

THE CITY OF
DUBUQUE
Masterpiece on the Mississippi



2023

WATER QUALITY REPORT

cityofdubuque.org/2023waterquality



**CITY OF DUBUQUE
WATER DEPARTMENT**

www.cityofdubuque.org/water
563-589-4291



2022 Drinking Water Summary

The City of Dubuque's Water Department is proud of the high quality of the City's readily available water supply, which meets all state and federal drinking water quality requirements.

We are pleased to inform that Dubuque had no drinking water violations in 2022.

The City's water quality testing results shown in this report include testing for regulated contaminants that were at detectable levels in the distributed water. The contaminants or analytes are reported in comparison to a maximum contaminant level (MCL) established by the U.S. Environmental Protection Agency's (EPA) Safe Drinking Water Act. Testing is not required for each parameter every year.

Water suppliers, including the City of Dubuque, participated in a study with the EPA related to the Unregulated Contaminant Monitoring Rule (UCMR). The USEPA establishes a new list of contaminants to be monitored and the conditions for that monitoring. The rule benefits the public health by providing the EPA with valid data on the National occurrence of selected contaminants. Under UCMR Round 4, all community water systems, and non-transient, non-community water systems serving more than 10,000 persons must participate in assessment monitoring.

Drinking Water Information

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 or potential health effects can be obtained by submitting a form on the Environmental Protection Agency's website at www.epa.gov/ground-water-and-drinking-water or from the Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons including those 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 lower the risk of infection by Cryptosporidium and other microbial contaminants are available on the Environmental Protection Agency's website at www.epa.gov/ground-water-and-drinking-water or from the Safe Drinking Water Hotline (800-426-4791).

Source Water Information

The City of Dubuque obtains water from the sand and gravel of the Apple-Plum Alluvial aquifer and the Jordan (Cambrian-Ordovician) aquifer. Every aquifer has a degree of susceptibility to contamination because of the characteristics of the aquifer, overlying materials, and human activity including contamination from leaking underground storage tanks, contaminant spills, and excess fertilizer application. Susceptibility to contamination generally increases with shallower aquifers because the characteristics of the aquifer and the overlying materials provide little protection from contamination at the land surface. Susceptibility to contamination generally decreases with deeper wells in the Jordan aquifer because the characteristics of the aquifer and the overlying materials provide moderate protection from contamination at the land surface.

The Apple-Plum Alluvial aquifer is considered to be highly susceptible to contamination, while the Jordan (Cambrian-Ordovician) aquifer has been determined to be slightly susceptible to contamination. A detailed evaluation of your source water was completed by the Iowa Department of Natural Resources, and is available on our website, www.cityofdubuque.org/water. You may also call 563-589-4291 to obtain a copy of the report.



Dubuque's average household water rate for fiscal year 2024 is \$35.82 per month.

This is the **second lowest** of Iowa's largest cities that soften their water. The highest (West Des Moines) is **20% higher** than Dubuque and the average is **8% higher** than Dubuque.

100 gallons
of City water costs only
\$0.60

Compare to 100 gallons of bottled water
(20 oz. at \$1.79 each at a convenience store)
costs over \$1,140!

Lead and Copper Reporting

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. The City of Dubuque Water Department is responsible for providing high quality drinking water, but 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 EPA at www.epa.gov/safewater/lead.



PFAS CHEMICALS

PFAS, or perfluoroalkyl substances, are human-made chemicals that have been used for over 70 years in products that are resistant to heat and repel water and oil. During production and use, PFAS do not break down easily and can migrate into the soil, water, and air, remaining in the environment.

The presence of PFAS in the environment is an international issue and many communities around the US are detecting the compounds in drinking water. Research is still ongoing to determine how different levels of exposure to different PFAS can impact health, especially effects associated with low levels of exposure over long periods of time.

Testing in the fall of 2022 showed detectable levels of PFAS compounds in the City's finished/drinking water and raw/

untreated water from some of the City's shallow wells. Following those findings, the City began a quarterly testing program for its drinking water and began maximizing water usage from its deep wells (which are less susceptible to contamination) and only mixing with water from shallow wells as needed.

Dubuque tap water continues to meet all federal and state standards for drinking water safety and customers may continue to drink tap water. The City is exploring treatment options at the water treatment plant that would reduce or eliminate PFAS from shallow wells and the possibility of creating additional deep wells. For more information, visit www.cityofdubuque.org/pfas.

Table Definitions

Action Level (AL) - The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

LRAA - Locational Running Annual Average

Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed in drinking water. MCLs are set a close to the MCLGs as feasible using the best available technology.

Maximum Contaminant Level Goal (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 (MRDL) - The highest level of a drinking water 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 (MRDLG) - The level of a drinking water disinfectant below which there is no known or expected risk to health.

N/A - Not Applicable

ND - Not Detected

ppb - parts per billion

ppm - parts per million

RAA - Running Annual Average

Revised Total Coliform Rule (RTCR) - Establishes a maximum contaminant level (MCL) based on the presence or absence of total coliforms, modifies monitoring requirements including testing for fecal coliforms or E. coli, requires use of a sample siting plan.

SGL - Single Sample Result

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

DISTRIBUTION SYSTEM REPORT									
ANALYTE	MCL - (MCLG)		COMPLIANCE		RANGE		DATE	VIOLATION	TYPICAL SOURCE
			TYPE	VALUE	MIN	MAX			
Total Trihalomethanes (ppb)	80 (N/A)		LRAA	56	49	61	12/31/2022	NO	By-products of drinking water chlorination
Total Haloacetic Acids (ppb)	60 (N/A)		LRAA	10	6	13	12/31/2022	NO	By-products of drinking water chlorination
Total Haloacetic Acids (ppb)	60 (N/A)		LRAA	10	7	15	12/31/2022		By-products of drinking water chlorination
Chlorine (ppm)	MRDL = 4.0 (MRDLG = 4.0)		RAA	1.1	nd	10.70	12/31/2022	NO	Water additive used to control microbes; disinfection
Total Coliform Bacteria	TT	(TT)	RTCR	0 positive samples	N/A	N/A	2022	NO	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other waterborne pathogens may be present, or that a potential pathway exists through which contamination may enter the drinking water.

FINISHED WATER TAP REPORT									
ANALYTE	MCL MCLG		COMPLIANCE		RANGE		DATE	VIOLATION	TYPICAL SOURCE
			TYPE	VALUE	MIN	MAX			
Nitrate [as N] (ppm)	10	10	SGL	0.68	N/A	N/A	2022	NO	Runoff from fertilizer use; Leaching from septic tanks; sewage; Erosion of natural deposits.
Fluoride (ppm)	4	4	MCL	0.62	0.29	0.95	7/21/2021	NO	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Sodium (ppm)	N/A	N/A	SGL	16	N/A	N/A	7/21/2021	NO	Erosion of natural deposits; Added to water during treatment process

LEAD AND COPPER REPORT											
ANALYTE	AL	MCLG	SAMPLES		COMPLIANCE		DETECT		DATE	VIOLATION	TYPICAL SOURCE
			TOTAL	EXCEED AL	TYPE	VALUE	MIN.	MAX.			
Lead (ppb)	15	0	34	1	90th	7.00	ND	23	2020	NO	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Copper (ppm)	1.3	1.3	34	0	90th	0.04	ND	0.05	2020	NO	Corrosion of household plumbing systems; Erosion of natural deposits