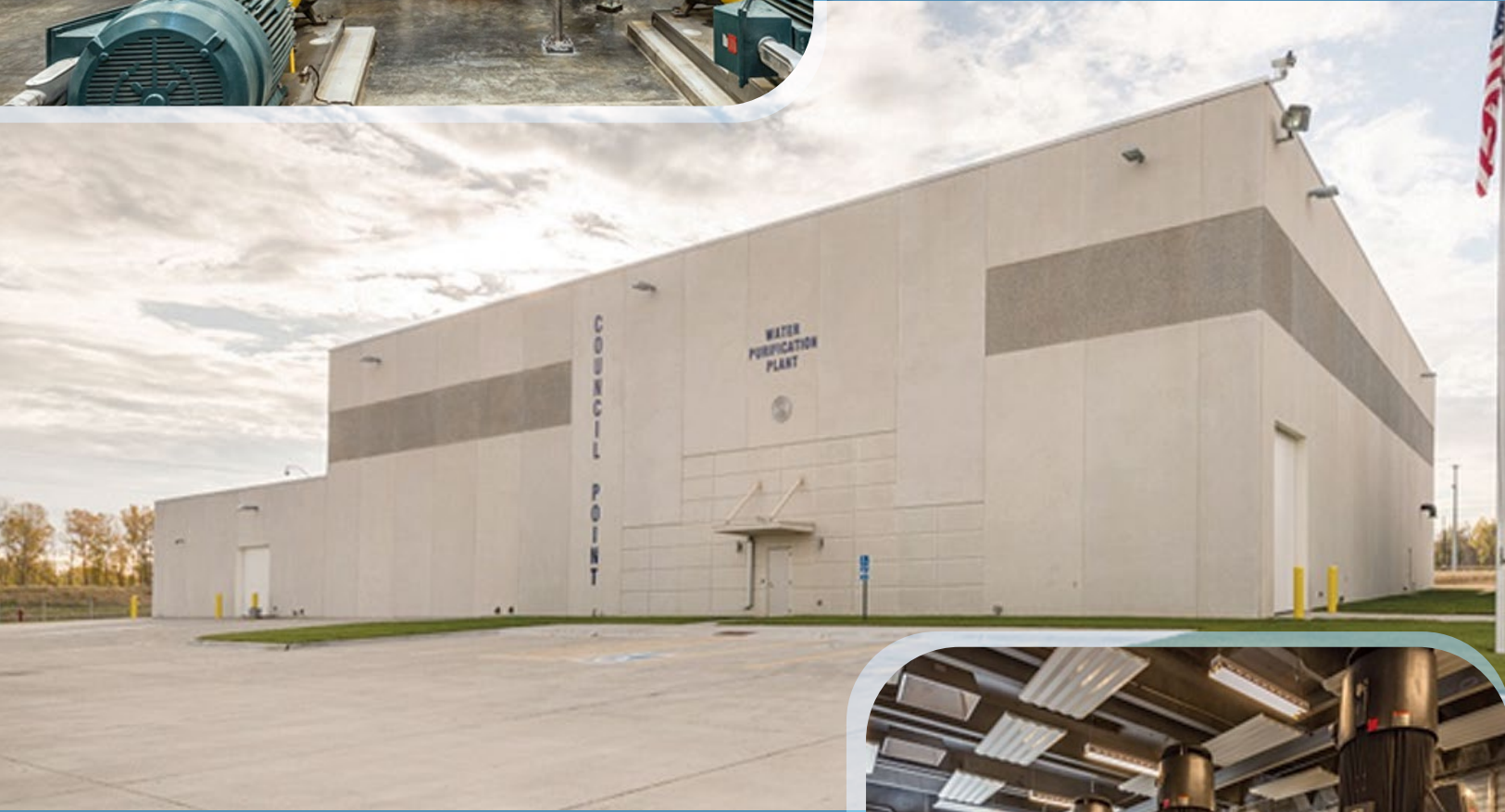


ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2019



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, 2019. 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.



Community Participation

We want our valued customers to be informed about your 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 Water Works office, 2000 N. 25th Street.

Where Does My Water Come From?

The Council Bluffs Water Works' primary water source is the Missouri River and the Missouri River Alluvium.

Source Water Assessment

The City of Council Bluffs obtains its water from the Missouri River and the Missouri River Alluvium. 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 Council Bluffs' water supply is obtained from an alluvial aquifer. The alluvial aquifer 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 John Meads, Purification Manager, at (712) 328-1006 ext. 1020.

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 <http://water.epa.gov/drink/hotline>.



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 have shown none. The 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 doctors 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.



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 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 Safe Drinking Water Hotline at (800) 426-4791 or at www.epa.gov/safewater/lead.

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 that 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.

We remain vigilant in delivering the best-quality drinking water

Tip Top Tap

The most common signs that your faucet or sink is affecting the quality of your drinking water are discolored water, sink or faucet stains, a buildup of particles, unusual odors or tastes, and a reduced flow of water. The solutions to these problems may be in your hands.

Kitchen Sink and Drain

Hand washing, soap scum buildup, and the handling of raw meats and vegetables can contaminate your sink. Clogged drains can lead to unclean sinks and backed-up water in which bacteria (e.g., pink and black slime) can grow and contaminate the sink area and faucet, causing a rotten egg odor. Disinfect and clean the sink and drain area regularly. Also, flush regularly with hot water.

Faucets, Screens, and Aerators

Chemicals and bacteria can splash and accumulate on the faucet screen and aerator, which are located on the tip of faucets and can collect particles like sediment and minerals, resulting in a decreased flow from the faucet. Clean and disinfect the aerators or screens on a regular basis.

Check with your plumber if you find particles in the faucet screen as they could be pieces of plastic from the hot water heater dip tube. Faucet gaskets can break down and cause black, oily slime. If you find this slime, replace the faucet gasket with a higher-quality product. White scaling or hard deposits on faucets and shower heads may be caused by calcium carbonate, fixtures may be cleaned with vinegar to remove the deposits.

Water Filtration and Treatment Devices

A smell of rotten eggs can be a sign of bacteria on the filters or in the treatment system. The system can also become clogged over time, so regular filter replacement is important. (Remember to replace your refrigerator filter!)

QUESTIONS?

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

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. Also, the water we deliver must meet specific health standards. Here, we show only 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. We are pleased to report that your drinking water meets or exceeds all federal and state requirements.

The state recommends monitoring for certain substances less often 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 in which the sample was taken.

We participated in the 4th stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR4) program by performing additional tests on our drinking water. UCMR4 sampling benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data are available to the public so please feel free to contact us if you are interested in obtaining that information. If you would like more information on the U.S. EPA's Unregulated Contaminant Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

REGULATED SUBSTANCES									
				Council Bluffs Water Works TP01		Council Bluffs Water Works TP02			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
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)	2019	[4]	[4]	2.7	0.25–2.70	NA	NA	No	Water additive used to control microbes
Chlorite (ppm)	2017	1	0.8	0.21	0.00–0.21	NA	NA	No	By-product of drinking water disinfection
Di(2-ethylhexyl) Phthalate (ppb)	2018	6	0	3.9	3.9–3.9	NA	NA	No	Discharge from rubber and chemical factories
Fluoride (ppm)	2019	4	4	0.73	0.40–0.73	0.72	0.40–0.72	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs] (ppb)	2019	60	NA	26.00	9.00–49.00	NA	NA	No	By-product of drinking water disinfection
Nitrate (ppm)	2019	10	10	3.1	ND–3.1	NA	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes]¹ (ppb)	2019	80	NA	62.00	30.00–90.00	NA	NA	No	By-product of drinking water disinfection
Total Organic Carbon² (removal ratio)	2019	TT	NA	1.8	1.0–2.4	NA	NA	No	Naturally present in the environment
Turbidity³ (NTU)	2018	TT	NA	0.12	0.03–0.12	NA	NA	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2018	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	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2019	1.3	1.3	0.07	0/37	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2019	15	0	2	0/37	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	
Sodium (ppm)	2019	19	19–19	41	41–41	Erosion of natural deposits; Added to water during treatment process

UNREGULATED CONTAMINANT MONITORING RULE - PART 4 (UCMR4)

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)	2019	2.30	0.0–2.30	NA	NA	Disinfection by-product
Bromochloroacetic Acid (ppb)	2019	4.4	0.0–4.4	NA	NA	Disinfection by-product
Bromodichloroacetic Acid (ppb)	2019	1.1	0.0–1.1	NA	NA	Disinfection by-product
Chlorodibromoacetic Acid (ppb)	2019	0.60	0.0–0.60	NA	NA	Disinfection by-product
Dibromoacetic Acid (ppb)	2019	1.4	0.0–1.4	NA	NA	Disinfection by-product
Dichloroacetic Acid (ppb)	2019	27.0	0.0–27.0	NA	NA	Disinfection by-product
Manganese (ppb)	2019	0.900	0.400–0.900	NA	NA	Naturally occurring mineral found in rocks, soil, groundwater, and surface water
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	0.0–4.5	NA	NA	Disinfection by-product

¹Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their livers, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

²The value reported under Amount Detected for TOC is the lowest ratio between the percentage of TOC actually removed to the 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.

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.

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 that, if exceeded, triggers treatment or other requirements that a water system must follow.

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as the highest LRAAs.

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.