

# ANNUAL WATER QUALITY REPORT

Reporting Year 2024



*Presented By*  
**Village of Carpentersville**



## 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, 2024. 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.

## Where Does My Water Come From?

The Village of Carpentersville residents are fortunate because we enjoy an abundant water supply from the Carpentersville Aquifer. The village has four sand-and-gravel wells that pump water from approximately 200 feet deep in the Carpentersville Aquifer to the Village of Carpentersville water treatment facility. The water treatment facility was constructed in the early 1960s to treat the water from all the village's groundwater wells before providing it to our residents. The Village of Carpentersville has approximately 5.5 million gallons of finished water storage to ensure our residents have an abundant source of water at all times. Our treatment facility provides roughly 900 million gallons of clean drinking water to our residents every year.

## Source Water Assessment

The source water assessment for our supply has been completed by the Illinois EPA. If you would like a copy of this information, please stop by Village Hall or call our water superintendent at (847) 551-3492. To view a summary version of the completed source water assessments, including the importance of source water, susceptibility to contamination determination, and documentation/recommendation of source water protection efforts, you may access the Illinois EPA website at [epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl](http://epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl).

To determine Carpentersville's susceptibility to groundwater contamination, the following document was reviewed: a well site survey published in 1990 by the Illinois EPA. Based on the information obtained in this document, three potential sources of groundwater contamination could pose a hazard to groundwater used by Carpentersville's community water supply. These include one auto repair shop, one store/sales, and one belowground fuel storage tank. Information provided by the Carpentersville community water supply indicates that the following potential source is currently inactive: belowground storage of petroleum has been removed. In addition, the information provided by the Leaking Underground Storage Tank and Remedial Project Management sections of Illinois EPA indicated sites with ongoing remediation that might be of concern.



Based on this information, the Illinois EPA has determined that the Carpentersville community water supply's source water is susceptible to contamination. The Illinois EPA is in the process of delineating five-year recharge area calculations for Carpentersville's wells. The land use within the areas around the wells was analyzed as part of this susceptibility determination. This land use includes open space, residential, and commercial properties.

## 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 can be particularly at risk from infections. These people should seek advice about drinking water from their health-care providers. U.S. Environmental Protection Agency (U.S. 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 [epa.gov/safewater](http://epa.gov/safewater).



## PFAS Statewide Investigation

In 2021 we participated in the state of Illinois per- and polyfluoroalkyl substances (PFAS) statewide investigation. Eighteen PFAS compounds were sampled, and none were detected above laboratory limits in our finished drinking water. For more information about PFAS health advisories, visit [www2.illinois.gov/epa/topics/water-quality/pfas/Pages/pfas-healthadvisory.aspx](http://www2.illinois.gov/epa/topics/water-quality/pfas/Pages/pfas-healthadvisory.aspx).

## QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Bryan Scheel, Water Division Superintendent, at (847) 551-3492.

We want our valued residents to be informed about their water quality. If you would like to learn more, please feel welcome to attend any of our regularly scheduled meetings.

## Substances That Could Be in 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. 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 occur naturally in the soil or groundwater 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 can also come from gas stations, urban stormwater runoff, and septic systems.

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

To ensure that tap water is safe to drink, U.S. EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. 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 contaminants does not necessarily mean that water poses a health risk. More information about contaminants and potential health effects can be obtained by contacting the U.S. EPA by calling the Safe Drinking Water Hotline at (800) 426-4791 or visiting [epa.gov/safewater](http://epa.gov/safewater).

## Lead in Home Plumbing

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 Village of Carpentersville is responsible for providing high-quality drinking water and removing lead pipes but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk.



Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, or doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute-accredited certifier to reduce lead in drinking water. If you are concerned about lead and wish to have your water tested, contact the Village of Carpentersville and Water Superintendent Bryan Scheel at (847) 551-3492. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at [epa.gov/safewater/lead](http://epa.gov/safewater/lead).

To address lead in drinking water, public water systems were required to develop and maintain an inventory of service line materials by October 16, 2024. Developing an inventory and identifying the location of lead service lines (LSL) is the first step for beginning LSL replacement and protecting public health. The lead service inventory may be accessed at [cville.org/509/Lead-Service-Line-Replacement-Information](http://cville.org/509/Lead-Service-Line-Replacement-Information). Please contact us if you would like more information about the inventory or any lead sampling that has been done.

## Water Treatment Process

The treatment process consists of a series of steps. First, raw water is drawn from our water source and sent to an aeration tank, which allows for oxidation of high iron levels. The water then goes to a mixing tank where polyaluminum chloride and soda ash are added. The addition of these substances causes small particles called floc to adhere to one another, making them heavy enough to settle into a basin from which sediment is removed. Chlorine is then added for disinfection. At this point, the water is filtered through layers of fine coal and silicate sand. As smaller suspended particles are removed, turbidity disappears and clear water emerges.

Chlorine is added again as a precaution against any bacteria that may still be present. (We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste.) Finally, soda ash (to adjust the final pH and alkalinity), fluoride (to prevent tooth decay), and a corrosion inhibitor (to protect distribution system pipes) are added before the water is pumped to underground reservoirs, water towers, and your home or business.

## 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.

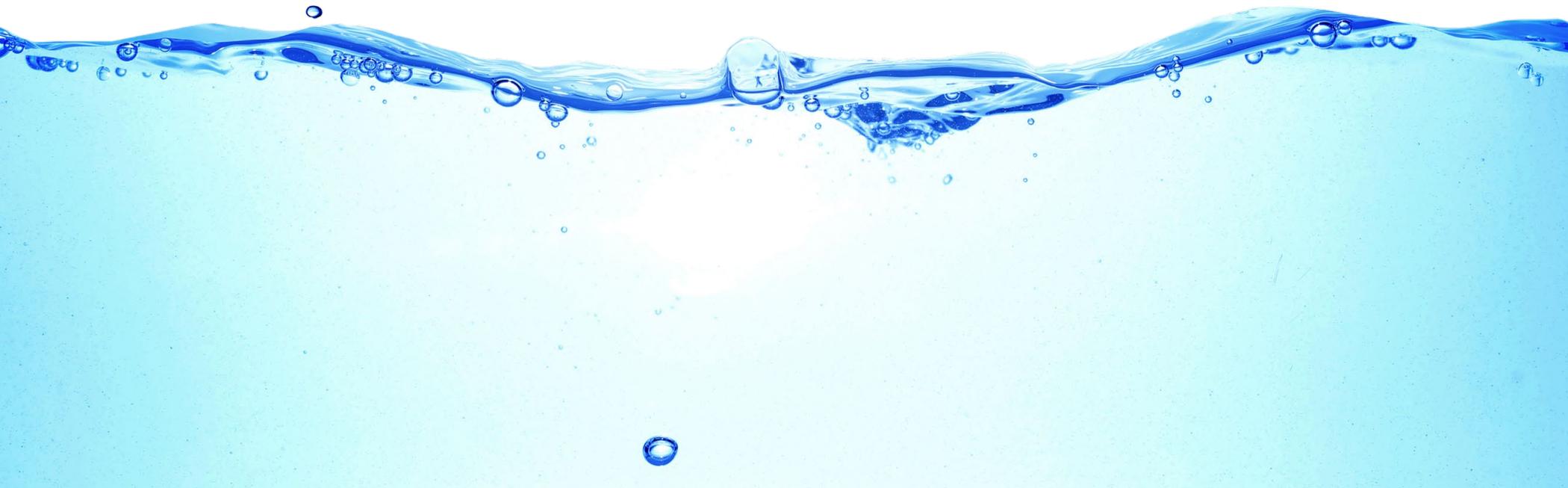
The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data is included, along with the year in which the sample was taken.

The percentage of total organic carbon (TOC) removal was measured each month, and the system met all TOC removal requirements set by Illinois EPA.

We participated in the fifth stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR5) program by performing additional tests on our drinking water. UCMR5 sampling benefits the environment and public health by providing the U.S. EPA with data on the occurrence of contaminants suspected to be in drinking water to determine if it needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data is available to the public, so please feel free to contact us if you are interested in obtaining that information. If you would like more information on the U.S. EPA's Unregulated Contaminant Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

### REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
<b>Barium</b> (ppm)	2024	2	2	0.039	0.039–0.039	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
<b>Chlorine</b> (ppm)	2024	[4]	[4]	1	0.8–1	No	Water additive used to control microbes
<b>Fluoride</b> (ppm)	2024	4	4	0.744	0.744–0.744	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
<b>Haloacetic Acids [HAAs]</b> (ppb)	2024	60	NA	10	10.11–10.21	No	By-product of drinking water disinfection
<b>Iron</b> (ppb)	2024	1,000 <sup>1</sup>	NA	0.044	0–0.044	No	Erosion from naturally occurring deposits
<b>Manganese</b> (ppb)	2024	150 <sup>2</sup>	NA	1.8	0–1.8	No	Erosion of naturally occurring deposits
<b>Sodium</b> (ppm)	2024	NS <sup>3</sup>	NA	220	220–220	No	Erosion of naturally occurring deposits; Used in water softener regeneration
<b>TTHMs [total trihalomethanes]</b> (ppb)	2024	80	NA	55	35.7–55	No	By-product of drinking water disinfection



Tap water samples were collected for lead and copper analyses from sample sites throughout the community<sup>4</sup>

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	RANGE LOW-HIGH	SITES ABOVE AL/TOTAL SITES	EXCEEDANCE	TYPICAL SOURCE
Copper (ppm)	2024	1.3	1.3	1.4	0.0043–1.6	4/30	Yes	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2024	15	0	7.4	<1.0–51	2/30	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> 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>3</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.

<sup>4</sup> The table summarizes our most recent lead and copper tap sampling data. If you would like to review the complete lead tap sampling data, please contact us (847) 551-3492.

## Copper Action Level Exceedance

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.

### 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.

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

**NS:** No standard.

**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).

