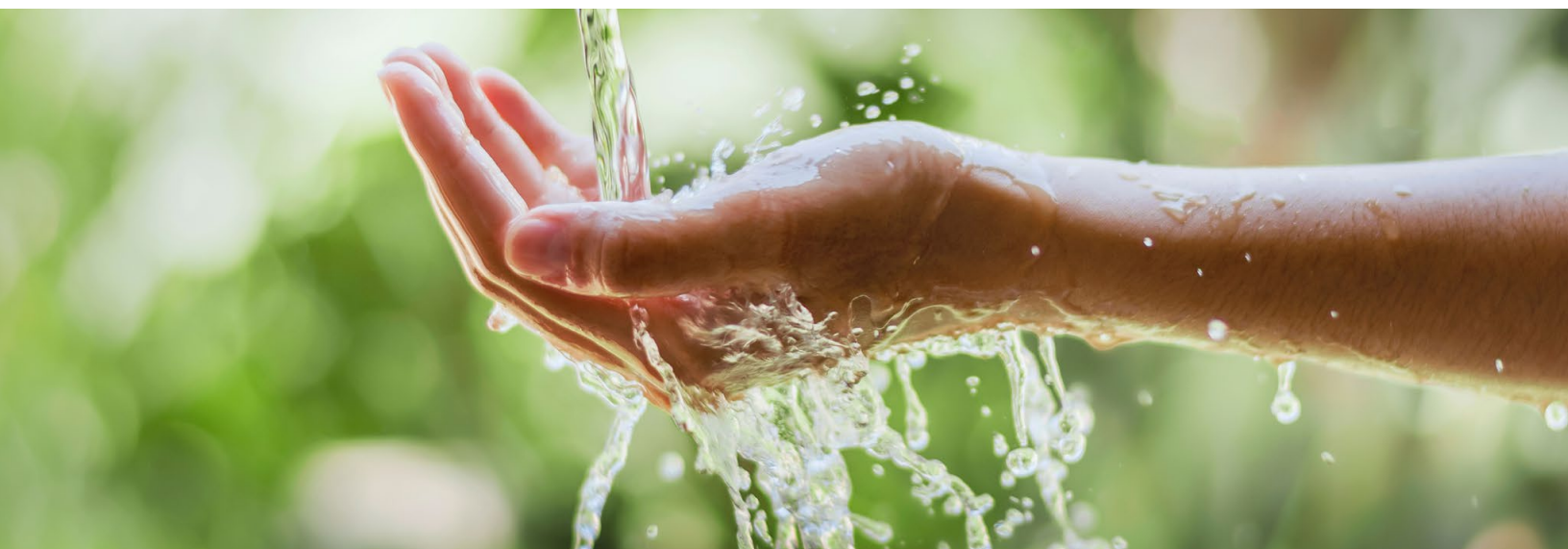




# ANNUAL WATER QUALITY REPORT

Reporting Year 2023



***Presented By***



PWS ID#: IL0370550



## Our Commitment

We are pleased to present to you this year's annual water quality report. This report is a snapshot of last year's water quality covering all testing performed between January 1 and December 31, 2023. Included are details about your source of water, what it contains, and how it compares to standards set by regulatory agencies.

Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water and providing you with this information because informed customers are our best allies.



## Water Treatment Process Overview

Raw water from the wells is sent to Water Remediation Technology (WRT) filters for radium removal. After the water passes through the WRT filters, the treatment chemicals are added. First, a phosphate blend is added as a corrosion inhibitor and to sequester iron and manganese. Fluoride is added to promote healthy teeth as required by the Illinois Department of Public Health. Last, chlorine is added for disinfection.

The City of Sycamore is in the process of constructing a hydrous manganese oxide treatment plant for radium removal at Well 7. The plant is anticipated to be completed by the end of 2024 or early 2025.

## 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. Environmental Protection Agency (EPA)/Centers for Disease Control and Prevention (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 at (800) 426-4791 or [water.epa.gov/drink/hotline](https://www.water.epa.gov/drink/hotline).



## 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 total capacity of 2.25 million gallons.



## PFAS Statewide Investigation

In 2021 we participated in the State of Illinois PFAS Statewide Investigation. Eighteen per- and polyfluoroalkyl substances (PFAS) compounds were sampled, and none were detected in our finished drinking water. For more information about PFAS health advisories, please see [www2.illinois.gov/epa/topics/water-quality/pfas/Pages/pfas-healthadvisory.aspx](https://www2.illinois.gov/epa/topics/water-quality/pfas/Pages/pfas-healthadvisory.aspx).

## 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 required.

**QUESTIONS?** Additional information concerning the public water supply is available by contacting 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..

## Level 1 Assessment Update

Coliforms are bacteria that are naturally present in the environment and used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct an assessment to identify and correct any problems.

During the past year, we were required to conduct one Level 1 assessment. One Level 1 assessment was completed. No corrective actions were identified or required as a result of the Level 1 assessment.

## 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 (IEPA) 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 and the entry point to the distribution system and the available hydrogeological data.

In anticipation of the U.S. EPA's proposed Ground Water Rule, IEPA 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 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 and were not evaluated for this groundwater supply.

To view a summary version of the completed source water assessments, which includes importance of source water, susceptibility to contamination determination, and documentation and recommendation of source water protection efforts, visit [epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl](http://epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl).

In July 2023, the city submitted an updated Source Water Protection Report to the IEPA. The submittal is still under review and has not yet been approved; the submitted report can be found at [cityofsycamore.com/water](http://cityofsycamore.com/water).

## 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.



## 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## 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. Although *E. coli* was detected, the water system is not in violation of the *E. coli* maximum contaminant level (MCL). All repeat confirmation samples were negative for E.coli.

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)	2023	15	0	9	0.871–11.3	No	Erosion of natural deposits
Arsenic (ppb)	2023	10	0	1.13	0.239–1.13	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2023	2	2	1.03	0.887–1.03	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2023	[4]	[4]	1	0.35–1.5	No	Water additive used to control microbes
Chromium (ppb)	2023	100	100	0.943	0.301–0.943	No	Discharge from steel and pulp mills; Erosion of natural deposits
Combined Radium (pCi/L)	2023	5	0	4	ND–6.99	No	Erosion of natural deposits
<i>E. coli</i> (positive samples)	2023	See footnote <sup>1</sup>	0	1	NA	No	Human and animal fecal waste
Fluoride (ppm)	2023	4	4	0.64	0.51–0.81	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 1 (ppb)	2023	60	NA	10.87	5.1–10.87	No	By-product of drinking water disinfection
Iron (ppb)	2023	1,000 <sup>2</sup>	NA	183	168–183	No	Erosion from naturally occurring deposits
Manganese (ppb)	2023	150 <sup>3</sup>	NA	4.85	4.61–4.85	No	Erosion of naturally occurring deposits
Selenium (ppb)	2023	50	50	2.06	0.716–2.06	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Sodium (ppm)	2023	NA <sup>4</sup>	NA	10.6	7.6–10.6	No	Erosion of naturally occurring deposits; Used in water softener regeneration
Total Coliform Bacteria (positive samples)	2023	TT	NA	2 <sup>5</sup>	NA	No	Naturally present in the environment
TTHMs [total trihalomethanes]–Stage 1 (ppb)	2023	80	NA	10.34	6.87–10.34	No	By-product of drinking water disinfection
Zinc (ppb)	2023	5,000 <sup>6</sup>	NA	2.97	1.61–2.97	No	Naturally occurring; Discharge from metal factories
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)	2023	1.3	1.3	0.75	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2023	15	0	4.9	0/30	No	Lead service lines; Corrosion of household plumbing systems, including fittings and fixtures; Erosion of natural deposits

<sup>1</sup> Routine and repeat samples are total coliform-positive and either *E. coli*-positive, or system fails to take repeat samples following *E. coli*-positive routine sample, or system fails to analyze total coliform-positive repeat sample for *E. coli*.

<sup>2</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>3</sup> Manganese 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>4</sup> Sodium is not currently regulated by the U.S. EPA; The state has NOT set an MCL for this contaminant.

<sup>5</sup> Repeat confirmation samples were negative.

<sup>6</sup> Zinc 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.





## Count on Us

Delivering high-quality drinking water to our customers involves far more than just pushing water through pipes. Water treatment is a complex, time-consuming process. Because tap water is highly regulated by state and federal laws, water treatment plant and system operators must be licensed and are required to commit to long-term, on-the-job training before becoming fully qualified. Our licensed water professionals have a basic understanding of a wide range of subjects, including mathematics, biology, chemistry, and physics. Some of the tasks they complete on a regular basis include:

- Operating and maintaining equipment to treat the water.
- Monitoring and inspecting machinery, meters, gauges, and operating conditions.
- Conducting tests and inspections on water and evaluating the results.
- Maintaining optimal water chemistry.
- Applying data to formulas that determine treatment requirements, flow levels, and concentration levels.
- Documenting and reporting test results and system operations to regulatory agencies.
- Serving our community through customer support, education, and outreach.

So the next time you turn on your faucet, think of the skilled professionals who stand behind each drop.

## 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.

**Level 1 Assessment:** A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

**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.

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**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.

