# Sudbury Water District

## 26th Annual Water Quality Report

## 2023

sudburywater.com

PWS ID NO 3288000

Additional copies of this report are available at our administration office:

**199 Raymond Road**

For more information about how Sudbury Water District
maintains the safety of your drinking water,
and to view previous years' reports go to

**www.sudburywater.com/my-water/water-quality**

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# Sudbury Water District

Dear Customer,

The Sudbury Water District is once again proud to report that water delivered to you has met or exceeded all Federal and State drinking water standards. This year's Water Quality Report includes all water testing from January through December 2023 as well as other important information concerning your drinking water.

We are dedicated to the planning, operations, and maintenance necessary for producing and delivering high quality drinking water for all household, commercial, and community needs. We strive to serve the community in a courteous, efficient, and environmentally sustainable manner. We are enthusiastic about our work and try to instill our values of integrity, professionalism, and teamwork in everything that we do.

While maintaining water quality is critical and is our top priority, other issues such as service reliability, adequacy of supply, preparing for future growth, protecting our water supply, and conservation are also of key importance. We encourage you to take the time to read this report.

If you have any further questions, or would like additional copies of this report, please contact our Administration office at (978) 443-6602.

Sincerely,

**Vincent J. Roy**
Executive Director

**Ted McAuliffe**
Operations Manager

**SEPTEMBER 2023**
EARLY CONSTRUCTION

**NOVEMBER 2023**
MIDWAY CONSTRUCTION

**APRIL 2024**
PFAS FILTRATION VESSELS

**MAY 2024**
PROJECT COMPLETION

# WHY AM I RECEIVING THIS REPORT?

In 1996 the Federal Safe Drinking Water Act mandated all community drinking water systems to prepare and distribute annually to their customers Consumer Confidence Reports (CCR's). In compliance with these regulations the District is pleased to present our 26th Annual Water Quality Report; a snapshot of the drinking water quality provided to you last year. Included are important details about where your water comes from, what it contains and how it compares to state and federal standards.

## WHERE DOES MY WATER COME FROM?

Sudbury Water District (the District) has nine active gravel packed wells, located in three separate aquifers known as Raymond Road, Hop Brook, and Great Meadow. We also have four ground level storage tanks; two are located on Willis Hill and provide the majority of the overall storage capacity of 3.0 and 2.0 Million Gallons (MG), a 1.0 MG storage tank is located on Bigelow Drive and a 0.35 MG storage tank is located on Goodman Hill, with a combined storage capacity total of 6.35 MG.

The wells provide water for potable consumption and fire protection to approximately 95% of all homes and businesses located within the District's public water supply system. The remaining 5% of the community uses privately owned artesian wells for drinking water, of which the District has no authority over. The District's public water system consists of approximately 6,200 service connections, water is distributed throughout town through a network of over 147 miles of water mains (pipes).

The District has a combined maximum pumping capacity of 7.6 million gallons daily (MGD) from the nine wells, however, to ensure adequate water supplies are available for current and future needs MassDEP regulates maximum daily withdrawal rates to a much lower threshold limit. The distribution system is also not designed to operate all the wells simultaneously, distribution serves to maintain system pressure by supplying local water demands during periods of peak consumption. It helps to meet hourly demand fluctuations, minimizing changes in flow rates through supply sources whereas storage helps to meet required fire flows and it provides a volume of water for other emergencies such as a pipeline break or mechanical equipment malfunction. Storage, when properly located, helps to equalize pressures throughout the system. It is necessary to maintain storage levels as near to full as possible in order to maintain maximum available pressure in the distribution system, and to maximize fire flow availability. However, it is also important to allow the tank levels to fluctuate to minimize stagnant conditions and maintain water quality.

As there are variations in the water quality among our nine sources, treatment systems are designed to specifically address the type and number of contaminants present at each site. Following treatment, water is pumped to elevated storage tanks for distribution to your home.

When the storage tanks are full, the pumps at the wells shut off and water is fed to customers from the tanks. As soon as demand brings tank levels to the "start" level, the pumps restart, and the cycle begins again. In order to perform scheduled and emergency maintenance operations, the specific wells selected to be in service at any time will vary. Therefore, the water delivered to your home does not necessarily originate at a single point but rather is a blend of several of our wells.

| Source Name | Mass DEP Source ID # | Source Type | Location of Aquifer |
|---|---|---|---|
| GP Well No 2A | 3288000-02G | Groundwater | Raymond Road |
| GP Well No 3A | 3288000-11G | Groundwater | Hop Brook |
| GP Well No 4 | 3288000-04G | Groundwater | Raymond Road |
| GP Well No 5 | 3288000-05G | Groundwater | Great Meadow |
| GP Well No 6 | 3288000-06G | Groundwater | Raymond Road |
| GP Well No 7 | 3288000-07G | Groundwater | Raymond Road |
| GP Well No 8A | 3288000-12G | Groundwater | Hop Brook |
| GP Well No 9 | 3288000-09G | Groundwater | Raymond Road |
| GP Well No 10 | 3288000-10G | Groundwater | Hop Brook |

## IS MY WATER TREATED?

Our water system makes every effort to provide you with safe and pure drinking water. To improve the quality of the water delivered to you, we treat it to remove several contaminants.

We add disinfectant to protect you against microbial contaminants; we add fluoride to the water to aid in dental health and hygiene; we aerate and filter the water to remove volatile organic contaminants; we filter the water to reduce levels of iron and manganese and we chemically neutralize the water.

## HOW ARE THESE SOURCES PROTECTED?

We are all concerned about the quality of the water we drink. Drinking water wells may be threatened by many potential contaminant sources, including storm runoff, road salting, and improper disposal of hazardous materials. A well's water supply protection area is the land around the well where protection activities should be focused. Each well has a Zone I protective radius and a Zone II protection area. The Zone I for each well is a 400 foot radius to the wellhead. Only water supply activities are allowed in the Zone I. However, many public water supplies were developed prior to MassDEP regulations and contain non-water supply activities such as homes, recreation fields, and public roads. Zone II is the primary recharge area for the aquifer. This area is defined by hydrogeologic studies that must be approved by MassDEP. The District's wells are located within three separate water supply protection areas with portions extending into the towns of Concord and Framingham. The District's Zone II's are a mixture primarily of residential, forest and wetland use, with a small portion consisting of other uses such as recreation, agriculture, commercial and light industry. In 2001 MassDEP completed a Source Water Assessment and Protection (SWAP) Report and identified that our source water has a high susceptibility to contamination, based on the wells are located in aquifers that have non-water supply activities within the Zone I and the absence of hydrogeologic barriers (clay) that can prevent contamination migration. Susceptibility to contamination does not imply poor water quality, it is more a measure of a water supply's potential to become contaminated due to land uses and activities within its recharge area. The District protects your drinking water by using Best Management Practices, regularly inspecting our Zone I, we work with

emergency response teams to ensure that they are aware of the stormwater drainage in our Zone II, we monitor for more than 100 chemicals, disinfecting, filtering, or treating water supplies, and using source protection measures to ensure that safe water is delivered to the tap. To mitigate potential source water contamination, the District has adopted land use controls to meet MassDEP's Drinking Water Regulations and has partnered with the Town to study the feasibility of sewering the commercial section of Route 20. Another example of measures being taken to protect our groundwater sources is the Town's Water Resource Protection Overlay District (WRPOD). The Town has established regulations prohibiting dumping and many other activities that could potentially pollute our drinking water in this wellhead area. The goal of the WRPOD is to (a) to promote the health, safety, and general welfare of the community; (b) to protect, preserve and maintain the existing and potential water supply and ground water recharge areas within the Town; (c) to preserve and protect present and potential sources of water supply for the public health and safety; (d) to conserve the natural resources of the Town; (e) to prevent the pollution of the environment; and (f) to provide for monitoring of ground and surface water quality in areas of present and potential water supply sources to accomplish detection of potential contamination at an early stage, thereby minimizing damage to such sources. MassDEP's SWAP Report for the District can be downloaded online at https://www.sudburywater.com/swap/ and can also be found on the MassDEP website at https://www.mass.gov/doc/northeast-region-source-water-assessment-protection-swap-program-reports/download.

Actual water quality is best reflected by the results of regular water tests, please refer to this water quality report for the most up to date data regarding your drinking water. The District produces high-quality drinking water, while remaining proactive using best management practices to protect our groundwater sources.

## SUBSTANCES FOUND IN 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.

Drinking water, including bottled water, may 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's Safe Drinking Water Hotline 1(800) 426-4791.

## 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 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, and can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

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 guidelines 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.

In order to ensure that tap water is safe to drink, EPA and MassDEP prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. FDA and Massachusetts Department of Public Health regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

## MINIMIZING LEAD EXPOSURE

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 18 materials and components associated with service lines and home plumbing. The District 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 2 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 Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

## CROSS CONNECTION CONTROL PROGRAM

### WHAT IS A CROSS CONNECTION?

A cross-connection is an ACTUAL or POTENTIAL link between the potable water supply and a source of contamination (sewage, chemicals, gas, etc.). This has the potential of becoming a hazardous situation if the contaminant source were to enter (backflow) into the potable water. Backflow occurs when the water flow is reversed, due to a change in pressure, and water flows backwards, into and through the system. Contamination can also occur when the pressure in the drinking water system drops due to occurrences such as water main breaks and heavy water demand causing contaminants to be drawn (back-siphonage) into the potable water system.

### WHERE DO I FIND CROSS CONNECTIONS?

Garden hoses connected to an outside water tap are the most common sources of cross connections in the home. The garden hose creates a hazard when submerged in non-potable water such as a swimming pool or when attached to a chemical sprayer for weed control. The District surveys all industrial, commercial, and municipal facilities to ensure that all cross connections are eliminated or protected by a backflow prevention device. The District is also responsible for inspecting and testing each device to ensure it provides maximum protection.

### WHAT CAN I DO TO PREVENT BACKFLOW?

You can prevent backflow in your home plumbing system by installing an inexpensive hose-bib vacuum breaker on each of your outside water faucets. These vacuum breakers will prevent water from being siphoned back from a polluted or even contaminated water source into your home's water pipes or the public water distribution system. These devices cost about $10 and are available at most hardware stores.

### WHO SHOULD I CONTACT FOR MORE INFORMATION ABOUT BACKFLOW PREVENTION?

The District's Cross Connection Control Program Coordinator, Nigel Dwarika, is happy to address questions or concerns about backflow protection. Call (978) 443-6602 or send an e-mail directly to Nigel at ndwarika@sudburywater.com.

## WHO DO I CONTACT IF I HAVE CONCERNS ABOUT MY LOCAL DRINKING WATER?

The District is staffed by seven field personnel and four administrative staff, all of whom are dedicated to bringing into your home the highest quality of drinking water. Administration and field personnel are available weekdays, during regular business hours, to meet and address public supply needs. Should you have questions or concerns about your drinking water contact the District at (978) 443-6602 or visit our website www.sudburywater.com, regularly updated to include important notices, meeting dates, water quality tests, and answers to frequently asked questions. Customers can also access real time account information 24-7 from any internet connected device through our customer web portal https://sudburywater.epayub.com. Simply register your account to view and download past invoices, account details, update communication preferences, make a payment or enroll in autopay. Executive Director, Vincent Roy, is also available during regular business hours by phone (978) 443-6602 or email vroy@sudburywater.com. Though office hours are limited the District always has an experienced field technician on-call, 24-7, 365 days a year, for emergency and after-hour matters. Should you experience or observe a water emergency after business hours call 9-1-1 and request the Sudbury Police Department to dispatch an on-call water technician to address the matter.

## ARE THERE OPPORTUNITIES FOR PUBLIC PARTICIPATION?

The Board of Water Commissioners meets bi-weekly at 5:00 p.m. at our Administration office located at 199 Raymond Road to discuss and vote on issues concerning your drinking water supply. Director Roy keeps the Commissioners up to date on current projects and developing situations. You are invited to participate in this public forum and become more knowledgeable about your drinking water as well as bringing your concerns to the attention of the Commissioners and Director Roy. Contact our Administration office at (978) 443-6602 to obtain the bi-weekly Commissioners meeting schedule or view our meeting calendar online at www.sudburywater.com.

## WATER CONSERVATION

MassDEP has mandated the District to implement restrictions on outdoor water use. Though not popular with many residents, the restrictions are similar to what many neighboring communities are subject to. The purpose of the restrictions is to ensure an adequate supply of water for drinking and fire protection and to protect the quality and quantity in local aquatic habitats such as ponds, rivers, and wetlands.

By using water more efficiently, you can help preserve water supplies for future generations, save money, and protect the environment. By changing a few habits, you will help protect your water supply and save on water charges. Here are some outdoor water saving tips that residents can implement in their homes.

- Water your lawn only as needed. Too frequent watering can weaken a lawn by encouraging shallow roots. The general rule of thumb is one inch per week including rain.
- Timing is critical for lawn watering. Water your lawn in the early morning or late evening to avoid evaporation.
- Install Mulch to keep roots cool and moist. Mulch serves as a ground cover that reduces water evaporation from the soil.
- Keep your blades sharp and high. Raising your lawn mower blade prevents tearing of the grass. Longer grass provides shade for the roots and helps reduce water loss.
- Use shut off-nozzles on hoses and automatic shut-off devices on irrigation systems. Unattended hoses can use ten (10) gallons or more per minute.
- Install a soil moisture sensor complimented with a rain sensor that turns automatic sprinkler systems off when the soil contains sufficient moisture and when it is raining.

## IMPROVEMENTS TO THE WATER DISTRIBUTION SYSTEM IN 2023

Each part of the water system needs routine maintenance to maintain a safe and dependable water supply. Listed are some of the projects undertaken by the District in 2023.

- Construction of the Raymond Road Water Treatment Plant PFAS Filtration System was completed on May 30, 2024.
- 14 new fire hydrants were installed on dead-end roads allowing added protection for fire safety and a means to improve water quality by adding a source to clean stagnant water from the dead-end mains.
- EPA and MassDEP mandated Lead Service Line Inventory is underway and will be completed and publicly accessible through the District's website www.sudburywater.com before the October 2024 deadline.
- Awarded a contract for construction of a new PFAS Filtration System at the East Street Water Treatment Plant.
- Replaced water main gate valves at the intersections of Marlboro Road and Willis Road.
- Conducted a Leak Detection Survey of the entire water system. The survey is necessary to locate and eliminate leaks from the system and prevent lost revenue.
- Completed the Annual Lead and Copper Monitoring Program.
- Improvements made to the Water GIS Mapping System.

## FUTURE PROJECTS FOR 2024

- Construction of a new PFAS Filtration System at the East Street Water Treatment Plant.
- Conduct an Analysis Study for Well 5 for future use, this project is funded through the State's Housing Choice Grant program.
- Conduct a Vertical Asset Management Plan to integrate facilities into our GIS system. Completion of this project will better enable management on scheduling maintenance of equipment within each of our facilities and long-term planning for equipment replacement, this project is funded through MassDEP Asset Management Grant program.
- Hydrant Replacement Program, this year's project will involve adding 20 new fire hydrants on dead-end roads where no fire protection currently exists.

We hope you find this report informative, allowing you the opportunity to become familiar with your public water supply. The Board of Water Commissioners and the District's employees strive to achieve the highest quality drinking water together with outstanding customer service. We invite your comments and questions regarding the District, its operation, and this Annual Water Quality Report. Questions, comments, or concerns may be addressed by contacting (978) 443-6602.

**Board of Water Commissioners,**

Robert E. Boyd, Jr., Chairperson

Robert H. Sheldon

Joshua M. Fox

## WHAT DOES THIS DATA REPRESENT?

The water quality information presented in the following table(s) is from the most recent round of testing done in accordance with the 1996 Safe Drinking Water Act Amendments. All data shown was collected during the last calendar year (January-December 2023) unless otherwise noted. We monitor for certain contaminants less than once per year because concentrations of those certain contaminants are not expected to vary significantly from year to year. As a result, some of the District's analytical data represented in the below table is more than a year old. For those contaminants, the date of the last sample is shown in the table.

**Regulated Contaminants** are those for which the EPA has set legal limits on the levels allowed in drinking water. The limits reflect both the level that protects human health and the level that water systems can achieve using the best available technology.

| **Radioactive Contaminant** | Date Collected | Highest Result | Range Detected | MCL or MRDL | MCLG or MRDLG | Violation (Yes/No) | Possible Source of Contamination |
|---|---|---|---|---|---|---|---|
| Gross Alpha emitter (pCi/L) | 09/13/23 | 1.08 | ND - 1.08 | 15 pCi/l | 0 | No | Erosion of natural deposits. |
| Radium 226 & 228 (pCi/L) (combined values) | 01/07/20 | 1.0 | 0.3-1.0 | 5 pCl/l | N/A | No | Erosion of natural deposits. |

| **Inorganic Contaminant** | Date Collected | Highest Result | Range Detected | MCL or MRDL | MCLG, MRDLG or ORSG | Violation (Yes/No) | Possible Source of Contamination |
|---|---|---|---|---|---|---|---|
| Arsenic (ppb) | 05/04/21 | 0.0011 | N/A | 10 ppb | N/A | No | Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes. |
| Barium (ppm) | 05/04/21 | 0.048 | ND-0.048 | 2 ppm | 2 ppm | No | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits. |
| Chlorine (ppm) (free, total or combined) | Monthly 2023 | 0.60 | 0.41-0.60 | 4 ppm | 4 ppm | No | Water additive used to control microbes. |
| Cyanide (ppm) | 05/04/21 | ND | N/A | 0.2 ppm | 0.2 ppm | No | Discharge for steel and metal factories/ Discharge from plastic and fertilizer factories. |
| Fluoride (ppm) | Monthly 2023 | 0.8 | 0.4-0.8 | 4 ppm [1] | 4 ppm | No | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories. |
| Nitrate (ppm) | 05/31/23 | 4.5 | 0.58-4.5 | 10 ppm | 10 ppm | No | Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits. |

| **Inorganic Contaminant** (Continued) | Date Collected | Highest Result | Range Detected | MCL or MRDL | MCLG, MRDLG or ORSG | Violation (Yes/No) | Possible Source of Contamination |
|---|---|---|---|---|---|---|---|
| Perchlorate (ppb) | 09/13/23 | 0.25 | 0.13-0.25 | 2 ppb | N/A | No | Rocket propellants, fireworks, munitions, flares, blasting agents. |
| PFAS6 (ppt) | Monthly 2023 | 14.5 | 4.8 - 14.5 | 20 ppt | N/A | No | Discharges and emissions from industrial and manufacturing sources associated with the production or use of these PFAS, including production of moisture and oil resistant coatings on fabrics and other materials. Additional sources include the use and disposal of products containing these PFAS, such as fire-fighting foams. |
| PFAS 6 Health Effects | Some people who drink water containing these PFAS in excess of the MCL may experience certain adverse effects. These could include effects on the liver, blood, immune system, thyroid, and fetal development. These PFAS may also elevate the risk of certain cancers. | | | | | | |

| **Contaminant** | Date(s) Collected | 90th Percentile | Action Level/MCL | MCLG | No of Sites Sampled | No of Sites Above Action Level | Possible Source of Contamination |
|---|---|---|---|---|---|---|---|
| [2] Copper (ppm) | 6/06/23 | 0.15 | 1.3 ppm | 1.3 ppm | 30 | 0 | Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives. |
| [2] Lead (ppb) | 6/06/23 | 0.0038 | 15 ppb | 0 | 30 | 0 | Corrosion of household plumbing systems; Erosion of natural deposits. |

| **Volatile Organic Contaminant** | Date Collected | [3] Highest RAA | Range Detected | MCL or MRDL | MCLG, MRDLG or ORSG | Violation (Yes/No) | Possible Source of Contamination |
|---|---|---|---|---|---|---|---|
| Haloacetic Acids (ppb) (HAA5) | Quarterly 2023 | 27 | 2.5 - 41 | 60 ppb | 60 ppb | No | By-product of drinking water disinfection. |
| Total Trihalomethanes (ppb) | Quarterly 2023 | 59 | 5.5 - 82 | 80 ppb | N/A | No | By-product of drinking water chlorination. |

**Unregulated Contaminants** are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining their occurrence in drinking water and whether future regulation is warranted.

| **Unregulated Contaminants** | Date(s) Collected | Highest Result Detected | Range Detected | ORSG | Possible Source of Contamination |
|---|---|---|---|---|---|
| Bromodichloromethane (ppb) | Quarterly 2023 | 24.5 | 2.1-24.5 | N/A | Trihalomethane; by-product of drinking water chlorination. |
| Bromoform (ppb) | Quarterly 2023 | ND | ND | N/A | Trihalomethane; by-product of drinking water chlorination. |
| Chloroform (ppb) | Quarterly 2023 | 47.1 | 3.4-47.1 | 70 ppb | A by-product of drinking water chlorination (regulated collectively with total trihalomethanes ; in non-chlorinated sources, chloroform may be naturally occurring. |
| Dibromochloromethane (ppb) | Quarterly 2023 | 9.2 | ND-9.2 | N/A | Trihalomethane; by-product of drinking water chlorination. |

| | Date Collected | Highest Result Detected | Range Detected | MCL or MRDL | MCLG, MRDLG or ORSG | Violation (Yes/No) | Possible Source of Contamination |
|---|---|---|---|---|---|---|---|
| Sodium (ppm) | 05/11/2021 | 62 | 8.7-63.6 | N/A | 20 ppm | No | Natural sources; runoff from use as salt on roadways; by-product of treatment process. |
| Sodium Health Effects | Some people who drink water containing sodium at high concentrations for many years could experience an increase in blood pressure. | | | | | | |

**Secondary Contaminants** are non-mandatory water quality standards. The EPA does not enforce "secondary maximum contamination levels" or SMCL. They are established only as guidelines to assist public water systems in managing their drinking water for aesthetic considerations such as taste, color, and odor. These contaminants are not considered to present a risk to human health at the SMCL.

| **Secondary Contaminants** | Date(s) Collected | Range Detected | SMCL | ORSG | Possible Source of Contamination |
|---|---|---|---|---|---|
| Hardness (ppm) | 05/31/23 | 66-198 | N/A | N/A | Not applicable (No SMCL) |
| Iron (ppm) | 05/31/23 | 0.0-0.50 | 0.3 ppm | N/A | Natural and industrial sources as well as aging and corroding distribution systems and household pipes. |
| Manganese (ppm) | 05/31/23 | 0.0-0.076 | 0.05 ppm | 0.3 ppm | Erosion of natural deposits; discharge from industrial uses. |
| Manganese Health and/or Aesthetic Effects | Infants and children who drink water containing manganese at high concentrations may have learning behavior problems. People with liver disease who drink water containing manganese at high concentrations may have neurological disorders. | | | | |
| pH | Daily 2023 | 7.0-8.5 | 6.5 - 8.5 | N/A | Low pH: bitter metallic taste; corrosion. High pH: slippery feel; soda taste; deposits. |

**KEY:**

**90th Percentile:** Out of every 10 homes sampled, 9 were at or below this level. Tis number is compared to the action level to determine lead and copper compliance.

**Action Level:** The concentration of a contaminant, which if exceeded, triggers treatment or other requirements that a water system must follow.

**Maximum Contamination Level or (MCL):** 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.

**Maximum Contamination Level Goal or (MCLG):** Maximum Contaminant Level Goal or MCLG means the level of a contaminant in drinking water at or 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 of expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**N/A:** Not Applicable **ND:** Not Detected

**ORSG:** This is the concentration of a chemical in drinking water at or below which adverse health effects are unlikely to occur after chronic (lifetime) exposure. If exceeded, it serves as an indicator of the potential need for further action.

**pCi/L:** Picocuries per liter (a measure of radioactivity)

**PFAS:** Per- and polyfluoroalkyl substances

**ppm:** Parts per million, the same as milligrams per liter or mg/L (One ppm is equivalent to one drop of water in a 10 gallon tank).

**ppb:** Parts per billion, the same as micrograms per liter or ug/L (One ppb is equivalent to one drop of water in a 10,000 gallon swimming pool).

**ppt:** Parts per trillion, the same as or nanograms per liter or (ng/L) (One ppt is equivalent to one grain of sand in 35 Junior Olympic sized swimming pools holding 288,000 gallons of water each or 10,000,000 gallons of water combined).

**PWS:** Public water system

**RAA:** Running Annual Average

**Secondary Maximum Contaminant Level (SMCL):** These standards are developed to protect aesthetic qualities of drinking water and are not health based.

**SWAP:** Source Water Assessment and Protection Program

**Ug/L:** Micrograms per liter (the same as parts per billion or ppb)

*(1) Fluoride also has a secondary contaminant level (SMCL) of 2ppm to better protect human health.*
*(2) The data presented in this report is from the most recent testing done in accordance with federal regulations for the lead and copper rule.*
*(3) Highest Running Annual Average (RAA) = highest running annual average of four consecutive quarters.*

An environmentally friendly electronic alternative to this traditional paper report can be found online at www.sudburywater.com/my-water/water-quality, which significantly reduces waste by saving paper, ink, and other production costs.

**For more information about how Sudbury Water District maintains the safety of your drinking water and to view previous year's reports go to www.sudburywater.com/my-water/water-quality.**

Sudbury Water District

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