

# ANNUAL WATER QUALITY REPORT

Reporting Year 2022



***Presented By***





## Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2022. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. We remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users. The City of Sycamore is committed to providing safe drinking water and reliable service to our customers. Please remember that we are always available should you ever have any questions or concerns about your water.



## Where Does My Water Come From?

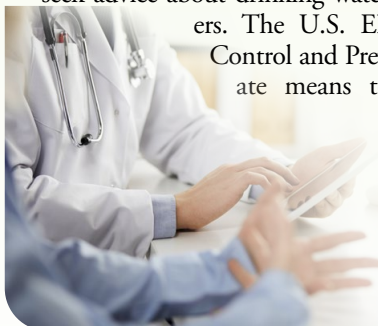
The City of Sycamore has five wells that draw water from deep sandstone aquifers. These wells are capable of pumping approximately 6.6 million gallons per day. All wells are equipped with backup generators for emergency conditions. The water pressure for Sycamore's system is provided by two elevated storage tanks with a capacity of 2.25 million gallons.

## Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection

“Thousands have lived without love, not one without water.”

—W.H. Auden



by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.

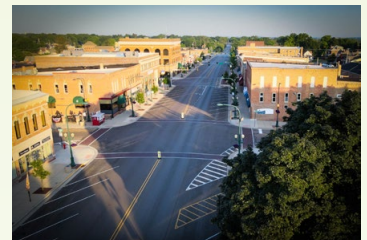


## Vulnerability Waiver

Due to favorable monitoring history, aquifer characteristics, and inventory of potential sources of contamination, our water supply was issued a vulnerability waiver for volatile organic compounds and synthetic organic compounds for some city wells. The vulnerability waiver reduces the amount of testing that is required at the city wells.

## Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing



is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains.

Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns,

they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen and disinfectant levels and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use and avoid using hot water to prevent sediment accumulation in your hot water tank. Please contact us if you have any questions or if you would like more information on our water main flushing schedule.



## Monitoring Violation Information

### Combined Radium 226 + 228 and Gross Alpha Particles

Violation Type: Routine, Major

Date of Violation: April 1 through June 30, 2022 (sample collection period)

Violation Explanation: The radium and gross alpha particle samples were collected and submitted to the laboratory within the specified sampling period. The laboratory did not submit the results to the Illinois EPA by the required reporting date. Once the laboratory analysis was completed, the results were submitted to the Illinois EPA. The results were below the maximum contaminant level.



### Which Household Activity Wastes The Most Water?

Most people would say the majority of water use comes from showering or washing dishes; however, toilet flushing is by far the largest single use of water in a home (accounting for 40% of total water use). Toilets use about 4–6 gallons per flush, so consider an ultra-low-flow (ULF) toilet, which requires only 1.5 gallons.

## Community Participation

Sycamore City Council meetings are held on the first and third Monday of every month at 308 West State Street. For more information, please visit [www.cityofsycamore.com](http://www.cityofsycamore.com)

## Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water, but we 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 Safe Drinking Water Hotline at (800) 426-4791 or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).



## Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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 by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

## PFAS Statewide Investigation

In 2021 we participated in the State of Illinois investigation for per- and polyfluoroalkyl substances (PFAS). We tested for 18 PFAS compounds, and none were detected in our finished drinking water. For more information about PFAS health advisories, visit <https://epa.illinois.gov/topics/water-quality/pfas.html>.

**QUESTIONS?** For additional information concerning the public water supply, please contact Matt Anderson, Director of Public Works, at (815) 895-3545. Office hours are Monday through Friday, 7:00 a.m. to noon and 1:00 p.m. to 4:00 p.m.



## Source Water Assessment

To determine Sycamore's susceptibility to groundwater contamination, information obtained during a well site survey performed by the Illinois Rural Water Association was reviewed. Based on this information, 74 potential sources of contamination were identified within the survey area of this water supply's wells. The Illinois EPA does not consider the city's source water susceptible to contamination. This determination is based on a number of criteria including monitoring conducted at the wells, monitoring conducted at the entry point to the distribution system, and the available hydrogeological data on the wells.

In anticipation of the U.S. EPA's proposed Ground Water Rule, the Illinois EPA has determined that the water supply is not vulnerable to viral contamination. This determination is based upon the completed evaluation of the following criteria during the vulnerability waiver process: the community's wells are properly constructed with sound integrity and proper site conditions; a hydrogeological barrier exists that should prevent pathogen movement; all potential routes and sanitary defects have been mitigated such that the source water is adequately protected; monitoring data did not indicate a history of disease outbreak; and a sanitary survey of the water supply did not indicate a viral contamination threat. Because the community's wells are constructed in a confined aquifer, which should minimize the movement of pathogens into the wells, well hydraulics were not considered to be a significant factor in the vulnerability determination. Hence, well hydraulics were not evaluated for this groundwater supply.

To view a summary version of the completed source water assessments, including Importance of Source Water; Susceptibility to Contamination Determination; and documentation and recommendation of Source Water Protection Efforts, visit <http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl>.

# Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2022	15	0	9	2.2–9.01	No	Erosion of natural deposits
Barium (ppm)	2021	2	2	1.38	1.38–1.38	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2022	[4]	[4]	1	0.32–2.1	No	Water additive used to control microbes
Combined Radium (pCi/L)	2022	5	0	5	1.234–6.43	No	Erosion of natural deposits
Fluoride (ppm)	2022	4	4	0.74	0.57–0.80	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs] (ppb)	2022	60	NA	6	6–6.16	No	By-product of drinking water disinfection
Iron (ppb)	2021	1,000 <sup>1</sup>	NA	135	135–135	No	Erosion from naturally occurring deposits
Sodium (ppm)	2021	NA <sup>2</sup>	NA	11.7	11.7–11.7	No	Erosion of naturally occurring deposits; Used in water softener regeneration
Total Coliform Bacteria (positive samples)	2022	TT	NA	2	NA	No	Naturally present in the environment
TTHMs [total trihalomethanes] (ppb)	2022	80	NA	11.5	8.11–11.5	No	By-product of drinking water disinfection
Tap water samples were collected for lead and copper analyses from sample sites throughout the community							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2022	1.3	1.3	0.57	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2022	15	0	6	0/30	No	Lead service lines; Corrosion of household plumbing systems, including fittings and fixtures; Erosion of natural deposits

<sup>1</sup>Iron is not currently regulated by the U.S. EPA. However, the state has set an MCL for supplies serving a population of 1,000 or more.  
<sup>2</sup>Sodium is not currently regulated by the U.S. EPA. However, the state has set an MCL for this contaminant for supplies serving a population of 1,000 or more.

# Definitions

- 90th %ile:** The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.
- AL (Action Level):** The concentration of a contaminant that triggers treatment or other required actions by the water supply.
- 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.
- 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.
- 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.
- NA:** Not applicable.
- pCi/L (picocuries per liter):** A measure of radioactivity.
- ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).
- ppm (parts per million):** One part substance per million parts water (or milligrams per liter).
- TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.