WATERLOO WATER WORKS
2021 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.

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 50 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 2021 was 12.1 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.

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.

NEW TREATMENT PROCESS COMING IN 2022

In an effort to meet an EPA mandate, the Waterloo Water Works will start feeding orthophosphate at all of our wells. This process will begin on or around July 1, 2022. This new process has been identified as a way to help keep lead in home plumbing systems from entering your water supply. The Water Works completed a corrosion control study with AECOM in 2020 showing our water supply is of sufficiently high quality and that no corrosion control was needed. However, the EPA and thus the Iowa DNR, have mandated that Waterloo must institute a corrosion control program and orthophosphate is the product that will provide the most effective treatment.

You may be wondering what orthophosphate is and what it does once added to the water supply. Orthophosphate is one of a variety of treatment methods that can be added and used for corrosion control. Once added to the water supply, it forms a protective barrier on the interior surface of the piping system to prevent the pipe materials from degrading and entering the water supply. In areas where lead pipe or lead solder have been used, orthophosphate's protective barrier will prevent lead from entering the water supply and causing a number of health effects.

As a reminder; property owners are responsible for 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, 2021 to Dec. 31, 2021, 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

2021 WATER ANALYSIS

ANALYTE	MCLG	MCL	Avg.Value/(Range)	SAMPLE DATE	VIOLATION	LIKELY SOURCE OF ANALYTE
REGULATED AT THE WELL						
Nitrate (as Nitrogen) *	10 ppm	10 ppm	5.9/(<1.0 - 7.9) ppm	2021	NO	Runoff from fertilizer use, leaching from sewage.
Fluoride	4 ppm	4 ppm	0.71/(0.60 - 0.93) ppm	2021	NO	Erosion of natural deposits. Water additive.
Sodium	N/A	N/A	14.0/(8.7 - 21.8) ppm	2021	NO	Erosion of natural deposits.
Barium	2 ppm	2 ppm	0.13/(0.04 - 0.22)ppm	2021	NO	Erosion of natural deposits.
Selenium	50 ppb	50 ppb	1.9/(ND - 3.0) ppb	2021	NO	Erosion of natural deposits.
VOLATILE ORGANICS						
Tetrachloroethylene	0 ppb	5 ppb	0.94 ppb	2021	NO	Discharge from factories and dry cleaners.
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	1.0/(0.46 -1.52) ppm	2021	NO	Water additive used to control microbes.
Total Trihalomethanes	N/A	80 ppb	Max Value 16.0 ppb	2021	NO	By-product of drinking water chlorination.
Total Haloacedic Acids	N/A	60 ppb	Max Value 6.0 ppb	2021	NO	By-product of drinking water chlorination.
Alpha Emitters (pCi/L)	0	15 pCi/L	2.4 pCi/L	2021	NO	Erosion of natural deposits.
Combined Radium	0	5 pCi/L	<1.0 pCi/L	2021	NO	Erosion of natural deposits.
Total Coliform Bacteria	TT	TT	No Positives	2021	NO	Naturally present in the environment.
E. Coli Bacteria	TT	TT	No Positives	2021	NO	Human and animal fecal waste.
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 occurance 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 revenue. If you have any questions regarding this report, call Travis Larson at ***(319)232-6280***.

Contact the Waterloo Water Works today to set up automatic payment, which will deduct your payment from your checking or savings account on the bill's due date. There is no fee for this service. Electronic payment is a payment alternative initiated by you through your bank. Also, we have partnered with a payment processing company that provides our customers with the option to pay via credit card or e-check. You can pay over the phone at *(855)282-7625* or online at ***www.waterloowater.org***. Visa, MC, and Discover are all accepted. Phone and online payments are charged a convenience fee, which is a pass-through cost of the bill payment company.

Drinking Water Quality Reports visit ***www.cityofwaterlooiowa.com/departments/water_works/drinking_water_quality_report.php***

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