



Kay Halloran
Kay Halloran – Mayor

BUILDING FROM THE PAST, LOOKING TO THE FUTURE.

As stewards of the Cedar Rapids' community's water supply, the city's leaders and the Cedar Rapids Water Department continually monitor, evaluate and protect the water resources and system that ensure us a reliable, secure water supply.

This requires ongoing efforts on many levels. We scrutinize our water resources — the Cedar River, its tributaries and the aquifer we draw from — for any changes in capacity and condition, or the presence of any potential contaminants. We are careful in the treatment methods we use and maintain and upgrade our facilities to be sure we're doing the best we can to provide dependable, clean water. We stay current on technological advances that might further improve our overall system and safety requirements we must meet, working together with regional, state and federal agencies involved in water treatment system operations.

The common thread running through these responsibilities is twofold: *communication* and *investment*. Communication within our own system so our operations are as effective and efficient as possible; with other agencies helping to care for and manage our water resources; and with our public, to assure residents and businesses we serve that our water treatment and distribution processes are reliable and thorough.

Investment comes into play in the methods we choose and facilities' upgrades we make to ensure their best operation and safety. All are undertaken ultimately to better provide top-grade water quality for our community. Investment is a tangible commitment to make our water treatment system as good as it can be. And ultimately, that is an investment in our city and a trust-builder with our public.

You can see progress in the remodeling of our J Avenue treatment plant that is underway to improve treatment efficiency and add storage space. After long study and a successful 2003 pilot project, we have started construction on Iowa's first ultraviolet disinfection system for a municipal water utility at our two water plants. This project will provide a new treatment method that has been shown effective in tackling viruses in anticipation of new federal requirements.

As always, our City Council members are committed to sharing information and communicating openly. This annual report, required by the Environmental Protection Agency, allows us to keep you informed on how we manage our water resources to maintain our high water quality.



City Council

Brian Fagan
At Large

Tom Podzimek
At Large

Pat Shey
At Large

Kris Gulick
District 1

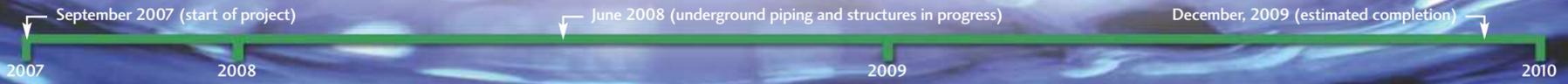
Monica Vernon
District 2

Jerry McGrane
District 3

Chuck Wieneke
District 4

Justin Shields
District 5

UV DISINFECTION & PLANT REMODELING PROJECT TIMELINE



GLOSSARY

Action level (AL)

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Arsenic

The EPA recently lowered the arsenic 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 Maximum Contaminant Levels (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.

Filtration

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

Ground water

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

Herbicide

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

Immuno-compromised

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 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 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.

Pesticides

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

Radioactivity

The spontaneous decay or disintegration of an unstable atomic nucleus, accompanied by the emission of radiation.

Radon

Radon is a radioactive gas that you can't see, taste, or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will, in most cases, be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air

containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. 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. For additional information, call your state radon program (800-838-5992) or call 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.

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 the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

Violation

Exceeding the maximum contaminant level (MCL) of a contaminant regulated by the federal government; failure to properly monitor regulated contaminants would also be considered a violation.

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Cedar Rapids Water Department
1111 Shaver Road NE, Cedar Rapids, Iowa 52402 319-286-5910



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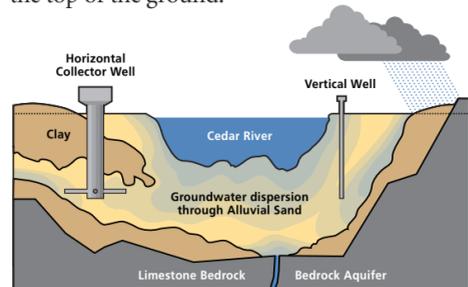
2007 Water Quality REPORT

Serving the City of Cedar Rapids, the City of Robins, and the Glenbrook Cove Subdivision of Marion

2008 THE YEAR OF THE RIVER

WHERE DOES OUR WATER COME 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 beneficial, pre-treating the water before it

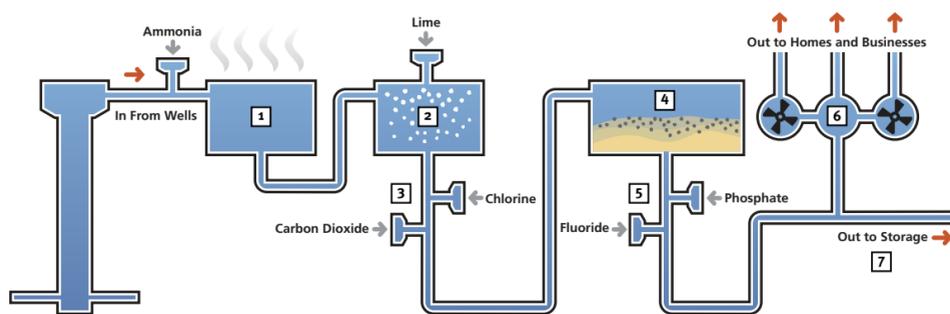
ever reaches the City's two treatment plants (both conventional lime-softening facilities).

In order to most effectively manage our water resources, the Cedar Rapids Water Department (CRWD) has worked with state and federal agencies to complete a source water assessment, identifying potential contamination sources in the Cedar River watershed. The results of that assessment, paired with a continuous monitoring program, help us better understand our watershed.

We have confirmed that some contaminants, including nitrate, herbicides and bacteria, enter the Cedar River watershed upstream from our wells. The watershed of the Cedar river upstream of Cedar Rapids is over 6,500 square miles and extends into southern Minnesota. This information is helpful when making decisions about current and future operational and water treatment needs.

Through these studies, we have confirmed the need for continued monitoring and for a strong watershed protection program. (If you are interested in reviewing our source water assessment or any monitoring results, please contact the CRWD at 319-286-5910.)

HOW DO WE TREAT OUR WATER?



Cedar Rapids' water treatment process begins before the water ever enters our plants. We use a multi-barrier approach to protect our drinking water and ensure high quality. That takes the form of ongoing watershed and wellhead protection programs, water treatment processes and distribution system monitoring and flushing activities – right up to your tap.

TREATMENT PROCESS HIGHLIGHTS

1 Aeration. Once water has been drawn from the wells into the City's treatment plants, it undergoes aeration. Raw or untreated water is allowed to cascade down a series of trays, increasing the surface area of the water and promoting the exchange of gases. Aeration also removes undesirable gases such as radon. Aeration is similar to the

natural process that occurs when a stream flows through rapids or over falls.

2 Softening. The CRWD adds slaked lime to the water. This softens or reduces the minerals that typically make water "hard." Excessive hardness increases soap use, deposits scale in water heaters and boilers, interferes with some industrial processes and sometimes gives water an unappealing taste and odor. Resulting lime residual materials are removed and applied to farmland as soil conditioner.

3 Recarbonation & chlorination. The CRWD lowers water pH by adding carbon dioxide and adds chlorine to disinfect the water. The chlorine helps ensure our water's microbiological safety by killing disease-causing organisms. The Department also adds a trace amount of ammonia to complete the disinfection process.

4 Filtration. Water is then passed through a sand and gravel filter bed, removing any remaining suspended matter.

5 Fluoridation & phosphate addition. After filtration, the CRWD adds fluoride to promote children's dental health. Phosphate is also added to chemically stabilize the water and lessen the possibility that lead will leach out of pipes and into tap water.

6 Distribution. From here, finished water is pumped directly into the three principal water distribution systems that serve homes and businesses throughout the City.

7 Reserves. Water not immediately consumed flows into storage tanks for use when demand exceeds plant pumpage. Water stored in elevated tanks helps stabilize pressure in the distribution system and serves as an emergency reserve for fire protection.

EXPANDED MONITORING OF CONTAMINANTS

Nitrate

A dissolved form of nitrogen found in fertilizers and sewage by-products that may leach into ground water and other water sources. Nitrates occur naturally in some waters. Over time, nitrates can accumulate in aquifers and contaminate ground water. Nitrate in drinking water at levels above 10 ppm is a 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.

Lead

Our drinking water contains little or no lead when it leaves our treatment plant. However, lead can leach into the water during overnight contact with the lead solder and brass faucets in some homes. Because of that, the CRWD tests first-draw samples quarterly from area homes.

Our tests show that most homes are at or well below the 15 parts per billion (ppb) – or 15 micrograms per liter of water – standard set by the Environmental Protection Agency (EPA).

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 or at <http://www.epa.gov/safewater/lead>.

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

State Hygienic Laboratory Oakdale, IA. 800-421-4692	TestAmerica Cedar Falls, IA. 319-277-2401	Keystone Laboratory, Inc. Newton, IA. 641-792-8451
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Additional information is available from the Safe Drinking Water Hotline, 800-426-4791.

QUESTIONS?

If you have questions or concerns about our water quality or this report, we invite you to attend one of two upcoming public meetings to be held at the Cedar Rapids Water Department, 1111 Shaver Road NE, Cedar Rapids, at 10:00 a.m. Wednesday, July 2nd, and at 7:00 p.m. Thursday, July 17th.

You are also welcome to bring questions to any of the regular city council meetings, which are held on the fourth floor of City Hall, 50 Second Avenue Bridge. These meetings are announced in the Cedar Rapids Gazette, and a schedule of future meetings can be viewed at www.cedar-rapids.org.

For more information on this Water Quality Report or for copies of our monitoring reports (CRWD's or USGS), contact the Cedar Rapids Water Department at 319-286-5910.

CONTAMINANT VIOLATIONS

The CRWD recorded one turbidity violation in 2007 (NW Plant, 3/1/07, 1.7 NTU). Length of the violation was less than 10 minutes. Actions taken by CRWD to address this violation include the implementation of new operating procedures to provide improved documentation of filter usage.

This definition of turbidity was provided by the Iowa Department of Natural Resources: Turbidity. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

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.

This concern played a part in the boil water advisories issued by the city of Cedar Rapids this past year. These advisories were precautionary measures after water main breaks created the potential for drops in water pressure. An advisory was requested by the Iowa Department of Natural Resources personnel asking residents in affected areas to boil their water as a precaution until the advisory was lifted.

In each instance, there was no indication that water quality was compromised, but the advisory ensured the public was protected until city officials could confirm that the water was bacterially safe.

Immuno-compromised persons — those undergoing cancer chemotherapy or organ transplants, the elderly, infants, or people with HIV/AIDS or other immune system disorders — can especially be at risk from infections.

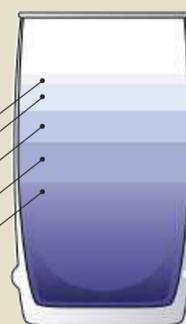
We ask anyone who is immuno-compromised to seek advice about drinking water from their health care providers. Guidelines from the EPA and Centers for Disease Control on appropriate steps to lessen the risk of infection by microbial contaminants are available from the national Safe Drinking Water Hotline at 800-426-4791.

WATER VALUE

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

\$2.49 Buys You 1,000 Gallons of Clean Water

Engineering & Administrative Support	\$0.19
Water Source (Wells)	\$0.33
Meter & Customer Service	\$0.37
Distribution & Storage	\$0.63
Water Treatment	\$0.97



WATER QUALITY FINDINGS

This table summarizes required water quality monitoring results for regulated parameters that were detected in the 2007 calendar year. The frequency of our monitoring far exceeds required testing. A comprehensive report of all water quality testing is available from the Water Department.

WATER TREATMENT PLANTS - FINISHED WATER										
Inorganic Chemicals			J Avenue Water Plant			NW Water Plant			Source of Contaminant	
Parameter	Units	MCL	MCLG	Max	Range	Average	Max	Range	Average	
Nitrate (as nitrogen)	mg/L	10	10	5.8	2.17-5.8	4.3	7.7	3.66-7.7	6.00	Runoff from fertilizer and natural deposits
Nitrite (as nitrogen)	mg/L	1	1	0.03	0.02-0.03	0.03	ND	ND	ND	Runoff from fertilizer and natural deposits
Fluoride	mg/L	4	4	1.18	0.16-1.18	0.95	1.18	0.25-1.18	0.99	Additive which promotes strong teeth
Sodium	mg/L	NA	NA	12	11-12	11.5	11	9.5-11	10.2	Erosion of natural deposits
Sulfate	mg/L	NA	NA	49.5	25.2-49.5	30.8	44	24.9-44	30.5	Erosion of natural deposits
Arsenic	µg/L	10	0	2	ND-2	1	ND	ND	ND	Erosion of natural deposits
Common Herbicides										
Atrazine	ug/L	3	3	0.45	ND-0.45	0.07	0.35	ND-0.35	0.08	Runoff from herbicide used on row crops
Radiological										
Radon*	pCi/L	NA	NA	110	61-110	82	56	29-56	40	Erosion of natural deposits

*See Glossary for definition and additional information.

TREATMENT TECHNIQUE INDICATORS

Turbidity										
Parameter			J Avenue Water Plant			NW Water Plant			Source of Contaminant	
Units	Max	Range	Average	Violation	Max	Range	Average	Violation		
NTU	2.26	0.03-2.26	0.05	No	1.7	0.03-1.7	0.04	Yes		Soil runoff
% exceeding 0.3 NTU	3.3	0-3.3	0.008	No	3.2	0-3.2	0.003	No		Soil runoff

Turbidity is an indicator of treatment filter performance and is regulated as a treatment technique.

Total Organic Carbon (TOC)

Parameter	Units	MCL	MCLG	Max	Range	Average	Violation	Source of Contaminant	
Treatment Technique requires that the annual average of credits given for TOC removal be at least 1.	Credits for TOC removal	1.9	1.3-1.9	1.5	No	1.9	1.3-1.9	1.52	Naturally present in the environment

Acronyms

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: Pico-curies per liter
MCL: Maximum Contaminant Level	MCLG: Maximum Contaminant Level Goal	NA: Not Applicable
NTU: Nephelometric Turbidity Unit	MRDLG: Maximum Residual Disinfection Level Goal	Max: Highest Level Detected

DISTRIBUTION SYSTEM MONITORING

Lead and Copper Rule	Units	Action Level	MCLG	Max	Range	90th/95th Percentile Violation	Samples Exceeding Action Level	Source of Contaminant	
Lead	µg/L	15	0	26	ND-26	6/12	No	1	Corrosion of household plumbing systems
Copper	mg/l	1.3	1.3	0.11	ND-0.11	0.05/0.07	No	0	

Total Coliform Rule	MCL	MCLG	Max	Range	Avg. Violation	Source of Contaminant	
Coliform Bacteria (% positive). Reported as percent of monthly samples in which coliform bacteria were detected. More than 1200 samples were collected in 2007. One October sample and one December sample had detectable levels of coliform bacteria.	5	0	1	ND-1	ND	No	Naturally present in the environment

Disinfectant	MRDL	MRDLG	Max	Range	Avg. Violation	Source of Contaminant	
Total Chlorine Residual (based on a running 12-month average)	4	4	3.9	0.6-3.9	3.4	No	Water additive used to control microbes

Disinfection Byproducts	J Avenue Water Plant Service Area			NW Water Plant Service Area			Source of Contaminant					
Parameter	Units	MCL	MCLG	Max	Range	Avg. Violation						
Total Trihalomethanes	µg/L	80	NA	2.9	ND-2.9	ND	No	5.9	ND-5.9	2.7	No	Byproduct of chlorinating drinking water
Total Haloacetic Acids (HAAS)	µg/L	60	NA	7	ND-7	ND	No	6	ND-6	ND	No	

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 1-800-426-4791 or visiting the Web site 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.