



macomb  
illinois

*Small-town living. Community driven.*

## 2024 Water Quality Report

### Annual Water Quality Report for the period of January 1 to December 31, 2023

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. This report includes drinking water facts, information on violations (if applicable), and contaminants detected in your drinking water supply during calendar year 2023. Each year, we will provide you a new report. If you need help understanding this report or have general questions, please contact the person listed below.

Contact Name: Dave Vavrek

Telephone Number: 815-444-4417

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

### Sources of Drinking Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and groundwater 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.

The source of drinking water used by Macomb is **Surface Water from Spring Lake.**

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.

### **Other Facts about Drinking Water**

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).

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 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 and 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 or at <http://www.epa.gov/safewater/lead>.

### **Source Water Assessments**

Source water protection (SWP) is a proactive approach to protecting our critical sources of public water supply and assuring that the best source of water is being utilized to serve the public. It involves implementation of pollution prevention practices to protect the water quality in a watershed or wellhead protection area serving a public water supply. Along with treatment, it establishes a multi-barrier approach to assuring clean and safe drinking water to the citizens of Illinois. The Illinois EPA has implemented a source water assessment program (SWAP) to assist with wellhead and watershed protection of public drinking water supplies.

We want our valued consumers to be informed about their water quality. If you would like to learn more, please feel welcome to attend any 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 (309)-836-3916. To view a summary version of the completed Source Water Assessment, including; Importance of Source Water; Susceptibility to Contamination Determination; and documentation/recommendation of Source Water Protection Efforts, you may access Illinois EPA website at <http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl>.

**Source of Water: MACOMB**

Source Water Name		Type of Water	Location
INTAKE (58055) SPRING LAKE		SW	4.5 Miles NW WTP
WELL 3 (01543)	REVERSE OSMOSIS TREATMENT	GW	South of WTP

Illinois EPA considers all surface water sources of community water supply to be susceptible to potential pollution problems; hence, the reason a mandatory treatment for all surface water supplies in Illinois. Mandatory treatment includes coagulation, sedimentation, filtration, and disinfection. The watershed areas contain mostly agriculture and woodland, with some urban and industrial areas. The portion of this area considered most critical for water quality concerns at the Macomb intakes is indicated in Figure 1. The critical area is intended to assist in emergency preparedness and contingency planning in the event of a release within this area. The critical area for the intake on the East Fork of the La Moine River is divided into three zones. Zone 1 consists of a quarter mile buffer on either side of the river, extending from a quarter mile downstream of the CWS surface water intake to twenty-five miles upstream (or the five-hour time of travel). Zone 2 is the 14-digit Hydraulic Unit Code (HUC) watershed (s) that contain Zone 1. Zone 3 is the 8-digit HUC watershed that contains Zone 2. The entire zone 3 is shown in figure 3. Figure 2 shows the location of the Macomb community water wells and the Minimum and Maximum Setback Zones associated with each well. In addition, the potential sources of contamination located near the wells are also displayed. Due to the confined nature of the wells and no history of detections, Illinois EPA considers these wells to not be susceptible to contamination.

**Water Quality Test Results**

The next several tables summarize contaminants detected in your drinking water supply. Here are a few definitions and scientific terms which will help you understand the information in the contaminant detection tables.

Avg	Regulatory compliance with some MCLs is 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	Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set

	as close to the Maximum Contaminant Level Goal as feasible using the best available treatment technology.
Maximum Contaminant Level Goal or 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.
Maximum Residual Disinfectant Level or MRDL	Maximum Residual Disinfectant Level: The highest level of disinfectant allowed in drinking water.
Maximum Residual Disinfectant Level Goal or MRDLG	Maximum Residual Disinfectant Level Goal: The level of disinfectant in drinking water below which there is no known or expected risk to health. MRDLGs allow for a margin of safety.
na	Not applicable
mrem	Millirems per years (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
Chlorine	2023	1.6	1 – 1.9	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Haloacetic Acids (HAA5)	2023	30	15.5 - 42	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2023	89	37 – 127.5	No goal for the total	80	ppb	Y	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
Barium	2023	0.016	0.016 – 0.016	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2023	0.6	0.578 – 0.578	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate (measured as nitrogen)	2023	1	0.06 – 1.3	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium	2023	1	1.2 – 1.2	50	50	ppb	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

Sodium	2023	21	21 - 21			ppb	N	Erosion from naturally occurring deposits. Used in water softener regeneration.
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### Microbial Contaminants

Turbidity	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest Single Measurement	1 NTU	0.309 NTU	N	Soil runoff
Lowest monthly % meeting limit	0.3 NTU	100%	N	Soil runoff

**Information Statement:** Turbidity is a measurement of cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.

### Lead and Copper

Definitions:

**Action Level Goal (ALG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. ALG's allow for a margin of safety.

**Action Level:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90 <sup>th</sup> Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2023	1.3	1.3	0.051	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.

**Note:** Lead is not listed above because our samples for 2023 resulted in zero detection.

#### Total Organic Carbon

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

### Violations Table

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
MCL, LRAA	10/01/2023	12/31/2023	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated

**Total Trihalomethanes (TTHM)**

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<b>Violation Type</b>	<b>Violation Begin</b>	<b>Violation End</b>	<b>Violation Explanation</b>
MCL, LRAA	01/01/2024	03/31/24	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated