

## Annual Drinking Water Quality Report for CARTHAGE IL0670250 for the period of January 1 to December 31, 2024

This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water.

**Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo ó hable con alguien que lo entienda bien.**

The source of drinking water used by CARTHAGE is Ground Water

For more information regarding this report contact: Greg Fulkerson at 309-255-0420 or The City of Carthage at 217-357-3119

### Source of Drinking 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 be naturally occurring or 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 can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

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 indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Some people may be more vulnerable to contaminants in drinking water than the general population.

Immuno-compromised 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.

EPA/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 (800-426-4791).

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 drinking water supplier 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, doing laundry or a load of dishes. You can also use a filter certified by an American National Standard Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water, you may wish to have your water tested, contact at Greg Fulkerson at 309-255-0420.

Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <http://www.epa.gov/safewater/lead>.

Source Water Name	Type of Water	Report Status	Location
WELL 4 (02054)	GW		

**Source Water Assessment**

We want our valued customers 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. 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 City Hall or call our water operator at 815-224-1650. 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://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl>.

Source of Water: CARTHAGE In 2022 the City of Carthage (Facility Number IL06702500) switched from surface water obtained from Carthage Lake and supplemented by Hamilton (IL0670400) to ground water. The City utilizes one active community water supply well. Well #4 (WL02054) is 1,115 feet in depth and utilizes a confined bedrock aquifer. Based on depth and the geologic setting, the well is not considered susceptible to Volatile Organic Chemical (VOC) or Synthetic Organic Chemical (SOC) contamination by the Illinois EPA. Currently, there are no raw water results available; however, the treated water did not indicate the presence of any VOCs or SOCs. The following items were reviewed concerning the proposed well setback determination and minimum setback zone: Illinois State Fire Marshal (ISFM) data base, ARCIMS site information, data provided by the applicant, the Leaking Underground Storage tank (LUST) data base, and the topographic map of the area. The information reviewed indicated the area within one thousand feet of the proposed well site is industry, recreational, riding stables, and agriculture. A potential problem site is located 300 feet from the proposed well location. The potential problem site is a Resource Recovery and Conservation Information System (RCRIS) database site where automotive wiring harnesses are manufactured. The city contract engineer stated in 2015 that the facility was closing and that no potential sources were located within 400 feet of the proposed wellsite for well #4. Another potential problem site, which is a LUST site, is located 2,500 feet from the proposed well location. A potential problem site, which is a closed landfill, is located 2,400 feet from the proposed well site. No potential problem sites were located within the 200-foot minimum setback zone.

**2024 Regulated Contaminants Detected**

**Lead and Copper**

Definitions:

Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.  
 Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.

Copper Range: <10 ppb to 130 ppb  
 Lead Range: <5 ppb to 16 ppb

To obtain a copy of the system's lead tap sampling data: The lead sampling data is available on Illinois EPA's Drinking Water Watch <https://water.epa.state.il.us/dww/index.jsp>

Our Community Water Supply has developed a service line material inventory.  
 To obtain a copy of the system's service line inventory: Greg Fulkerson at 309-255-0420

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2024	1.3	1.3	0.0326	0	ppm	N	Corrosion of household plumbing systems; Erosion of natural deposits.
Lead	2024	0	15	0	1	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure

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.

**Water Quality Test Results**

Definitions: The following tables contain scientific terms and measures, some of which may require explanation.

Avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples.

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

**Level 2 Assessment:** A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

**Maximum Contaminant Level or MCL:** 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.

**Maximum Contaminant Level Goal or MCLG:** 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.

**Maximum residual disinfectant level or MRDL:** 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.

**Maximum residual disinfectant level goal or MRDLG:** 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.

mrem: millirems per year (a measure of radiation absorbed by the body)

ppb: micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.

ppm: milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.

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

**Regulated Contaminants**

Disinfectants and Disinfection By- Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chloramines	2024	1	0.5 - 1.1	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Haloacetic Acids (HAA5)	2024	1	0 - 1.02	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2024	1	0.633 - 0.803	No goal for the total	80	ppb	N	By-product of drinking water disinfection.
Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Fluoride	2024	0.7	0.597 - 0.727	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Selenium	2024	3	0 - 10.4	50	50	ppb	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
Sodium	2024	90	84100 - 94732			ppb	N	Erosion from naturally occurring deposits. Used in water softener regeneration.
Zinc	2024	0.014	0 - 0.0314	5	5	ppm	N	This contaminant is not currently regulated by the USEPA. However, the state regulates. Naturally occurring; discharge from metal
Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Combined Radium 226/228	2024	2	1.6 - 1.6	0	5	pCi/L	N	Erosion of natural deposits.

Gross alpha excluding radon and uranium	2024	6	5.59 - 5.59	0	15	pCi/L	N	Erosion of natural deposits.
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**Total Organic Carbon**

The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set, unless a TOC violation is noted in the violations section.

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