

ANNUAL WATER QUALITY REPORT

Reporting Year 2022

CARPENTERSVILLE

Presented By
Village of Carpentersville

Photo credited to David Sandoval and Angel Ramirez

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

PWS ID#: 0890200



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. As new challenges to drinking water safety emerge, 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. Please remember that we are always available should you ever have any questions or concerns about your water.

Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council (NRDC), bottled water is not necessarily cleaner or safer than most tap water. In fact, about 40 percent of bottled water is actually just tap water, according to government estimates.

The Food and Drug Administration (FDA) is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water. For a detailed discussion on the NRDC study results, check out its website at <https://goo.gl/Jxb6xG>.

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 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>.



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.

QUESTIONS?

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

Source Water Assessment

A source water assessment for our supply has been completed by the Illinois Environmental Protection Agency (IEPA). To determine Carpentersville's susceptibility to groundwater contamination, a well site survey published in 1990 by IEPA was reviewed. Based on the information in this document, there are three potential sources of contamination that could pose a hazard to groundwater. These include one auto repair shop, one store, and one underground fuel storage tank. Information provided by the Carpentersville community water supply indicates that the potential sources listed are currently inactive (underground storage tank has been removed): See Map Code 00916, 00917, and 00918. In addition, the information provided by the Leaking Underground Storage Tank and Remedial Project Management sections of IEPA indicates sites with ongoing remediation that might be of concern.

Based on this information, the IEPA has determined that Carpentersville's source water is susceptible to contamination. The IEPA is in the process of delineating five-year recharge area calculations for Carpentersville's wells. 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.

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 <http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl>.



PFAS Statewide Investigation

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

Public Participation

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.

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.

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 a depth of 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 that 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.



BY THE NUMBERS

The number of Olympic-sized swimming pools it would take to fill up all of Earth's water.

800
TRILLION

1 The average cost in cents for about 5 gallons of water supplied to a home in the U.S.

The percent of Earth's water that is salty or otherwise undrinkable, or locked away and unavailable in ice caps and glaciers.

99

50 The average daily number of gallons of total home water use for each person in the U.S.

The percent of Earth's surface that is covered by water.

71

330
MILLION

The amount of water on Earth in cubic miles.

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)	2022	4	4	1	1 – 1.0	No	Water additive used to control microbes
Combined Radium (pCi/L)	2022	5	0	0.267	0.267–0.267	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)	2022	60	NA	14.05	13.8–14.05	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)	2022	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)	2022	80	NA	48.1	45.4–48.1	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 SUBSTANCES³

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Manganese (ppm)	2021	1.4	1.4–1.4	NA

¹Iron 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.

²Sodium 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.

³An 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.

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).