

ANNUAL WATER QUALITY REPORT

Reporting Year 2023

CARPENTERSVILLE

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, 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.

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.

“When the well is dry, we know the worth of water.”

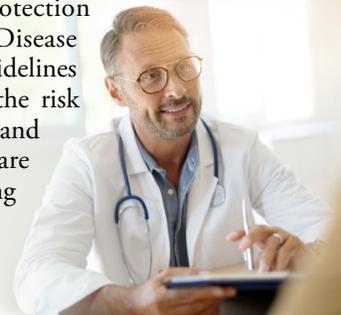
—Benjamin Franklin

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 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.

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.



QUESTIONS?

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

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 epa.gov/safewater/lead.

How Long Can I Store Drinking Water?

The disinfectant in drinking water will eventually dissipate even in a closed container. If that container housed bacteria prior to filling up with the tap water, the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

Think Before You Flush!

Flushing unused or expired medicines can be harmful to your drinking water. Properly disposing of unused or expired medication helps protect you and the environment. Keep medications out of our waterways by disposing responsibly. To find a convenient drop-off location near you, please visit <https://bit.ly/3IeRyXy>.

Source Water Assessment



A 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 and recommendation of source water protection efforts, visit dataservices.epa.illinois.gov/swap/factsheet.aspx.

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, there are three potential sources of groundwater contamination that could pose a hazard to groundwater utilized by Carpentersville's community water supply. These include one auto repair shop, one store, and one belowground fuel storage tank. Information provided by the Carpentersville community water supply indicates that the following potential sources are currently inactive (belowground storage of petroleum has been removed): Map code 00916, 00917, and 00918. 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.



Community Participation

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



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
Arsenic (ppb)	2021	10	0	1	1–1	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2021	2	2	0.039	0.039–0.039	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2023	[4]	[4]	1	0.9–1.1	No	Water additive used to control microbes
Combined Radium (pCi/L)	2023	5	0	1	1.08–1.08	No	Erosion of natural deposits
Fluoride (ppm)	2021	4	4	0.622	0.622–0.622	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2023	60	NA	15	12.82–14.8	No	By-product of drinking water disinfection
Iron (ppb)	2021	1,000 ¹	NA	30	30–30	No	Erosion from naturally occurring deposits
Nitrate (ppm)	2023	10	10	0.3	0.3–0.3	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite (ppm)	2021	1	1	0.02	0.02–0.02	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (ppm)	2021	NA ²	NA	230	230–230	No	Erosion of naturally occurring deposits; used in water softener regeneration
TTHMs [total trihalomethanes]– Stage 2 (ppb)	2023	80	NA	57	50.6–56.6	No	By-product of drinking water disinfection
Vinyl Chloride (ppb)	2021	2	0	ND	NA	No	Leaching from PVC piping; Discharge from plastics 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)	2021	1.3	1.3	1.2	3/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2021	15	0	9.1	2/30	No	Lead service lines; Corrosion of household plumbing systems, including fittings and fixtures; Erosion of natural deposits
UNREGULATED SUBSTANCES ³							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Manganese (ppb)	2021	150 ³	NA	1.4	1.4–1.4	No	Erosion of naturally occurring deposits

¹ 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.

² 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.

³ An MCL for this contaminant has not been established by either state or federal regulations, and no mandatory health effects language has been set. The purpose of unregulated contaminant monitoring is to assist U.S. EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

BY THE NUMBERS

 **5.1** TRILLION

The dollar value needed to keep water, wastewater, and stormwater systems in good repair.

 **2**

How often in minutes a water main breaks.

 **1.7** TRILLION

The gallons of drinking water lost each year to faulty, aging, or leaky pipes.

 **12** THOUSAND

The average amount in gallons of water used to produce one megawatt-hour of electricity.

 **47.5** TRILLION

The amount in gallons of water used to meet U.S. electric power needs in 2020.

 **33**

The percentage of water sector employees who will be eligible to retire in 2033.

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.

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).