

ANNUAL WATER QUALITY REPORT

Reporting Year 2022



Presented By
**Council Bluffs
Water Works**



Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2022. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users. Please remember that we are always available should you ever have any questions or concerns about your water.

Source Water Assessment

Reservoirs and streams are highly susceptible to contamination because contaminants can move through them quickly. Council Bluffs' water supply will be susceptible to contaminant releases from landfills and livestock confinements. A portion of the water supply is obtained from an alluvial aquifer, which was determined to be highly susceptible to contamination because the characteristics of the aquifer and overlying materials allow contaminants to move through the aquifer quickly. The City of Council Bluffs' wells will be most susceptible to activities such as dry cleaners, gas stations, industrial sites, and municipal wastewater discharges. A detailed evaluation of your source water was completed by the Iowa Department of Natural Resources and is available from Council Bluffs Water Works.

“Thousands have lived without love, not one without water.”
—W.H. Auden

Community Participation

We want our valued customers to be informed about their water utility. The Board of Water Works Trustees conduct the business of the water works during their regularly scheduled meetings. The meetings are normally held on the third Tuesday of the month at 4:30 p.m. at the Council Bluffs Water Works office, 2000 North 25th Street.

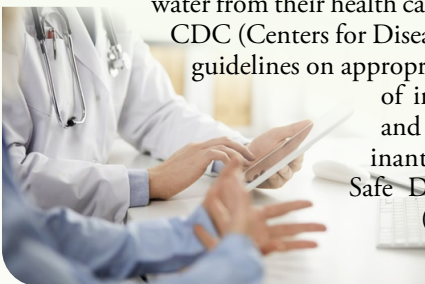
Testing for *Cryptosporidium*

Cryptosporidium is a microbial parasite found in surface water throughout the U.S. While monitoring of source water indicates the presence of these organisms, analysis of the treated or finished water has shown none. Council Bluffs Water Works utilizes a multiple-barrier treatment process that effectively removes and inactivates *cryptosporidium*. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immunocompromised people are at greater risk of developing life-threatening illness. We encourage immunocompromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water.



Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or online at: <http://water.epa.gov/drink/hotline>.



Where Does My Water Come From?

The primary water source for Council Bluffs Water Works is the Missouri River and its alluvium.



QUESTIONS? For more information about this report, or for any questions relating to your drinking water, please call Tim Parker, Purification Manager, at (712) 328-1006, ext. 1020.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater 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 stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

What Are PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a group of manufactured chemicals used worldwide since the 1950s to make fluoropolymer coatings and products that resist heat, oil, stains, grease, and water. During production and use, PFAS can migrate into the soil, water, and air. Most PFAS do not break down; they remain in the environment, ultimately finding their way into drinking water. Because of their widespread use and their persistence in the environment, PFAS are found all over the world at low levels. Some PFAS can build up in people and animals with repeated exposure over time.

The most commonly studied PFAS are perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS). PFOA and PFOS have been phased out of production and use in the United States, but other countries may still manufacture and use them.

Some products that may contain PFAS include:

- Some grease-resistant paper, fast food containers/wrappers, microwave popcorn bags, pizza boxes
- Nonstick cookware
- Stain-resistant coatings used on carpets, upholstery, and other fabrics
- Water-resistant clothing
- Personal care products (shampoo, dental floss) and cosmetics (nail polish, eye makeup)
- Cleaning products
- Paints, varnishes, and sealants

Even though recent efforts to remove PFAS have reduced the likelihood of exposure, some products may still contain them. If you have questions about PFAS in Iowa go to <http://www.iowadnr.gov/Environmental-Protection/PFAS>. IDNR testing on 11/22/21 at our intake was below the detectable limit of 4 parts per trillion.

Lead in Home Plumbing

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 are responsible for providing high-quality drinking water, but 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 two 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 Safe Drinking Water Hotline at (800) 426-4791 or online at: www.epa.gov/safewater/lead. If you have concerns about lead in your drinking water, please call us at 712-328-1006 ext.1020 or go to our website https://www.cbwaterworks.com/wp-content/uploads/2022/02/Lead-in-Drinking-Water-Information-Guide-2022_03032022.pdf or <https://www.cbwaterworks.com/water-quality/>.



Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year the sample was taken.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	Council Bluffs Water Works TP01		Council Bluffs Water Works TP02		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Alpha Emitters (pCi/L)	2018	15	0	6.1	6.1–6.1	NA	NA	No	Erosion of natural deposits
Barium (ppm)	2015	2	2	NA	NA	0.06	0.06–0.06	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chlorine (ppm)	2022	[4]	[4]	2.0	1.38–2.63	NA	NA	No	Water additive used to control microbes
Di(2-ethylhexyl) Phthalate (ppb)	2021	6	0	1.3	1.3–1.3	NA	NA	No	Discharge from rubber and chemical factories
Fluoride (ppm)	2022	4	4	0.99	0.34–0.99	1.01	0.27–1.01	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2022	60	NA	19	10.0–34.0	NA	NA	No	By-product of drinking water disinfection
Nitrate (ppm)	2022	10	10	1.1	ND–1.1	NA	NA	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	2022	NA	NA	67	67–67	38	38–38	No	Erosion of natural deposits; added to water during treatment process
Total Organic Carbon (removal ratio)	2022	TT ¹	NA	1.8	1.0–2.9	NA	NA	No	Naturally present in the environment
TTHMs [total trihalomethanes]–Stage 2 (ppb)	2022	80 ²	NA	51	28–95	NA	NA	No	By-product of drinking water disinfection
TTHMs [total trihalomethanes]–Stage 2 (ppb)	2022	80 ²	NA	51	31–92	NA	NA	No	By-product of drinking water disinfection
Turbidity ³ (NTU)	2022	TT	NA	0.10	0.03–0.10	NA	NA	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2022	TT = 95% of samples meet the limit	NA	100	NA	NA	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	Council Bluffs Water Works TP01		Council Bluffs Water Works TP02		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/ TOTAL SITES		
Copper (ppm)	2019	1.3	1.3	0.07	0/37	NA	NA	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	2019	15	0	2	0/37	NA	NA	No	Corrosion of household plumbing systems; erosion of natural deposits

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Council Bluffs Water Works TP01		Council Bluffs Water Works TP02		TYPICAL SOURCE
		AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	
Bromide (ppb)	2019	41	40–41	54	54–54	Derives from reaction between chlorine and naturally occurring organic matter
Bromoacetic Acid (ppb)	11/04/2019	2.30	ND–2.30	NA	NA	Disinfection by-product
Bromochloroacetic Acid (ppb)	2019	4.4	ND–4.4	NA	NA	Disinfection by-product
Bromodichloroacetic Acid (ppb)	2019	1.1	ND–1.1	NA	NA	Disinfection by-product
Chlorodibromoacetic Acid (ppb)	2019	0.60	ND–0.60	NA	NA	Disinfection by-product
Dibromoacetic Acid (ppb)	2019	1.4	ND–1.4	NA	NA	Disinfection by-product
Dichloroacetic Acid (ppb)	2019	27.0	ND–27.0	NA	NA	Disinfection by-product
Manganese (ppb)	2019	0.900	0.400–0.900	NA	NA	Naturally occurring
Total Organic Carbon [TOC] (ppb)	2019	5,800	3,900–5,800	2,900	2,900–2,900	Naturally present in the environment
Trichloroacetic Acid (ppb)	2019	4.5	ND–4.5	NA	NA	Disinfection by-product

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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

MCL (Maximum Contaminant Level): 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.

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.

MRDL (Maximum Residual Disinfectant Level): 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.

MRDLG (Maximum Residual Disinfectant Level Goal): 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.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

removal ratio: A ratio between the percentage of a substance actually removed to the percentage of the substance required to be removed.

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

Think Before You Flush!

Flushing unused or expired medicines can be harmful to your drinking water. Properly disposing of unused or expired medication helps protect you and the environment. Keep medications out of our waterways by disposing responsibly. To find a convenient drop-off location near you, please visit <https://odcp.iowa.gov/drugtakeback>.

¹The value reported under Amount Detected for TOC is the lowest ratio of percentage of TOC actually removed to percentage of TOC required to be removed. A value of greater than 1 indicates that the water system is in compliance with TOC removal requirements. A value of less than 1 indicates a violation of the TOC removal requirements.

²Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system and may have an increased risk of getting cancer.

³Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.