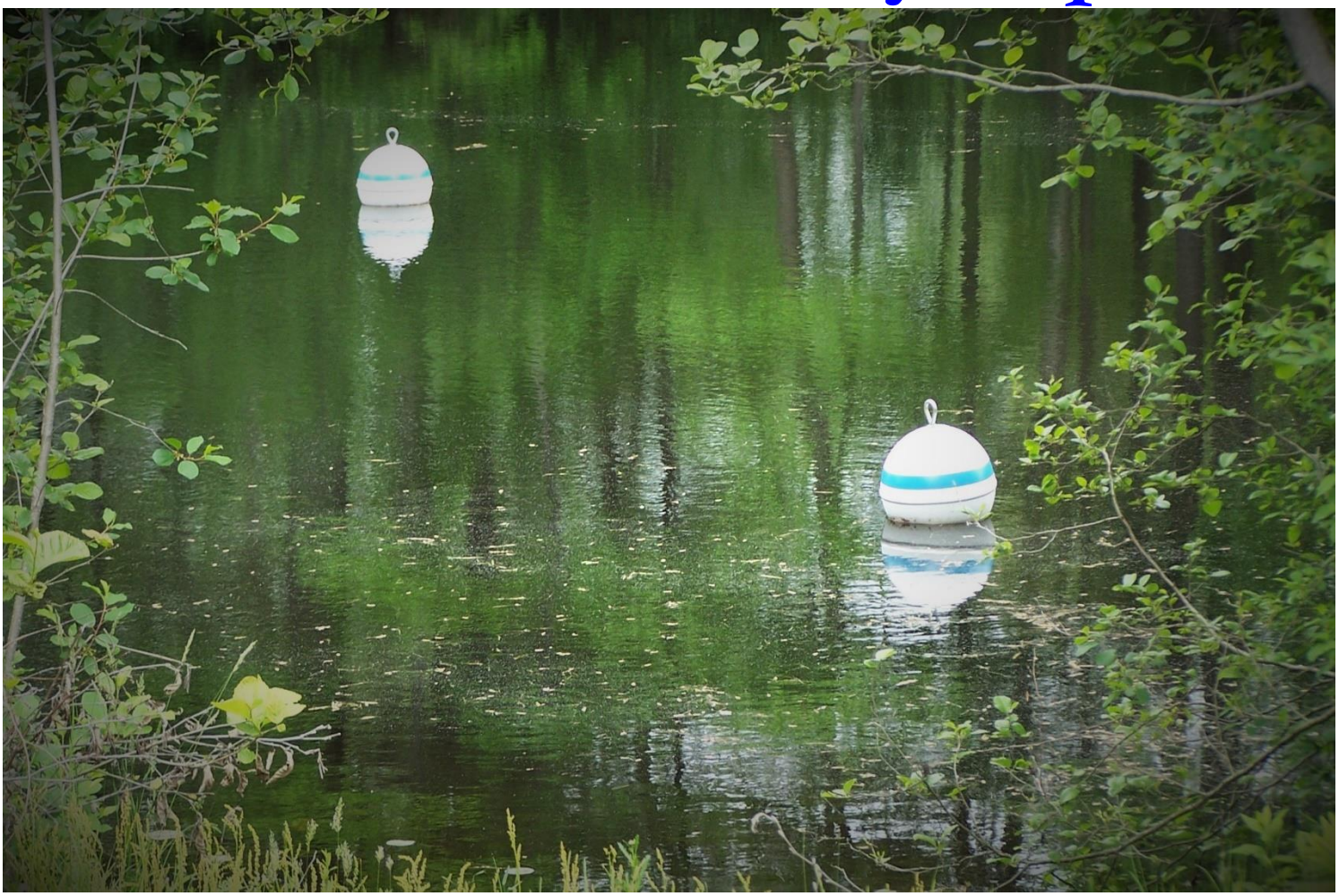
City of Somersworth Water Treatment Facility

9 Wells Street • Somersworth, NH 03878 PWSID # 2151010

2022 Water Quality Report



Salmon Falls River Somersworth, NH

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Drinking Water Sources: Your water is drawn from the Salmon Falls River. It is processed with a ballasted micro-sand clarification system and four multimedia filter beds, chlorinated, pumped into the city's distribution system and stored in a pair of one million-gallon standpipes, ready to flow to every open tap

Our raw river quality fluctuates seasonally, with daily swings in turbidity and color from 1.5NTU to over 20NTU and 40ptcu to 400ptcu; TOC from 3-14mg/l, and pH

Finished water production averages 2.0 million gallons per day (MGD) summer usage and 1.2MGD winter usage, with a 3.2MGD capacity and typically enters the distribution system at less than 0.050NTU, 0ptcu, <2.7mg/l TOC, 7.08 pH, 1.10 mg/l free chlorine, a hardness of 7-20 mg/l (very soft), and manganese of less than .015 mg/l .

The city also has a Gravel Packed Well located on Rocky Hill Rd for emergency use. This well has a permitted capacity for up to 315 gallons per day. The City is currently valve isolated from the well however, we do continue regular required testing and maintenance to maintain it as an active source for the City.

Water Quality Monitoring: Water is one of the world's most precious resources, as such, the City works to maintain the integrity and conservation of our water supply. Comprehensive water quality data may be obtained from the Water Division, please call 603-692-2268 for more information or visit NH Department of Environmental Services (DES)Drinking Water and Groundwater Bureau web site at: www.des.nh.gov/water/drinking-water/public-water-systems

We continually refine and advance water treatment techniques in response to new regulations and our duty to provide safe and clean water for our customers. This requires us to perform extensive water sample collection and analysis for many different waterborne substances including: pH, conductivity, Color, Turbidity, Coliform, Cryptosporidium, Total Organic Carbon; Disinfection Byproducts (TTHM/HAA5); Lead and Copper, Iron, Manganese, Nitrates; Volatile/Synthetic Organic and Inorganic Chemicals (VOC/SOC/IOC); Alkalinity

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the number of certain contaminants in water provided by public water systems. The United States Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Water Quality Data: The table in this report lists all the drinking water contaminants that were detected during the 2021 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk Unless otherwise noted, the data presented in this table is from testing done January 1 through December 31, 2021. The State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

How is my Water? Throughout 2021 we conducted more than 1000 tests for over 175 drinking water compounds. The City of Somersworth is pleased to inform you that the quality of your water far exceeds the standards set by State and Federal regulations.

Violations and Other Information: No Violations. The Water Treatment Plant contains four multimedia filters that are responsible for final filtration of the water after completing the treatment process. During the spring of 2021 the City completed a repair on filter number 1. Filter 1 had developed an issue with the media under drain that maintains the filtration sand. The repair was completed with success and returned to service in June 2021. In the fall of 2021, the water main replacement on Cemetery Rd was completed. This water main was rated poorly on the 2013 water system assessment. The City is in the process of continuing water main replacement on several other streets in the next 4 years that were also identified on the report as in poor condition. This infrastructure was re-evaluated in 2020-2021 to determine the progress of replacement indicated in the 2013 report. These evaluation's aid to determine which water mains are in the highest need of replacement due to age and condition.

This Water Quality Report (also known as a Consumer Confidence Report) details the quality of your drinking water, where it comes from, and where you can get more information. It documents all detected primary drinking water parameters and compares them to their respective standards known as Maximum Contaminant Levels (MCLs). The City of Somersworth is committed to providing you with this information because we want you to be informed.

The Somersworth Water Treatment Facility is a secure, sanitary, safe, and efficient workplace responsible for supplying potable water for consumption, and for fire protection. For more information about water quality, the treatment process, or for a tour of the facility, contact the treatment staff at 603-692-2268. We will be pleased to answer all of your questions.

System Owner- Robert M. Belmore City Manager Owner's Representative- Michael Bobinsky Director of Public Works and Utilities

Fire Hydrant Somersworth, NH

Water Quality and Health Information: Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency (EPA) Safe Drinking Water Hotline 800-426-4791. 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 activity.

Contaminants that may be present in source water before we treat it 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 & herbicides, which may come from a variety of sources such as agriculture, residential use, and urban storm water runoff.

Radioactive contaminants, which are naturally occurring.

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and also can come from gas stations, urban storm water runoff, and septic systems.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guide- lines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Source Water Assessment Summary: DES prepared drinking water source assessment reports for all public water systems between 2000 and 2003 in an effort to assess the vulnerability of each of the State's public water supply sources. Included in the report is a map of each source water protection area, a list of potential and known contamination sources, and a summary of available protection options. The results of the assessment, prepared on, 10/25/2001 and 04/30/2002 are noted below.

- Salmon Falls River, 2 susceptibility factors were rated high, 6 were rated medium, and 4 were rated low.
- GPW (Gravel Packed Well) Rocky Hill Rd, 1 susceptibility factor was rated high, 4 were rated medium, and 7 were rated low.

Note: This information is over 20 years old and includes information that was current at the time the report was completed. Therefore, some of the ratings might be different if updated to reflect current information. At the present time, DES has no plans to update this data.

The complete Assessment Report is available for review at Somersworth Water Treatment Facility. For more information, call primary operator Greg Kirchofer at (603)692-2268 or visit the DES Drinking Water Source website at: https://www.des.nh.gov/climate-and-sustainability/conservation-mitigation-and-restoration/source-water-protection/assessment

Abbreviations: **AL**: Action Level - the concentration of a contaminant which, when exceeded, triggers treatment or other requirements that a water system must follow. **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. **MCL**: Maximum Contaminant Level - the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology. **MRDL:** Maximum residual disinfectant level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants. **MRDLG:** Maximum residual disinfectant level goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants. **TT**: Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water. **NA**: not applicable **ND**: not detectable at testing limit **NTU**: Nephelometric Turbidity Units **PTCU**: Platinum-Cobalt color unit's **pCi/l**: picocuries per liter (radioactivity) **mg/L or ppm**: milligrams per liter or parts per million **ppb**: parts per billion or micrograms per liter **Turbidity** is a measure of the cloudiness of the water. It is monitored by surface water systems because it is a good indicator of water quality and thus helps measure the effectiveness of the treatment process. High turbidity can hinder the effectiveness of disinfectants. Turbidity has no health effects.

Footnotes: ***1 Radon** is a radioactive gas that you cannot see, taste or smell. It can move up through the ground and into a home through cracks and holes in the foundation. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. It is a known human carcinogen. Breathing radon can lead to lung cancer. Drinking water containing radon may cause an increased risk of stomach cancer. Our radon analysis of 1100 piCi/l was found at the well site which is no longer regularly used to supply potable water into the distribution system. ***2 Lead:** 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. This water system is responsible for high quality drinking water but cannot control the variety of materials used in your plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing cold water your tap for at least 30 seconds before using water for drinking or cooking. Do not use hot water for drinking and 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 Safe Drinking Water Hotline or at http://water.epa.gov/drink/info/lead/index.cfm. ***3 A Copper** content in the treated water prior to entering the distribution system is 0.0234mg/l. Corrosion of household plumbing contributes to the higher average.

Analyte/Contaminant	(S)MCL	MCLG	Our Water	Violation (Y/N)	Typical Source of Contamination	Health Effects
Microbiological Contaminants						
Total Coliform Bacteria	<40 samples >1is positive	0	Negative/ Absent	N	Naturally present in environment	*E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems.
Turbidity (NTU)	TT (0.3)	N/A	0.055 (.034-.224)	N	Soil runoff	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
Total Organic Carbon (TOC,ppm)	TT	N/A	1.93 (1.34-2.90)	N	Naturally present in environment	Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.
Radon (pCi/l)*1	None	0	<200	N	Erosion of natural deposits	Radon is a radioactive gas that you can't see, taste or smell. It can move up through the ground and into a home through cracks and holes in the foundation. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. It is a known human carcinogen. Breathing radon can lead to lung cancer. Drinking water containing radon may cause an increased risk of stomach cancer.
Radioactive Contaminants						
Combined Radium 226+228 Emergency back-up well (pi/L)	5	0	0.5	N	Erosion of natural deposits	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity
Compliance GrossAlpha(pi/L) Emergency back-up well	15	0	0.2	N	Erosion of natural deposits	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer
Inorganic Contaminants						
Arsenic Emergency back-up well	10	0	0.0013	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronic production wastes	(5 ppb through 10 ppb) While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems. (Above 10 ppm) Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
Barium (ppm) Treatment plant Emergency back-up well	2	2	0.0050 0.0020	N	Discharge of drilling waste; Discharge from metal refineries; Erosion of natural deposits	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure
Chlorine (ppm)	MRDL=4	MRDLG =4	0.58	N	Water additive used to control microbes	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
Copper (ppm) Emergency back-up well	1.3mg/L (AL)	1.3	0.158a	N	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
Lead (ppb)*2	15ppb (AL)	0	0	N	Corrosion of household plumbing systems; Erosion of natural deposits	(15 ppb in more than 5%) Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).(above 15 ppb) Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
Nitrate (ppm) Emergency back up well	10	10	0.30	N	Run off from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	(5ppm through 10ppm) Nitrate in drinking water at levels above 10ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider. (Above 10 ppm) Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Sodium (ppm) Treatment plant Emergency back-up well	100-250	N/A	47.1 4.73	N/A	We are required to regularly sample for sodium	
Zinc (ppm) Treatment plant Emergency back-up well	5	5	0.0011 0.0250	N	Galvanized pipes	Possible presence of other health related heavy metals
Volatile Organic Contaminants						
TTHMs (Total trihalomethanes) (ppb)	80 ppb	N/A	55 (15 to 89)	N	By-product of drinking water chlorination	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
HAA5 (Haloacetic Acids) (ppb)	60 ppb	N/A	28.75 (15 to 36)	N	By-product of drinking water chlorination	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
Secondary Contaminants						
Chloride (ppm) Treatment plant Emergency back-up well	250	N/A	25 6	Wastewater, road salt, corrosion		Naturally occurring non-toxic
Iron Emergency back-up well (ppm)	.03	N/A	1.78	Geological		
Manganese (ppm) Treatment plant Emergency back up well	.05	N/A	.0041 .0649	Geological		
pH (ppm) Treatment plant Emergency back-up well	6.5-8.5	N/A	7.08 5.93	Precipitation and geology		
Sulfate (ppm) Treatment plant Emergency back up well	250	N/A	69 6	Naturally occurring		
UCMR						
Cryptosporidium- Salmon Falls River Raw			0.00			This is an EPA mandated testing to collect data on our source water. Cryptosporidium is a parasite that causes gastrointestinal illness with-out persistent cough It is removed from drinking water by way of coagulation, flocculation, sedimentation and filtration. This is the treatment process we utilize.
Giardia- Salmon Falls River Raw			0.45			This is an EPA mandated testing to collect data on our source water. Giardia is a microscopic parasite that causes diarrheal illness know as Giardiasis. Giardia is removed from drinking water by coagulation, filtration, and disinfection.
Analyte Anatoxin- A (ug/l) Cylindrospermopsin (ug/l) Total Microcystin (ug/l)			Health Advisory level / Our level .3 / <0.03 .7 / <0.15			The purpose of the monitoring is to provide the EPA a basis for future regulatory actions to protect public health. Adverse health outcomes from exposure to elevated cyanotoxins in drinking water include upset stomach, vomiting and diarrhea as well as liver and kidney damage. The U.S. Environmental Protection Agency published national drinking water Health Advisories for the cyanotoxins, microcystins, and cylindrospermopsin.
Analyte Manganese (ug/l) HAA5 (ug/l) HAA6 (BR) (ug/l) HAA9 (ug/l) Bromide			Reporting Detection Limit .400 .400 .300 .200 5		Average Range 4.24 (2.91-6.02) 3.64 (2.91-5.10) 26.8 (2.68-6.73) 26.8 (21.0-33.2) 18.55 (16.5-20.6)	Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. In 2020 the City of Somersworth participated in the fourth round of the Unregulated Contaminant Monitoring Rule (UCMR 4). For a copy of the results please call primary operator Greg Kirchofer at 603-692-2268.