

A dynamic, high-speed photograph of water splashing against a light blue background. The water is captured in mid-air, creating a complex pattern of droplets and streams that flow from the bottom right towards the top left. The lighting highlights the transparency and texture of the water, giving it a sense of movement and freshness.

ANNUAL WATER QUALITY REPORT

Reporting Year 2021

Presented By
Village of Glen Carbon



We've Come a Long Way

Once again, we are proud to present our annual water quality report covering the period between January 1 and December 31, 2021. In a matter of only a few decades, drinking water has become exponentially safer and more reliable than at any other point in human history. Our exceptional staff continues to work hard every day—at all hours—to deliver the highest-quality drinking water without interruption.

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 Illinois American Granite City Water Treatment Facility, which draws surface water from the Mississippi River. The Mississippi River is subject to a variety of influences, including agricultural, municipal, and industrial activities.

Extensive monitoring and treatment ensure high-quality water service regardless of variations in the source water.



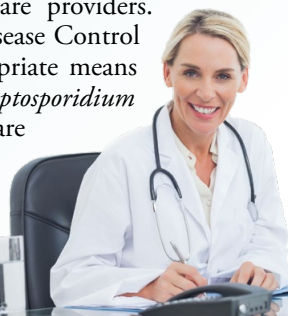
Source Water Assessment

The Illinois EPA has completed a source water assessment for the Granite City system, and a copy is available upon request by calling Sam Saucier, Water Quality Supervisor at (618) 707-1913. To view a summary version of the completed Source Water Assessments—including Importance of Source Water, Susceptibility to Contamination Determination, and documentation/recommendation of Source Water Protection Efforts—you may access the Illinois EPA website at <http://dataservices.epa.illinois.gov/swap/factsheet.aspx>.

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>.



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 pm on the second and fourth Tuesdays of each month in the Council Chambers of the Village Hall.

Table Talk

Get the most out of the Testing Results data table with this simple suggestion. In less than a minute, you will know all there is to know about your water:

For each substance listed, compare the value in the Amount Detected column against the value in the MCL (or AL, SMCL) column. If the Amount Detected value is smaller, your water meets the health and safety standards set for the substance.

Other Table Information Worth Noting

Verify that there were no violations of the state and/or federal standards in the Violation column. If there was a violation, you will see a detailed description of the event in this report.

If there is an ND or a less-than symbol (<), that means that the substance was not detected (i.e., below the detectable limits of the testing equipment).

The Range column displays the lowest and highest sample readings. If there is an NA showing, that means only a single sample was taken to test for the substance (assuming there is a reported value in the Amount Detected column).

If there is sufficient evidence to indicate from where the substance originates, it will be listed under Typical Source.

QUESTIONS?

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

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 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.

Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains.



Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen, disinfectant levels, and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use and avoid using hot water, to prevent sediment accumulation in your hot water tank.

Please contact us if you have any questions or if you would like more information on our water main flushing schedule.

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

—Benjamin Franklin
”



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.

The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set by IEPA.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	Village of Glen Carbon		Illinois American Water- Granite City		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Arsenic (ppb)	2017	10	0	1.6	0–1.6	1 ¹	0–1 ¹	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Atrazine (ppb)	2021	3	3	NA	NA	0.9	0–0.9	No	Runoff from herbicide used on row crops
Barium (ppm)	2017	2	2	0.13	0.12–0.13	NA	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2021	[4]	[4]	1.6	1–2	NA	NA	No	Water additive used to control microbes
Combined Radium (pCi/L)	2017	5	0	0.791	0–0.791	1.29 ²	1.29–1.29 ²	No	Erosion of natural deposits
Fluoride (ppm)	2017	4	4	0.282	0–0.282	0.8 ¹	0.83–0.83 ¹	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	4 ¹	2.51–3.98 ¹	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
Turbidity ³ (NTU)	2021	TT	NA	NA	NA	1	0.24–1	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2021	TT = 95% of samples meet the limit	NA	NA	NA	100%	NA	No	Soil runoff

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	0.62	0/40	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2021	15	0	1.6	1/40	No	Corrosion of household plumbing systems; Erosion of natural deposits

Coliform Bacteria

MAXIMUM CONTAMINANT LEVEL GOAL	TOTAL COLIFORM MAXIMUM CONTAMINANT LEVEL	HIGHEST NO. OF POSITIVE	FECAL COLIFORM OR E. COLI MAXIMUM CONTAMINANT LEVEL	TOTAL NO. OF POSITIVE E. COLI OR FECAL COLIFORM SAMPLES	VIOLATION	LIKELY SOURCE OF CONTAMINATION
0	1 positive monthly sample	4		0	No	Naturally present in the environment.

Coliforms are bacteria that are naturally present in the environment and are 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 assessment (s) to identify problems to correct any problems that were found during these assessments.

During the past year we were required to conduct one (1) Level 1 assessment. One (1) Level 1 assessment was completed. In addition, we were required to take four (4) corrective actions and we completed four (4) of these actions.

OTHER REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	Village of Glen Carbon		Illinois American Water- Granite City		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	0–3.59	2.84 ²	2.84–2.84 ²	No	Erosion of natural deposits
Haloacetic Acids (HAA5) (ppb)	2021	60	NA	24	5.56–41.8	NA	NA	No	By-product of drinking water disinfection
Iron⁴ (ppb)	2017	1,000	NA	0.52	0.44–0.52	NA	NA	No	Erosion from naturally occurring deposits
Manganese⁴ (ppb)	2017	150	NA	230	150–230	10 ⁵	4.7–16 ⁵	No	Erosion of naturally occurring deposits
Sodium⁴ (ppm)	2017	NA	NA	15	13–15	28 ¹	28.1–28.1 ¹	No	Erosion of naturally occurring deposits; Used in water softener regeneration
Total Trihalomethanes (ppb)	2021	80	NA	56	27–941	NA	NA	No	By-product of drinking water disinfection

UNREGULATED SUBSTANCES (ILLINOIS AMERICAN WATER - GRANITE CITY)⁶

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Perfluorobutanesulfonic Acid (PFBS) (ppt)	2021	2.3	0–2.3	Manufactured chemical (s); used in household goods for stain, grease, heat and water resistance.
Perfluorohexanoic Acid (PFHxA)⁷ (ppt)	2021	3.0	2.4–3.0	Manufactured chemical (s); used in household goods for stain, grease, heat and water resistance.
Perfluorooctanesulfonate Acid (PFOS) (ppt)	2021	3.1	0–3.1	Manufactured chemical (s) used in household goods for stain, grease, heat and water resistance.
Perfluorooctanoic Acid (PFOA) (ppt)	2021	2.9	0–2.9	Manufactured chemical (s); used in household goods for stain, grease, heat and water resistance.

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

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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).

ppt (parts per trillion): One part substance per trillion parts water (or nanograms per liter).

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.

¹ Sampled in 2021

² Sampled in 2020

³ Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

⁴ 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 1000 or more.

⁵ Sampled in 2019

⁶ A maximum contaminant level (MCL) for these contaminants has not been established by either state or federal regulations, nor has mandatory health effects language. 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.

⁷ The health-based guidance levels are intended to be protective of all people consuming water over a lifetime of exposure. It is important to understand that guidance levels are not regulatory limits for drinking water. Rather, the guidance levels are benchmarks against which sampling results are compared to determine if additional investigation or other response action is necessary.