CEDAR RAPIDS
City of Five Seasons®


ELLIS ROAD NW WATER TREATMENT PLANT


J AVENUE NE WATER TREATMENT PLANT

Great Tasting WATER
CITY OF CEDAR RAPIDS

2019

Water Quality Report

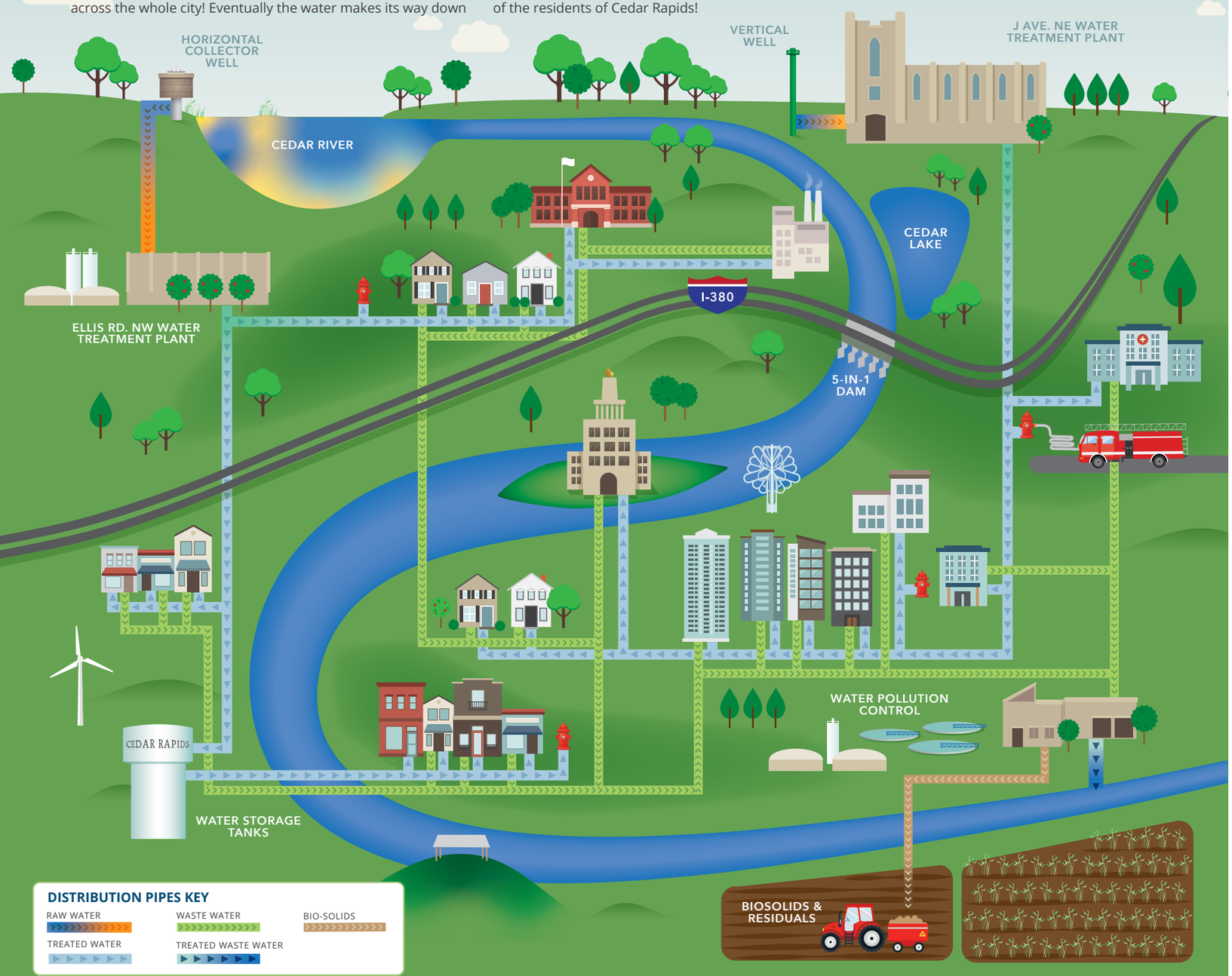
We work around the clock to ensure your drinking water is of the highest quality.

This report illustrates the scrutiny water undergoes before and after it leaves our facilities.

Serving the City of Cedar Rapids, the City of Robins, the Glenbrook Cove Subdivision of Marion and the Poweshiek Water Association.

YOUR WATER SYSTEM

Rain and snowmelt eventually make their way into our streams and river to become the water you drink when you turn on the faucet. Special wells adjacent to the Cedar River draw water from below the ground and send it to our treatment plants where we clean it up so it is safe to drink. Water makes its way through the distribution system — underground pipes — that connect to homes, businesses, schools, and fire hydrants across the whole city! Eventually the water makes its way down the drain, and back into more underground pipes that connect our sewer system to the Water Pollution Control Facility (WPCF). This facility cleans away anything dirty contaminating the water through a biological process. Residuals from this process can be applied as soil amendment, enriching area farmland for crop production. The water that is cleaned at WPCF is returned to the Cedar River. This impressive system is owned by you — and all of the residents of Cedar Rapids!



Middle Cedar Partnership Project

JUNE 5, 2015 – JUNE 5, 2020

Beyond investing in the community's water treatment and delivery system, the City of Cedar Rapids recognizes the need to collaborate with watershed partners outside of city borders.

Due to its annual average levels of nitrogen and phosphorus, the Iowa Water Resources Coordinating Council (IWRCC) designated the Middle Cedar watershed as one of nine priority watersheds under the Iowa Nutrient Reduction Strategy. The Middle Cedar watershed contains multiple communities that have experienced considerable flood damage and associated economic impacts. After experiencing a severe drought in 2012 and with the increased frequency of flood events, the City of Cedar Rapids understands the need to address water quantity challenges in the watershed.

Cedar Rapids residents and its industries rely on the safe, high-quality water we provide every day. More than 70 percent of the drinking water produced by the Cedar Rapids Water Treatment facilities is used by local industry. Many of these major industries depend upon the agricultural resources harvested in our region. In turn, the farmers who produce the grains processed in Cedar Rapids rely on their ability to sell their products in the local market. These farmers also appreciate the long-term benefits of healthier soil on their landscape.

In this way, regional agriculture, local industry, and the Cedar Rapids Water Division are all intertwined. Without clean water, all these groups would face devastating economic ripple effects.

The Middle Cedar Partnership Project (MCPP) is a collaboration between downstream water users, upstream conservation entities and local farmers. Led by the City of Cedar Rapids, the project partners created a structure for watershed management and soil conservation practices to be implemented in our watershed.

Watershed management practices promote healthy soil and can stabilize the water supply both in times of drought and flood. Soil conservation practices work to hold nitrates and phosphorus in place on the field, reducing unwanted contributions to the water supply and decreasing the need for additional nutrient application, or new drinking water treatment methods.

By leveraging approximately $4.3 million in financial and technical assistance, the MCPP has seen success toward its objectives of developing watershed plans, implementing Best Management Practices (BMPs), and conducting outreach activities with landowners and producers in the watershed. The project has also done extensive water monitoring in partnership with Iowa Soybean Association and Coe College. Results from monitoring farm field tile outlets and streams have shown a trend towards decreasing nitrate concentrations in the watersheds where conservation work is underway. The City will continue these monitoring efforts in 2020 to track trends in water quality.

SUMMARY OF MCPP PRACTICES	TOTAL IMPLEMENTED
Nutrient Management	2,673 acres
Cover Crops	20,126 acres
Residue Management / No-till Strip-till	5,740 acres
Nutrient Management Written Plan	5 written plans
Saturated Buffers	2,350 feet

The City of Cedar Rapids has earned national recognition and drawn attention from farmers and landowners across the State of Iowa and beyond for its collaborative approach with agricultural partners in the watershed. For its work on MCPP, the City was awarded the US Water Prize in 2019, recognizing outstanding leadership to change how water is viewed, valued, and managed.

WHERE OUR WATER COMES FROM

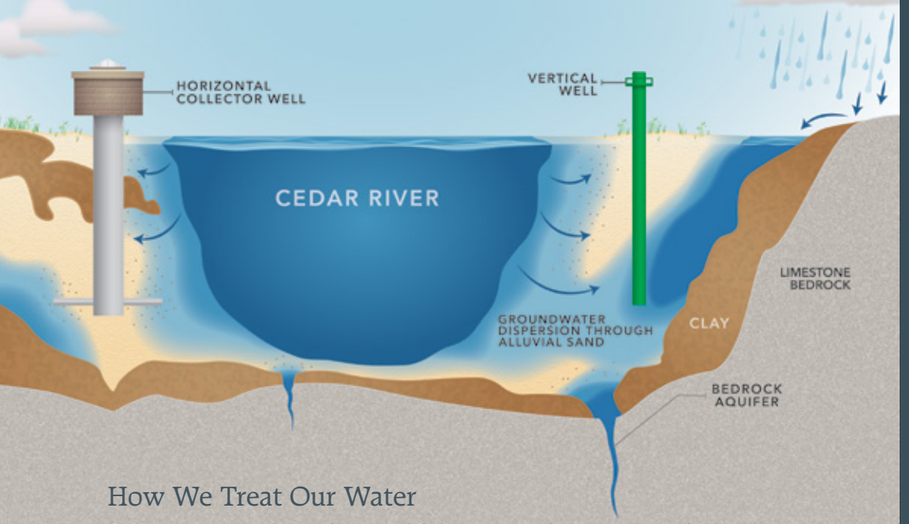
The City of Cedar Rapids obtains its drinking water supplies from shallow vertical and collector wells constructed in the sand and gravel deposits along the Cedar River. Those deposits form an underground water-bearing layer called an alluvial aquifer. Because of continuous pumping of the City's wells, most of the water in the aquifer is pulled from the river.

The rest of the water is supplied as water percolates up from a deeper bedrock aquifer or down from the top of the ground.

Our drinking water from those wells benefits from natural filtration through the riverbank. This natural sand filtration has proven to be a beneficial pretreatment to water before it reaches the City's two conventional lime-softening facilities.

How We Protect the Quality of Our Drinking Water

The Cedar Rapids Water Division continues to work with state and federal agencies to monitor and assess our watershed. The Cedar River watershed covers more than 6,500 square miles upstream of Cedar Rapids and extends into southern Minnesota. Source water assessment identifies potential sources of contamination to the water we use to treat for drinking water purposes. Although efforts are made on many fronts, farm-field runoff continues to be a primary concern and risk for contamination of our source water. We continue to actively monitor the watershed and have initiated a watershed protection program.



How We Treat Our Water

Our treatment process involves a multibarrier approach to protect our drinking water from the source to your tap. This includes source water monitoring; well-head protection; treatment processes of softening, filtration and disinfection; and distribution-system monitoring and maintenance.

WATER VALUE

Cedar Rapids residents enjoy water rates that are among the lowest in the state.

PER 1,000 GALLONS FROM CITY

VS.

PER 1,000 GALLONS PURCHASED AT THE STORE (AT $.88/GALLON)

QUESTIONS?

If you have questions or concerns about our water quality or this report, please contact Water Division Customer Service. We are happy to help identify issues and resolve your concerns.

CALL:
319-286-5900

EMAIL:
watermail@cedar-rapids.org

WHAT WE'RE DOING ABOUT LEAD

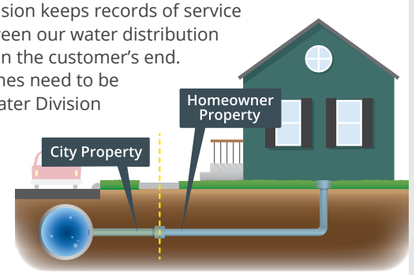
The Cedar Rapids Water Division (CRWD) routinely tests for lead in the drinking water leaving our treatment plants. In 2019, no lead was detected leaving our plants. However, lead can leach into water during overnight contact with pipes and faucets in some homes. CRWD collects and analyzes special samples to monitor for this. Our tests show that most homes are at, or well below, the 15 micrograms per liter of water standard set by the Environmental Protection Agency (EPA) for annual monitoring. For any occurrences over the standard, CRWD performs special quarterly sampling and analysis.

Important Lead and Copper Service Line Information

Providing clean, safe, great-tasting drinking water is the mission of the CRWD. We work hard every day to exceed the expectations set by the EPA. The EPA is in the process of finalizing revisions to its Lead and Copper Rule for Public Water Systems. It is important for consumers to understand what the changes are and how they might be affected.

The CRWD has added lead corrosion control — a very low concentration of zinc ortho-phosphate — to its water supply since the 1990s. This mineral reduces the risk of dissolved lead in consumers' water. The division is proactively reevaluating this process to make sure it is at optimum efficiency and engages in removal and replacement whenever lead service lines are discovered during repair work.

The Cedar Rapids Water Division keeps records of service lines — the connection between our water distribution pipes and the water meter on the customer's end. From time to time, service lines need to be repaired or replaced. The Water Division does not always receive updated information when this happens. Updating our records is a high priority and the logical first step to determine how precise our monitoring program can be.



To better manage resources and costs, CRWD may ask for help from residents and business owners to identify service line material. A service-line inventory is a costly undertaking. Customer participation can reduce the expense of the inventory requirement and reduce inconveniences associated with potential home or office visits. Once complete, a new list of sample locations will be in place to pinpoint any further needed lead sampling or testing.

The biggest revision expected in the new Lead and Copper Rule will be a percentage of mandatory service-line replacements every year, with an end goal of no lead service lines in use after several years. The EPA is working to provide financial assistance to help property owners offset the cost of replacing their portion of the lead service line, however, it will not be mandatory for the owner to replace their portion. If only the CRWD-owned portion is replaced, the potential for dissolved lead exposure remains. CRWD will notify homeowners of scheduled service line and adjacent water main work in their area. Our goal is to conduct complete service line replacements all at one time.

Another revision under the new Lead and Copper Rule discontinues the collection of water samples from service lines that are made of copper using lead solder. The monitoring program will continue to collect water samples from service lines made of lead. Additional testing of schools and childcare centers are also expected with the rule revision.

Educational Information

LEAD IN DRINKING WATER

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 CRWD 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 and 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 (1-800-426-4791) or at www.epa.gov/safewater/lead.

The following state-approved laboratories can test your water for lead:

State Hygienic Laboratory:
Coralville, IA | 800-421-4692
TestAmerica: Cedar Falls, IA | 319-277-2401
Keystone Labs: Newton, IA | 641-792-8451

NITRATE

A nitrate is a dissolved form of nitrogen found in fertilizers and sewage byproducts that may leach into groundwater and other water sources. Nitrates occur naturally in some waters. Over time, nitrates can accumulate in aquifers and contaminate groundwater.

Nitrate in drinking water at levels above 10 ppm is a potential health risk for infants 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 because of rainfall or agricultural activity. If you are caring for an infant, ask for advice from your health care provider.

AT-RISK POPULATIONS

It's important to be aware that some people may be more vulnerable than the general population to contaminants in drinking water. Immuno-compromised persons — those undergoing cancer chemo-therapy or organ transplants, some elderly or infants and people with HIV/AIDS or other immune system disorders — can be particularly at risk from infections. We ask anyone that may be at risk to seek advice about drinking water from their health care providers. Guidelines from the EPA and Centers for Disease Control on appropriate steps to lessen the risk of infection by microbial contaminants and/or Cryptosporidium are available from the National Safe Drinking Water Hotline at 1-800-426-4791.

Water Quality Findings

This table summarizes required water quality monitoring results for regulated parameters that were detected in the 2019 calendar year. A comprehensive report of all water quality testing is available from the Water Division.

WATER TREATMENT PLANTS - FINISHED WATER

INORGANIC CHEMICALS	UNITS	MCL	MCLG	VIOLATION	J AVE. PLANT RANGE	J AVE. PLANT REPORTED	NW PLANT RANGE	NW PLANT REPORTED	POSSIBLE SOURCES OF CONTAMINANT
Arsenic	µg/L	10	0	No	ND -1.06	0.2	ND -1.17	0.18	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Nitrate	mg/L	10	10	No	0.67 - 5.23	5.23	1.19 - 5.91	5.91	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite	mg/L	1	1	No	ND - 0.05	0.05	ND - 0.04	0.04	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium	mg/L	NA	NA	No	NA	9.6	NA	9.2	Erosion of natural deposits; added to water during treatment process
Fluoride	mg/L	4	4	No	0.18 - 0.87	0.66	0.16 - 0.96	0.66	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
ORGANIC CHEMICALS					RANGE	REPORTED	RANGE	REPORTED	
Toluene	mg/L	1	1	No	ND - 0.0005	0.0005	NA	ND	Discharge from petroleum factories. J Ave Plant Detect from 2016, 2019 result = ND
Atrazine	µg/L	3	3	No	ND - 0.4	0.11	ND - 0.20	0.10	Runoff from herbicide used on row crops
RADIONUCLIDES					RANGE	REPORTED	RANGE	REPORTED	
Combined Radium	pCi/L	5	0	No	NA	1.1	NA	ND	Erosion of natural deposits. J Ave Plant Detect from 2017, 2019 result = ND
Radium -226	pCi/L	5	0	No	NA	ND	NA	ND	Erosion of natural deposits
Radium -228	pCi/L	5	0	No	NA	0.7	NA	0.9	Erosion of natural deposits. J Ave Detect from 2018, 2019 result = ND; NW Detect from 2017, 2019 result = ND
Gross Alpha	pCi/L	15	0	No	NA	ND	NA	0.7	Erosion of natural deposits. NW Plant detect from 2017, 2018 result = ND, 2019 result = ND
TREATMENT TECHNIQUE INDICATORS					RANGE	REPORTED	RANGE	REPORTED	
Total Organic Carbon	Removal Credits	TT	NA	No	0.31 - 1.93	1.41	1.00 - 2.99	1.84	Naturally present in the environment
					Running Annual Average TOC Credits must be > 1.0				
Turbidity	NTU	TT	NA	No	0.04 - 0.10	0.10	0.02 - 0.16	0.16	Soil runoff
	Cannot exceed 1.0 NTU & Monthly no more than 5% > 0.3 NTU				% > 0.3 NTU		% > 0.3 NTU		
					0		0		

DISTRIBUTION SYSTEM MONITORING

LEAD AND COPPER RULE	UNITS	ACTION LEVEL (AL)	MCLG	VIOLATION	RANGE	90TH PERCENTILE	95TH PERCENTILE	SAMPLES EXCEEDING AL	POSSIBLE SOURCES OF CONTAMINANT
Lead	µg/L	15	0	No	ND - 128	3.4	18.7	3	Corrosion of household plumbing systems; erosion of natural deposits
Copper	mg/L	1.3	1.3	No	ND - 0.191	0.089	0.092	0	Corrosion of household plumbing systems; erosion of natural deposits

REVISED TOTAL COLIFORM RULE	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Total # Samples/Month	108	108	108	108	108	108	108	113	108	112	113	109
# Positive Coliform Samples/Month	0	0	0	0	0	0	0	0	0	1	1	0
Level 1 Assessment Required	No	No	No	No	No	No	No	No	No	No	No	No
Meets Monthly MCL of <5% Positive Coliform/Month	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

DISINFECTANT & DISINFECTION BY-PRODUCTS	UNITS	MRDL	MRDLG	VIOLATION	DISTRIBUTION SYSTEM RANGE	DISTRIBUTION SYSTEM REPORTED	
Total Chlorine Residual	mg/L	4	4	No	1.9 - 3.9	3.5	Water additive used to control microbial growth
	UNITS	MCL	MCLG	VIOLATION	RANGE	REPORTED	
Total Trihalomethanes (TTHM)	µg/L	80	NA	No	ND - 4.4	3.0*	By-product of drinking water disinfection
Total Haloacetic Acids (HAA5)	µg/L	60	NA	No	ND - 6.0	1.5**	By-product of drinking water disinfection

Highest Locational Running Annual Average at Site DB03* * Highest Locational Running Annual Average at Site DB01*

Sample Key

Highest Running Annual Average		Maximum Value	Single Result		Lowest Running Annual Average	Highest Locational Running Annual Average
Arsenic	Total Chlorine Residual	Nitrate	Sodium	Radium -226	Total Organic Carbon	Total Trihalomethanes
Fluoride	Radon	Nitrite	Toluene	Radium - 228		Total Haloacetic Acids
Atrazine		Turbidity	Combined Radium	Gross Alpha		

UNREGULATED AND SECONDARY CHEMICALS

INORGANIC CHEMICALS	UNITS	MCL	MCLG	J AVE. PLANT RANGE	J AVE. PLANT AVG	NW PLANT RANGE	NW PLANT AVG	POSSIBLE SOURCES OF CONTAMINANT
Chloride	mg/L	NA	250	19.4 - 31.4	24.6	17.3 - 28.4	23.2	Erosion of natural deposits, run-off
Copper	mg/L	NA	1.0	ND - 0.0202	0.0026	ND - 0.0167	0.0084	Corrosion of household plumbing, erosion of natural deposits
Manganese	mg/L	NA	0.05	0.0051 - 0.0254	0.0108	ND - 0.0014	0.0001	Corrosion of household plumbing, erosion of natural deposits
Sulfate	mg/L	NA	250	20.9 - 28.9	24.3	19.6 - 29.7	24.3	Erosion of natural deposits
Zinc	mg/L	NA	5	0.1930 - 0.3240	0.2228	0.1920 - 0.2860	0.2365	Corrosion of household plumbing, erosion of natural deposits
ORGANIC CHEMICALS				RANGE	AVG	RANGE	AVG	
Chloroform	µg/L	NA	70	1.2 - 1.4	1.3	1.7 - 3.4	2.1	By-product of drinking water disinfection
Bromodichloromethane	µg/L	NA	0	NA	ND	ND - 6	1.2	
Dichloroacetic Acid	µg/L	NA	0	1.0 - 3.0	2	1.0 - 3.0	1.8	
Trichloroacetic Acid	µg/L	NA	20	NA	ND	NA	ND	
Metolachlor	µg/L	NA	NA	0.10 - 0.40	0.19	0.10 - 0.30	0.18	Run-off from fertilizer used on row crops
RADIONUCLIDES				RANGE	AVG	RANGE	AVG	
Radon	pCi/L	NA	NA	38 - 80	61	15 - 32	28	Erosion of natural deposits

UNREGULATED CONTAMINANT MONITORING RULE (UCMR) 4

		Manganese µg/L	HAA5 µg/L	HAA6Br µg/L	HAA9 µg/L	TOC mg/L	Bromide mg/L
	Method	EPA 200.8	EPA 552.3	EPA 552.3	EPA 552.3	SM 5310B	EPA 300.01
J Ave. Treatment Plant	Range	NA	NA	NA	NA	NA	NA
	Average	6.200	NA	NA	NA	2.3	37.2
J Ave. Distribution Area	Range	NA	NA	NA	NA	NA	NA
	Average	NA	NA	NA	NA	NA	NA
NW Treatment Plant	Range	NA	NA	NA	NA	NA	NA
	Average	ND	NA	NA	NA	1.9	33.4
NW Plant Distribution Area	Range	NA	4.5 - 7.1	1.9 - 3.1	6.4 - 9.1	NA	NA
	Average	NA	6	2.5	7.8	NA	NA
	MCL	NA	NA	NA	NA	NA	NA

NO CURRENT REGULATORY MCL - EPA Mandatory sampling and Analysis to determine contaminate occurrence nationally and establish regulatory MCL's.

ACRONYMS

AVG: Average
ND: Not Detected
MRDL: Maximum Residual Disinfectant Level
NR: Not Regulated
mg/L: Milligrams per liter or parts per million
µg/L: Micrograms per liter or parts per billion
pCi/L: Picocuries per liter
MCL: Maximum Contaminant Level
MCLG: Maximum Contaminant Level Goal
NA: Not Applicable
NTU: Nephelometric Turbidity Unit
MRDLG: Maximum Residual Disinfection Level Goal

Source Water

Source Water Assessment Information: This water supply obtains its water from the sand and gravel of the Alluvial aquifer of the Cedar River. The Alluvial aquifer was determined to be highly susceptible to contamination because the aquifer characteristics and the overlying materials provide little protection from contamination at the land surface. The Alluvial wells will be highly susceptible to surface contaminants such as leaking underground storage tanks, contaminant spills, and excess fertilizer application. A detailed evaluation of the source water supply was completed by the IDNR, and is available by contacting the public water supply at 319-286-5975. *Information about work being done to help minimize contamination of the source water supply can be found at www.cityofcr.com/mcpp.*

	Arsenic µg/L	Total Coliform cfu/100ml	E.coli cfu/100ml	Lead µg/L	Copper µg/L	Zinc µg/L	Manganese µg/L	Iron µg/L	Sodium mg/L	Nitrate mg/L	TOC mg/L
2015 Annual Average	1.15	720	<1	ND	2.8	1.0	214.9	65.1	11.9	4.0	2.10
2016 Annual Average	3.05	33	<1	ND	6.8	2.1	166.0	63.4	9.2	5.5	2.56
2017 Annual Average	1.25	65	<1	0.37	8.8	4.4	170.3	110.6	9.5	4.0	1.94
2018 Annual Average	0.84	35	<1	0.05	4.2	2.2	170.9	49.4	10.0	3.6	2.27
2019 Annual Average	0.86	55	<1	ND	6.6	2.7	120.0	42.7	9.4	3.6	2.87

The following is an important message from the Environmental Protection Agency:
Drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contaminants. That's because as the water we draw from — lakes, rivers, streams, ponds, reservoirs, springs and wells — travels over the surface of the land or through the ground, it picks up naturally occurring minerals and, in some cases, radioactive material. It can also pick up substances resulting from the presence of animals or from human activity. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 800-426-4791 or visiting the website at www.epa.gov/ogwdw. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses and parasites, which can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

Frequently Asked Questions

Is there PFAS in my drinking water?
We sampled for six specific PFAS as part of EPA-required testing for UCMR — third round in 2013. All of our results were non-detect for the compounds tested at that time. Currently, there are no formal standards for these compounds. While regulatory sampling has not been required, plans for future sampling are under review. Locations where the compounds were manufactured, or air fields adjacent to streams where a significant amount of fire-fighting foam may have been used, appear to be the most likely sites of concern for these compounds. Neither of these cases present a concern for our source water at this time.

What is the fluoride concentration and why is it added?
Fluoride is added during the treatment process to help prevent dental cavities. The optimal concentration is maintained at 0.7 parts per million (ppm) with a range of 0.6-0.9 ppm as recommended by the U.S. Department of Health and Human Services.

My toilet tank and inside of my dishwasher are stained dark brown to black. Is my water safe to drink?

The dark staining is likely due to the corrosion-control chemical added during treatment. Its purpose is to lay a protective coating on the insides of pipes so water never comes in contact with the pipe, thereby reducing the risk of dissolving lead or copper into the drinking water. It has been tested extensively and no health or safety concerns have been identified.

My water throughout the entire house tastes and smells musty or stale. Is it OK to drink?
Sometimes in low-use areas or dead-end main areas, the water does not get circulated as it should. Where this is the case, the distribution crew can be notified to flush hydrants in the area to help bring in fresh water.

What should I expect if my water is shut off due to a water main break?
Water main breaks are often indicated by a lack of water at the tap or water bubbling to the surface of neighborhood streets. This may prompt a water service disruption to your home or business.

Repair crews attempt to reach all homes, businesses, and apartments prior to shutting off water, except under emergency situations. The crews leave an information sheet (door hanger) at the property which explains what to do if water is shut off. It generally takes repair crews 8-12 hours to fix a break and restore water service. If air or particles are coming out of your drinking tap, run water for several minutes to flush the line.

In most cases, it takes another two days for a bacterial contamination sample to return. If the sample shows no contamination in the water, another information sheet is issued, indicating an All Clear. Information will be posted to the City's website (CityofCR.com) if a precautionary boil advisory notice is issued.

If you receive a precautionary boil advisory notice, follow these steps before consuming tap water: **1)** bring water to a boil; **2)** let water boil rapidly for at least one minute; **3)** allow water to completely cool before consuming; **4)** check City website for advisory status updates, or call Water Customer Service at 319-286-5900.

Glossary

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

Arsenic: The EPA recently lowered the arsenic Maximum Contaminant Level (MCL) to 10 ppb. Trace amounts of arsenic are occasionally detected in your drinking water at levels well below this more stringent standard. Arsenic is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Coliform: A bacteria originating in the digestive system of mammals. Its presence in water alerts lab technicians that disease-causing agents may be present.

Compliance: Following all rules and regulations defined in the Safe Drinking Water Act and maintaining water quality below MCLs.

Contaminant: One of a variety of natural or man-made physical, chemical, biological or radiological substances whose presence in public water systems may cause adverse health effects to consumers.

Detection: The positive identification of the presence of a particular contaminant. Detection of a contaminant does not necessarily represent a serious health risk to consumers if the concentration is below the MCL.

Disinfection: Killing the larger portion of microorganisms in water, with the probability that the disinfecting agent kills all disease-causing bacteria.

Drought: A period of unusually persistent dry weather that persists long enough to cause serious problems such as crop damage and/or water supply shortages.

Filtration: A treatment process that physically removes particles from water as the water passes through a medium.

Groundwater: The supply of fresh water found beneath the earth's surface, usually in aquifers. Groundwater is often used to supply wells and springs.

Herbicide: A chemical agent used to kill plants, especially weeds. Used widely in agriculture.

Immunocompromised: A physical condition in which the human immune system becomes less capable of warding off illness or infection.

Inorganic: Composed of or involving organisms (or their remains or products) that are not living. Examples of inorganic substances include minerals, rocks and salt.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the Maximum Contaminant Level Goals (MCLGs) as feasible, using the best available treatment 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 Disinfection Level (MRDL): 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.

Maximum Residual Disinfection Level Goal (MRDLG): The level of 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.

Microbial: A group of microorganisms such as bacteria, protozoa and viruses.

Nephelometric Turbidity Unit (NTU): A unit of measure used to determine the clarity of drinking water.

Organic: Of, pertaining to or derived from living organisms. Organic matter contains carbon, hydrogen and oxygen. Examples include humans, plants and animals.

Particulates: Of or relating to minute separate particles.

Per- and Polyfluoroalkyl Substances (PFAS): A group of manufactured chemicals that have been used in a variety of industries around the globe since the 1940s. The chemicals are very persistent in the environment and in the human body – meaning they don't break down and they can accumulate over time. There is evidence that exposure to PFAS can lead to adverse human health effects.

Pesticides: Any substance or chemical applied to kill or control pests, including weeds, insects, algae, rodents and other undesirable agents.

Radionuclides: Naturally occurring and human-made radionuclides are present throughout the environment. They are found in varying amounts in soil, water, indoor and outdoor air—and even within our bodies—making exposure inevitable. State and Federal regulations establish safe drinking water maximum contaminant levels for a variety of radionuclides. Monitored contaminants include Gross Alpha Radiation, Radium-226, Radium-228, and Combined Radium radionuclides. The existing treatment process does not reduce or remove these contaminants. Except in extreme circumstances, radiation resulting from the ingestion of radionuclides in drinking water is far lower than radiation resulting from other sources of exposure, like radon found in some basements. Radon is a radionuclide classified as an unregulated contaminant. During the aeration treatment stage, radon can be removed from the water source. Additional information about Radon and aeration is included in this report. The concentration of radionuclides found in our water is well within safe regulatory guidelines.

Radon: Radon is a radioactive gas that you can't see, taste or smell. It is found throughout the United States. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also increase the risk of stomach cancer. Radon can build up to high levels in all types of homes. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can also be released into indoor air from tap water when showering, washing dishes, and performing other household activities. A radon level less than 4 picocuries per liter of air (pCi/L) is considered safe. Between 0.0019 – 0.0070 pCi/L of radon may enter the air from City tap water — far less than radon entering homes through the foundation. Fix your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that aren't too costly. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy.

For additional information, call your state radon program (800-838-5992) or the EPA's Radon Hotline (800-767-7236).

Surface water: All water naturally open to the atmosphere and all springs, wells or other collectors that are directly influenced by surface water. Water located close to the earth's surface.

Total Organic Carbon (TOC): Amount of carbon found in an organic compound; used as an indicator of water quality.

Revised Total Coliform Rule (RTCR): Revised compliance rule that aims to increase public health protection through reduction of pathways for contamination; find-fix-document.

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

Turbidity: Turbidity is a measure of the cloudiness of water. Turbidity is a good indicator of treatment filter performance and is regulated as a Treatment Technique.

Violation: Exceeding the MCL of a contaminant regulated by the federal government; failure to properly monitor or report regulated contaminants would also be considered a violation.