

WATERLOO WATER WORKS

2022 ANNUAL DRINKING WATER QUALITY REPORT

We are very pleased to provide you with this year's Annual Drinking Water Quality Report. We want to keep you informed about the safe and dependable drinking water delivered to you. The goal of the Waterloo Water Works is to provide adequate quantities of high quality water to its customers for domestic, industrial, and fire protection purposes at the most reasonable cost.

The information presented in this report is based on water samples collected from our 14 wells, random sites within the community that represent the water quality in the piping system, and some from customer locations in the Waterloo area. The Waterloo Water Works not only monitors drinking water more frequently than is required by the federal and state regulations, but also tests for contaminants that are not even regulated – *all to assure that the water flowing from your tap is safe.*

The Environmental Protection Agency regulates the quality of drinking water. In 1974, Congress passed the Safe Drinking Water Act that required the EPA to establish uniform standards for drinking water. These water quality regulations were amended in 1986, and again in August of 1996. Iowa has adopted these standards and in some cases have set more stringent standards, all of which are enforced by the Iowa Department of Natural Resources, DNR.

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 microbiological contaminants are available from the Safe Drinking Water Hotline.

WHERE DOES MY WATER COME FROM?

The Waterloo Water Works obtains water from the sand and gravel of the Alluvial Aquifer, and the limestone and dolomite of the Silurian-Devonian Aquifer. These aquifers have been determined to be highly susceptible to surface contamination due to the characteristics of the aquifers, and the overlying materials provide little protection from contamination at the land surface. Surface contamination may be due to leaking underground storage tanks, contaminant spills, and excess fertilizer application. A detailed evaluation of your source water was conducted by the Iowa DNR, and is available from the Waterloo Water Works at (319)232-6280 or online at <https://ci.waterloo.ia.us>.

These wells are strategically located throughout the City of Waterloo. The depths of the wells range from 75 feet to 225 feet, which is where the aquifers are found. The total daily capacity of the Waterloo water system is 40 million gallons per day while the most ever pumped in any one day has been 28.8 million gallons. The average daily water production in 2022 was 11.4 million gallons per day. To date, no surface level contamination has been detected in any of our production wells. Our regular water quality sampling monitors these water sources very closely to detect any change in water quality.

DISTRIBUTION SYSTEM

The Waterloo Water Works' distribution system is comprised of 402 miles of water mains, with over 6,745 control valves and over 3,381 fire hydrants throughout the city. Distribution crews flush and maintain fire hydrants yearly, this process helps maintain water quality throughout the system and insures that our fire hydrants are working properly for any future firefighting protection. Behind that network of infrastructure is a team working together to make sure you have clean and safe drinking water every day.

BILLING AND PAYMENTS

You can view and pay your bill online via credit card, electronic check, Venmo or Paypal by visiting www.waterloowater.org today! You can also manage your water usage, billings, and more from our website by creating an account. Payment can be made over the phone by calling our office at (319) 232-6280 and selecting option #2. Phone and online payments are charged a convenience fee, which is a pass-through cost of the bill payment company. We offer in house, fee free auto-pay which will deduct your payment from your checking or savings account on the bill's due date; this can be set up with the back of bill coupon, requesting a form, or speaking to the Office Manager. Our standard billing for residential accounts is quarterly, however, monthly billing options are available.

As a reminder; property owners are responsible for keeping their service line from the connection point with the Water Works' main to their premises, and all their apparatus, including meter couplings and gaskets, in good working condition and properly protected. The pave box and meter valve is an integral part of the water service line and must be accessible and in good working order.

A Board of Trustees, currently consisting of Mary Potter, Chair; Scott Wienands, Vice Chair; and Thomas E. Wall, Trustee; governs the Waterloo Water Works. The Board meets in public session monthly at the office of the Waterloo Water Works, 325 Sycamore Street, Waterloo, Iowa. The General Manager and Secretary is Chad Coon. Please contact the Water Works office for the Board meeting dates.

If you have any questions about this report or for more information about the Waterloo Water Works, call the Waterloo Water Works at (319)232-6280. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at (800)426-4791 or the Iowa Department of Natural Resources at (563)927-2640.

We are pleased to report that Waterloo's drinking water is safe and meets or exceeds all federal and state drinking water requirements.

The following table shows the results of water quality monitoring from Jan. 1, 2022 to Dec. 31, 2022, however, some of the data, though representative of the water quality, is more than a year old. The data presented in this report is from the most recent testing done in accordance with EPA regulations. Certain water quality tests are only conducted every 3, 6, or 9 years.

All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It is important to remember that the presence of these constituents does not necessarily pose a health risk. The data in the accompanying tables are from water samples that have been analyzed by laboratories which are certified by the Iowa Department of Natural Resources.

WATERLOO WATER WORKS

2022 WATER ANALYSIS

ANALYTE	MCLG	MCL	Avg.Value/(Range)	YEAR TESTED	VIOLATION YES/NO	LIKELY SOURCE OF ANALYTE
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REGULATED AT THE WELL

Nitrate (as Nitrogen) *	10 ppm	10 ppm	4.9/(0.7-8.4) ppm	2022	NO	Runoff from fertilizer use, leaching from sewage.
Fluoride	4 ppm	4 ppm	0.73/(0.2-0.9) ppm	2022	NO	Erosion of natural deposits. Water additive.
Sodium	N/A	N/A	14.0/(8.7-21.8) ppm	2021-2022	NO	Erosion of natural deposits.
Barium	2 ppm	2 ppm	0.13/(0.04-0.22)ppm	2021-2022	NO	Erosion of natural deposits.
Selenium	50 ppb	50 ppb	1.9/(ND-3.0) ppb	2021-2022	NO	Erosion of natural deposits.
Arsenic	0 ppb	10 ppb	3 ppb	2022	NO	Erosion of natural deposits.

VOLATILE ORGANICS

cis1,2-Dichloroethylene	70 ppb	70 ppb	ND	2022	NO	Discharge from industrial chemical factories.
Tetrachloroethylene	0 ppb	5 ppb	ND	2022	NO	Discharge from factories and dry cleaners.
Trichloroethylene	0 ppb	5 ppb	3.57/(ND-3.64) ppb	2022	NO	Discharge from metal degreasing sites.

REGULATED AT THE CUSTOMER'S TAP

Lead**	0 ppb	AL= 15 ppb	90th Percentile 3.00 ppb (ND - 4) ppb	2021	NO	Erosion of natural deposits in the ground. Corrosion of household plumbing systems.
Copper	1.3 ppm	AL= 1.3 ppm	90th Percentile 0.164 ppm (0.0274 - 0.245) ppm	2021	NO	Erosion of natural deposits in the ground. Corrosion of household plumbing systems.

REGULATED IN THE DISTRIBUTION SYSTEM

Chlorine	4 ppm	4 ppm	1.10/(0.52-1.82) ppm	2022	NO	Water additive used to control microbes.
Orthophosphate	N/A	N/A	1.11/(1.01-1.21) ppm	2022	NO	Water additive for corrosion control.
Total Trihalomethanes	N/A	80 ppb	Max Value 14.7 ppb	2022	NO	By-product of drinking water chlorination.
Total Haloacetic Acids	N/A	60 ppb	Max Value <5.00 ppb	2022	NO	By-product of drinking water chlorination.
Total Coliform Bacteria	TT	TT	2 Positives (7/12/22)	2022	NO	Naturally present in the environment.
E. Coli Bacteria	TT	TT	No Positives	2022	NO	Human and animal fecal waste.

RADIONUCLIDES

Alpha Emitters (pCi/L)	0	15 pCi/L	2.81 pCi/L	2022	NO	Erosion of natural deposits.
Combined Radium	0	5 pCi/L	<1.0 pCi/L	2022	NO	Erosion of natural deposits.
Uranium	0	30 ppb	1.7	2022	NO	Erosion of natural deposits.

UNREGULATED CONTAMINANT MONITORING RULE 4 (UCMR4)

Ground Water						These samples were collected as part of the Environmental Protection Agency's (EPA) requirements for the Unregulated Contaminant Monitoring Rule 4 (UCMR4).
Manganese	N/A	N/A	7.83/(ND-25) ppb	2019	NO	
Bromide	N/A	N/A	42.81/(ND-67) ppb	2019	NO	
Distribution System						
HAA5	N/A	N/A	1.98/(1.59-2.28) ppb	2019	NO	
HAA6Br	N/A	N/A	2.70/(1.41-3.59) ppb	2019	NO	
HAA9	N/A	N/A	3.72/(2.19-4.79) ppb	2019	NO	

NO CURRENT REGULATORY MCL - EPA mandatory sampling and analysis to determine contaminant occurrence nationally and establish regulatory MCLs

Listed above are all of the analytes that were previously detected in Waterloo's drinking water. Not listed were the numerous other analytes which were tested for but were not detected. Also included are analytes that were tested but are not regulated by EPA.

We are proud to provide you with water that meets or exceeds all federal and state requirements. We have learned through our continued monitoring that even though some of these constituents have been detected, the EPA has determined that your water IS SAFE at these levels.

* Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause "blue baby syndrome". Nitrate levels may rise quickly for short periods of time due to heavy rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider. If the nitrate level rises above the MCL, the community will be notified immediately.

** 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 Waterloo Water Works is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 2 minutes before using water to drink or cook. If you are concerned about lead, you may wish to have your water tested at an approved laboratory. Information on lead in drinking water, testing methods, and steps to minimize exposure is available from the **Safe Drinking Water Hotline (800)426-4791** or at www.epa.gov/safewater/lead.

DEFINITIONS:

ND - Not Detected

N/A - Not Applicable

Action Level (AL) - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. Action levels are reported at the 90th percentile for homes at greatest risk. No action levels were exceeded.

pCi/L - Pico curies per liter (a measure of radioactivity).

ppm - One part per million is like 1 inch in 16 miles or one minute in two years.

ppb - One part per billion is like one minute in 2000 years or a single penny in \$10,000,000.

MCL - Maximum Contaminant Level - the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG 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.

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

EPA - Environmental Protection Agency

Thank you for allowing us to continue providing your family with clean, quality water this year. We intend to maintain a safe and dependable water supply. We are continually making improvements that will benefit the service to all of our customers. All improvements are paid for from water sales revenue. If you have any questions regarding this report, please call **(319)232-6280**.

To view all of the Waterloo Water Works' Drinking Water Quality Reports please visit:

www.cityofwaterlooia.com/departments/water_works/drinking_water_quality_report.php

The cost of this report is paid from water sales revenue.