purpose of monitoring for these contaminants is to help the EPA decide whether the contaminants should have a standard. The following chart shows the ranges of the contaminants found in the samples taken throughout the test period (2018 through 2021). A list of all contaminants tested for during this period can be found below.

Table of Detected Unregulated Contaminants					
Contaminant (2018)	Unit of Measure	Regulatory Limit (MCL or MCLG)	Level Detected		Use or Environmental Source ¹
Loughberry Lake Watershed					
Bromide	mg/L	N/A	0.05 ²		Naturally occurring
Haloacetic Acids (HAA5)	µg/L	N/A	<u>Denny's</u> 19.1 ² (14.9 - 24.6) ³ <u>Hilton Garden</u> 21.5 ² (14.1 - 27.8) ³	<u>DPW</u> 18.5 ² (15.7 - 21.5) ³ <u>Skidmore</u> 20.1 ² (14.0 - 24.9) ³	Byproduct of drinking water disinfection needed to kill harmful organisms
Haloacetic Acids (HAA6Br)	µg/L	N/A	<u>Denny's</u> 7.82 ² (5.9 - 10.1) ³ <u>Hilton Garden</u> 8.6 ² (5.0 - 13.1) ³	<u>DPW</u> 7.8 ² (5.7 - 10.3) ³ <u>Skidmore</u> 8.1 ² (5.0 - 11.8) ³	Byproduct of drinking water disinfection needed to kill harmful organisms
Haloacetic Acids (HAA9)	µg/L	N/A	<u>Denny's</u> 26.3 ² (20.3 - 32.6) ³ <u>Hilton Garden</u> 29.5 ² (19.1 - 38.5) ³	<u>DPW</u> 25.9 ² (21.1 - 29.8) ³ <u>Skidmore</u> 27.7 ² (19.0 - 34.6) ³	Byproduct of drinking water disinfection needed to kill harmful organisms

NOTES:

- "Use or Environmental Source" further documented in *The Fourth Unregulated Contaminant Monitoring Rule (UCMR 4) Fact Sheet for Assessment Monitoring* (EPA 815-F-16-006, December 2016), available at: <https://www.epa.gov/sites/default/files/2017-03/documents/ucmr4-fact-sheet-haas.pdf>
- The level presented represents the average of results for the four quarterly samples collected at each site.
- The level presented represents the range of results for the four quarterly samples collected at each site.



2022 Consumer Confidence Report for NSF Saratoga Springs

WHAT DOES THIS INFORMATION MEAN?

The information in the previous tables indicate that the City's system had no MCL violations in 2022. Testing has indicated that some contaminants have been detected; however, these contaminants were detected below the levels allowed by NYS.

IS THE CITY'S WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2022, the City's system was in compliance with applicable State drinking water operating, monitoring, and reporting requirements. During 2022, the City tried to gather PFOA samples at the Excelsior and Geyser Plants on four separate occasions with all sampling ending in laboratory errors. Additional testing will be conducted in 2023 for PFOA and perfluorooctanesulfonic acid (PFOS).

INFORMATION ABOUT LEAD IN DRINKING WATER AND ITS EFFECT ON CHILDREN

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City, through the Excelsior Avenue Treatment Plant and Geyser Crest Well System, is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When water has been sitting for several hours, the potential for lead exposure can be minimized by flushing the tap for several 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 to minimize exposure is available from the Safe Drinking Water Hotline at (800) 426-4791 or at <http://www.epa.gov/safewater/lead>.

INFORMATION ON FLUORIDE ADDITION

The City's system is one of many drinking water systems in NYS that provides drinking water with a controlled, low level of fluoride for consumer dental health protection. According to the Centers for Disease Control and Prevention (CDC), fluoride is very effective in preventing cavities when present in drinking water at a target level of 0.7 mg/L (ppm). To ensure that the fluoride supplement in your water provides optimal dental protection, the NYDOH requires that the City monitors fluoride levels on a daily basis. During 2022, monitoring showed daily fluoride levels for the two treatment plants were within 0.3 mg/L of the target level as recommended by the NYDOH. None of the monitoring results showed fluoride at levels that approached the 2.2 mg/L MCL for fluoride.

INFORMATION ON PERFLUORINATED COMPOUNDS AND 1,4-DIOXANE

NYS has adopted the first national drinking water standard for 1,4-dioxane along with one of the lowest MCLs for PFOA and PFOS. PWSs in NYS are required to test for PFOA, PFOS, and 1,4-dioxane. PFOA and PFOS have MCLs of 10 ng/L (ppt) each, while 1,4-dioxane has an MCL of 1.0 µg/L (ppb). The City has completed four quarters of sampling its two treatment plants. The data showed compliance with the new MCLs for PFOA and PFOS and NDs for 1,4-dioxane. The PFOA data presented in the previous tables show the highest levels detected. The results ranged from ND to 2.36 ng/L.

COMPOSITE FILTER MONITORING INFORMATION

The highest single composite turbidity measurement for the year was 0.278 on 16 August 2022. The regulations require that 95% of the turbidity samples collected have measurement below 0.3 NTU. In 2022, 100% of measurements met that requirement.

DO YOU NEED TO TAKE SPECIAL PRECAUTIONS?

Although the City's drinking water met or exceeded State and Federal regulations, some people may be more vulnerable to disease-causing microorganisms or pathogens in drinking water than the general population. Immunocompromised persons (e.g., persons 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 from their healthcare provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium*, *Giardia*, and other microbial pathogens are available from the Safe Drinking Water Hotline at (800) 426-4791.



2022 Consumer Confidence Report for NSF Saratoga Springs

3. NSF SARATOGA SPRINGS WATER SYSTEM INFORMATION

This section presents information specific to the NSF Saratoga Springs water system.

CONTACT INFORMATION

If you have any questions about this report or concerns regarding your drinking water, please contact Richard Massad at the Public Works New London Environmental Division at Naval Submarine Base New London in Groton, CT at 860-694-5140 or Daniel Lewis, Public Works Site Manager at NSF Saratoga Springs at (518) 886-0200 x102.

INSTALLATION WATER SYSTEM DESCRIPTION

NSF Saratoga Springs receives its water from the City of Saratoga Springs, New York. Water enters the base through a service connection on Buff Road on the west side of the installation behind Building 117 (Commissary).

Once water enters the installation, it is distributed to facilities through underground pipes that are owned/operated by the Navy. It is important to note that there is no water treatment occurring on the installation; it is merely distributed to Navy facilities where it is consumed or used. For this reason, the NSF Saratoga Springs water system is generally thought of as a consecutive system that is part of the overall water distribution system of the City of Saratoga Springs. Additionally, the water system is a PWS that is not regulated by the NYDOH. Conversely, the City's system is a PWS that is regulated by the NYDOH as it supplies water and is responsible for water source protection and treatment. However, the Navy requires that the water onsite be routinely tested to make sure that installation personnel and visitors are provided with the same quality water as those consumers that are serviced by the City but use taps that are offsite. Navy policy also requires that NSF Saratoga Springs monitor its own water distribution systems for contaminants that could be contributed downstream of its connections to the City's distribution system.

NOTE: Finished water is not provided for consumption at the offsite Morale, Welfare, and Recreation (MWR) Facility located in Milton, NY. There is also no sampling plan developed for that site. Consequently, this CCR does not apply to that site.

2022 NSF SARATOGA SPRINGS WATER QUALITY MONITORING PROGRAM

Water quality sampling plans were developed for NSF Saratoga Springs in 2018 in order to meet Navy water quality monitoring requirements for consumers using Navy-owned water distribution systems. The sampling plans require that one representative bacteriological sample be taken every month and one representative sample be taken every year and analyzed for disinfection byproducts (TTHM and HAA5). NSF Saratoga Springs is also required to sample for per- and polyfluoroalkyl substances (PFAS) once every three years in accordance with Navy policy. This sampling is performed through the Public Works Site Manager with oversight provided by the Public Works New London Environmental Division at Naval Submarine Base New London in Groton, Connecticut. Sampling and analysis is performed by a local and certified laboratory contractor.

The NSF Saratoga Springs water quality monitoring program includes the following parameters:

Bacteriological Monitoring:

Total coliform monitoring is performed to verify that water is 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.

There were no total coliforms detections in the monthly bacteriological samples taken at NSF Saratoga Springs in 2022. The representative samples were taken at either Building 101 (Administrative Building) or 104 (Fleet and Family Service Center).



2022 Consumer Confidence Report for NSF Saratoga Springs

Disinfectants and Disinfection Byproducts Monitoring:

TTHM and HAA5 can form as a result of disinfection treatment performed by the City of Saratoga Springs at their treatment plants. As water sits in pipes, the disinfection chemicals can react with organic matter already in the water, which causes these byproducts to develop. Monitoring is needed to ensure that these levels do not become too high as water travels through the distribution system.

Total residual chlorine (TRC) monitoring is performed at the same time as disinfection byproduct sampling, as the disinfectant level in the water is directly tied to 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.

A representative sample was taken at Building 103 (Customer Service/Identification Desk) on 4 August 2022 and analyzed for TTHM and HAA5. Laboratory results indicated a TTHM concentration of 74.0 µg/L and a HAA5 concentration of <2.0 µg/L (both below the respective MCL).

Per- and polyfluoroalkyl substances (PFAS) Monitoring:

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 NY 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 NY, there is a PFAS drinking water regulation. The Department of Defense (DoD) must follow these state standards where we supply the drinking water. The State drinking water regulation sets an MCL in drinking water for the following PFAS: PFOS and PFOA each have MCLs of 10 ng/L (ppt).

The 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. This policy states that where State regulations for PFAS are more stringent than the guidance provided in the memorandum, the more stringent regulations apply. That is, if water sampling results confirm levels of PFAS compounds (including PFOS or PFOA) in drinking water above the State standard, water systems would 1) take immediate action to reduce exposure to elevated levels of PFAS compounds, 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 HAs 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 NSF Saratoga Springs tested its water for PFAS?

Yes. In December 2021, a sample was collected from Building 117 (the base Commissary). 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 once every three years for your continued protection.



2022 Consumer Confidence Report for NSF Saratoga Springs

Monitoring Summary:

The following table summarizes the results of the testing performed at NSF Saratoga Springs in 2022 for bacteria, disinfectants and disinfection byproducts, and PFOA/PFOS.

NSF Saratoga Springs – Regulated Contaminants							
Bacteriological							
Parameter	Units	Detection Level		MCL	MCLG	Met Standard? ¹	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	MCLG	Met Standard? ¹	Major Source in Drinking Water
		Annual Result or Highest RAA	Range				
TTHM	µg/L	74.0	74.0	80	N/A	Yes	Byproduct of drinking water chlorination
HAA5	µg/L	<2.0	<2.0	60	N/A	Yes	Byproduct of drinking water chlorination
TRC	mg/L	0.32	0.10 - 0.70	4	4	Yes	Drinking water disinfectant
PFAS							
Parameter	Units	Detection Level		MCL		Met Standard? ¹	Major Source in Drinking Water
PFOA	ng/L	Not Detected (Below MRL)		10		Yes ²	Released into the environment from widespread use in commercial and industrial applications
PFOS	ng/L	Not Detected (Below MRL)		10		Yes ²	

NOTES:

1. Indicates whether the drinking water monitoring results meet the associated Safe Drinking Water Act water quality standards.
2. The PFOA/PFOS sample was collected in December 2021 from Building 117 (base Commissary). In accordance with DoD policy, the water system will be resampled once every three years.