

A dynamic splash of clear water against a white background, with a thick stream of water falling from the top and splashing outwards, creating numerous droplets and ripples.

ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2019



Presented By
Village of Glen Carbon

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, 2019. 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.

Source Water Assessment

A Source Water Assessment has been completed by the Illinois Environmental Protection Agency (EPA). If you would like a copy of this information, please stop by the City of Edwardsville Public Works Department. 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 www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl.

We remain vigilant in delivering the best-quality drinking water

Community Participation

The Village of Glen Carbon Board of Trustees has the decision-making responsibility regarding contractual agreements and expenditure of funds for the water system. You are invited to attend our regularly scheduled meetings, which are held at 7:00 p.m. on the second and fourth Tuesdays of each month in the Council Chambers of the Village Hall.

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 storm-water 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 storm-water 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 storm-water 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.

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>.



QUESTIONS?

For more information about this report, or for any questions related to your drinking water, please call John Leezy, Utility Department Superintendent, at (618) 288-2661.

Safeguard Your Drinking Water

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides—they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use U.S. EPA's Adopt Your Watershed to locate groups in your community.

Organize a storm drain stenciling project with others in your neighborhood. Stencil a message next to the street drain reminding people "Dump No Waste – Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

Water Treatment Process

Your water is treated by filtration and disinfection. Filtration removes particles suspended in the source water. Particles typically include clays and silts, natural organic matter, iron and manganese, and microorganisms. Your water is also treated by disinfection. Disinfection involves the addition of chlorine or other disinfectants to kill bacteria and other microorganisms (viruses, cysts, etc.) that may be in the water. Disinfection is considered to be one of the major public health advances of the 20th century.

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 2 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.

Information on the Internet

The U.S. EPA (<https://go.gl/TFAMKc>) and the Centers for Disease Control and Prevention (www.cdc.gov) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation and public health. Also, the Illinois Environmental Protection Agency has a Web site (<http://bit.ly/3c8YPZt>) that provides complete and current information on water issues in Illinois, including valuable information about our watershed.



Where Does My Water Come From?

The source of drinking water used by the Village of Glen Carbon is purchased water. Water is purchased from the City of Edwardsville. It is obtained from a wellfield that draws water from the American Bottoms Underground Aquifer.

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

				Village of Glen Carbon		City of Edwardsville			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2017	10	0	1.6	ND–1.6	1 ¹	1–1 ¹	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2017	2	2	0.13	0.12–0.13	0.085 ²	0.085–0.085 ²	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2019	[4]	[4]	1.3	1–1.3	1.2 ²	1–1.4 ²	No	Water additive used to control microbes
Combined Radium (pCi/L)	2017	5	0	0.791	ND–0.791	1.328 ³	1.328–1.328 ³	No	Erosion of natural deposits
Fluoride (ppm)	2017	4	4	0.282	ND–0.282	0.434 ²	0.434–0.434 ²	No	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (ppm)	2018	10	10	2.9	2.9–2.9	1.1 ⁴	1.1–1.1 ⁴	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	2017	50	50	7.5	5.8–7.5	NA	NA	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines

Tap Water Samples Collected for Copper and Lead Analyses from Sample Sites throughout the Community

				Village of Glen Carbon		City of Edwardsville			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2019	1.3	1.3	0.7	0	0.55 ⁵	0 ⁵	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2019	15	0	1.8	0	1.8 ⁵	0 ⁵	No	Corrosion of household plumbing systems; Erosion of natural deposits

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).

OTHER REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	Village of Glen Carbon		City of Edwardsville		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Gross Alpha [excluding radon and uranium] (pCi/L)	2017	15	0	3.59	ND–3.59	NA	NA	No	Erosion of natural deposits
Haloacetic Acids (HAA5) (ppb)	2019	60	NA	8	5.4–8	9.75	4.06–9.75	No	By-product of drinking water disinfection
Iron ⁶ (ppb)	2017	1,000	NA	0.52	0.44–0.52	NA	NA	No	Erosion from naturally occurring deposits
Manganese ⁶ (ppb)	2017	150	NA	230	150–230	4.6 ²	4.6–4.6 ²	No	Erosion of naturally occurring deposits
Sodium ⁶ (ppm)	2017	NA	NA	15	13–15	130 ¹	130–130 ¹	No	Erosion of naturally occurring deposits; Used in water softener regeneration
Total Trihalomethanes (ppb)	2019	80	NA	17	17.43–25	35	19.58–35	No	By-product of drinking water disinfection

¹ Sampled in 2015.

² Sampled in 2018.

³ Sampled in 2014.

⁴ Sampled in 2019.

⁵ Sampled in 2017.

⁶ Iron, manganese, and sodium are not currently regulated by the U.S. EPA. However, the state has set MCLs for supplies serving a population of 1,000 or more.

About Our Violations

HALOACETIC ACIDS (HAA5)

Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

VIOLATION TYPE	VIOLATION BEGIN	VIOLATION END	VIOLATION EXPLANATION
Monitoring, Routine (DBP), Major	01/01/2019	09/30/2019	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

TOTAL TRIHALOMETHANES (TTHM)

Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

VIOLATION TYPE	VIOLATION BEGIN	VIOLATION END	VIOLATION EXPLANATION
Monitoring, Routine (DBP), Major	01/01/2019	09/30/2019	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

What's Your Water Footprint?

You may have some understanding about your carbon footprint, but how much do you know about your water footprint? The water footprint of an individual, community, or business is defined as the total volume of freshwater that is used to produce the goods and services that are consumed by the individual or community or produced by the business.

For example, 11 gallons of water are needed to irrigate and wash the fruit in one half-gallon container of orange juice. Thirty-seven gallons of water are used to grow, produce, package, and ship the beans in that morning cup of coffee. Two hundred and sixty-four gallons of water are required to produce one quart of milk, and 4,200 gallons of water are required to produce two pounds of beef. According to the U.S. EPA, the average American uses over 180 gallons of water daily.

In fact, in the developed world, one flush of a toilet uses as much water as the average person in the developing world allocates for an entire day's cooking, washing, cleaning, and drinking. The annual American per capita water footprint is about 8,000 cubic feet; twice the global per capita average. With water use increasing six-fold in the past century, our demands for freshwater are rapidly outstripping what the planet can replenish.

To check out your own water footprint, go to <http://goo.gl/QMoIXT>.

