

2011 WATER QUALITY REPORT

Rockford Water Division



"In this country we expect and demand safe drinking water. The City of Rockford takes pride in our achievements in improving water quality and clarity."

*- Lawrence J. Morrissey,
Mayor of the City of Rockford*

Excellence Everywhere

The Rockford Water Division is pleased to provide you this Water Quality Report.

Why did you receive this report?

The Rockford Water Division is required to provide this report to all of our customers. Per the Illinois and U.S. Environmental Protection Agency (EPA) regulations, the City of Rockford Water Division is required to provide a report on the City's compliance with drinking water standards to all customers on an annual basis. This report also provides updates on initiatives being undertaken by the City's Water Division.

Water System Improvement Project Update

In 2005, the City of Rockford initiated a \$75 million Water System Improvement Project to bring the City's water system into full compliance with state and federal drinking water standards. The goals of the project were to improve our water quality, increase water pressure, and enhance system reliability. The project was successfully completed on schedule and on budget this past June. All of the city's 27 wells are now in full compliance with drinking water standards and all violations listed on page 4 of this report have been addressed. The following sections provide some recent highlights of the system improvement.



Treatment Facilities

Well 36

Construction was completed on Well 36, located at Samuelson Road, in early April 2012. This facility is critical to maintaining good water pressure in the southern portion of the City's water system and also operates to filter and remove both iron and radium from our drinking water. A dedication ceremony for this filtration plant was held on May 3, 2012.



Well 10

Well 10

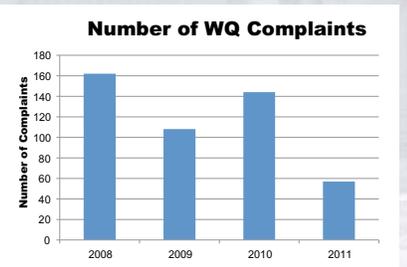
Well 10, as seen in the picture above, located at Newburg Road and was completed in Spring 2012 as the final construction project in the Water System Improvement Project. This filtration plant operates to remove both iron and radium from the City's drinking water. (Photographs on this page are from the Well 10 dedication ceremony held on June 5, 2012.)



Water Quality Improvements

The filtration plants built as part of the Water System Improvement Project operate to remove iron from the City's drinking water. Iron is a mineral present in all groundwater and,

if it comes in contact with air, it oxidizes resulting in reddish brown water at your tap. As a result of the City's new filtration plants, customers are provided with clear tap water because the plants are able to remove ten times more oxidized iron than before. The improvement of the City's water quality is evident by the fact that customer calls for water quality concerns have decreased by 60% since 2008.



2011 Water Quality Data: Detected Contaminants

Coliform Bacteria

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
0	5% of monthly samples are positive	1.6		0	No	Naturally present in the environment

Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future

Lead & Copper

Lead And Copper	Collection Date	MCLG	Action Level (AL)	90th Percentile	Number of Sites Over AL	Violation	Likely Source of Contamination
copper	09/01/2010	1.3	1.3 ppm	1.1 ppm	1	No	Erosion of natural deposits; Leaching from wood preservatives Corrosion of household plumbing systems.
Lead	09/01/2010	0 ppm	15 ppb	6.7 ppb	1	No	Corrosion of household plumbing systems; Erosion of natural deposits.

Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
TTHMs [Total Trihalomethanes]		23	23 - 23	No goal for the total	80	ppb	No	By-product of drinking water chlorination
Chlorine	01/01/2011	0.5	0.4825 - 0.5711	MRDLG=4	MRDL=4	ppm	No	Water additive used to control microbes

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Arsenic		9.5	0 - 9.5	0	10	ppb	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.

While your drinking water meets EPA standards for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which 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.

Barium		0.84	0.044 - 0.84	2	2	ppm	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium		4.4	0 - 4.4	100	100	ppb	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride		1.2	0.56 - 1.2	4	4.0	ppm	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (As N)		3	0 - 3.2	10	10	ppm	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium		2.6	0 - 2.6	50	50	ppb	No	Erosion of naturally occurring deposits; Used in water softener regeneration.
Sodium		34	2.2 - 34			ppm	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Zinc		0.028	0 - 0.028	5	5	ppm	No	This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits.

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/Photon Emitters	01/13/2006	7.8	7.8 - 7.8	0	4	mrem/yr	No	Decay of natural and man-made deposits
Beta/Photon Emitters	01/13/2006	7.8	7.8 - 7.8	0	50	mrem/yr	No	Decay of natural and man-made deposits
Combined Radium 226/228		8	0.4 - 10.5	0	5	pCi/L	Yes	Erosion of natural deposits
Gross Alpha Excluding Radon and Uranium		11	0 - 4.5	0	15	pCi/L	No	Erosion of natural deposits
Uranium	07/09/2010	4.321	4.321 - 4.321	0	30	ug/l	No	Erosion of natural deposits

Synthetic Organic Contaminates Including Pesticides & Herbicides	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Di (2-ethylhexyl) phthalate	4/1/2010	0.78	0.78 - 0.78	0	6	ppb	No	Discharge from rubber and chemical factories

Volatile Organic Contaminates	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Tetrachloroethylene		2	0 - 2	0	5	ppb	No	Discharge from factories and dry cleaners
1, 1, 1-Trichloroethylene		4	0 - 4	200	200	ppb	No	Discharge from metal degreasing sites and other factories
Trichloroethylene		1	0 - 2	0	5	ppb	No	Discharge from metal degreasing sites and other factories
cis-1,2-Dichloroethylene		5	0 - 5	70	70	ppb	No	Discharge from industrial chemical factories
trans 1, 2-Dichloroethylene		1	0 - 1	100	100	ppb	No	Discharge from industrial chemical factories

State Regulated Contaminants	Date	Detected	Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Iron		2.1	0 - 3.5	N/A	1.0	ppm	No	This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits.
Manganese		544	0 - 920	150	150	ppb	No	This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits.

Definitions of Terms & Abbreviations Used in the Table

MCLG: Maximum Contamination Level Goal, or 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.

MCL: Maximum Contamination Level, or the highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available technology.

AL: Action Level, or the concentration of the contaminant which when exceeded, triggers treatment or other requirements which a water system must follow.

n/a: Not applicable.

ppm: Parts per million or milligrams per liter or one ounce in 7,350 gallons of water.

ppb: Parts per billion or micrograms per liter or one ounce in 7,350,000 gallons of water.

pCi/l: Picocuries per liter, used to measure radioactivity.

MRDL: Maximum Residual Disinfectant Level, or the highest level of disinfectant allowed in drinking water.

MRDLG: Maximum Residual Disinfectant Level Goal, or the level of disinfectant in drinking water below which there is no known or expected risk to health. MRDLGs allow for a margin of safety.

Avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples.

Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.

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

Information About Inorganic Contaminants

Iron: This contaminant is not currently regulated by USEPA. However, the state has set an MCL for this contaminant for supplies serving a population of 1000 or more.

Manganese: This contaminant is not currently regulated by USEPA. However, the state has set an MCL for this contaminant for supplies serving a population of 1000 or more.

Sodium: There is not a state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. If you are on a sodium-restricted diet, you should consult your physician about this level of sodium in the water.

Notes for page 2 charts:

Highest Level Detected indicates the annual running average of the analyte listed.

NOTE: The state requires monitoring of certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Therefore, some of this data may be more than one year old.

EPA has reviewed the drinking water standard for arsenic because of special concerns that it may not be stringent enough. Arsenic is a naturally occurring mineral known to cause cancer in humans at high concentrations.

Source of Drinking Water

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. Water travels over the surface of the land or through the ground. It dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- **Microbial contaminants:** includes viruses and bacteria which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants:** includes salts and metals which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides:** these come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- **Organic chemical contaminants:** includes synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- **Radioactive contaminants:** can be naturally-occurring or be the result of oil and gas production and mining activities.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of contaminants. 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.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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

Rockford Water Division Goes Green

In the fall of 2011, the City of Rockford began construction on a major solar energy project. The project included the installation of 150 solar panels on the top of the City's water reservoir located at 1780 Bell School Road.



The solar panels were purchased by the City of Rockford Water Division from the Wanxiang America Corporation New Energy Division as part of an incentive package to bring Wanxiang to Rockford in 2009. The 150 solar panels, each capable of producing 280 watts of power, were manufactured at Wanxiang's new production facility located in Rockford.

The 42 kilowatt solar photovoltaic system will be capable of powering a portion of the energy needs of the water facility. The panels make it less expensive to power the treatment facility and at the same time provide clean energy. The City of Rockford Water Division personnel will operate and maintain the solar panels.



The ribbon cutting ceremony for the water facility solar panel project (as seen in the photographs on this page) was held on May 30, 2012. Mayor Larry Morrissey, City officials, and representatives from Wanxiang were present to celebrate this achievement.



Source Water

The Illinois EPA considers the source water of Rockford's water supply to be subject to contamination. This determination is based on a number of criteria including:

- Monitoring conducted at wells.
- Monitoring conducted at the entry point to the distribution system.
- Available hydrogeologic data of the wells.
- Land-use activities in the recharge area of the wells.

A Source Water Assessment Summary is available upon request. Be a good steward and help protect our ground water. Refer to our website (<http://rockfordil.gov/public-works/water-division/water-quality.aspx>) for our Groundwater Protection informational bulletins.

2011 Violation Summary Table:

Rule or Contaminant	Violation Type	Violation Duration
RADIUM, COMBINED (226, 228) Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer. Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.	MCL, AVERAGE	01/01/2011 To 12/31/2011

Please refer to page 1 of this brochure for actions Rockford is taking specific to the violation(s) listed above.

Water Information Sources

City of Rockford
<http://www.rockfordil.gov>

Illinois Environmental Protection Agency
<http://www.epa.state.il.us>

Illinois Department of Public Health
<http://www.idph.state.il.us>

Unidirectional Hydrant Flushing

Each spring, the Rockford Water Division conducts an annual unidirectional flushing program. This annual maintenance program runs Monday through Thursday (weather permitting) from April through October. The hydrant flushing program removes the normal mineral build-up from the pipes that deliver water to our customers.

Neighborhoods will be notified when we will be in their area by use of the Non-Emergency Notification System. Customers who currently have a listed telephone number will be contacted. If you have an unlisted number or would rather be notified via cell phone or email, you may register at <http://wincoil.us/rockfordwater>. Notifications are also posted on the City of Rockfords web site (<http://rockfordil.gov/public-works/water-division/hydrant-flushing.aspx>).

Water is safe during flushing, but customers may notice discoloration or sediment at the water tap. Customers are advised not to use hot water until the water has cleared.



Need help?

Service Problems, Leaks, etc.

Call Customer Service 815-987-5700

Water Quality

Call Water Production 815-987-5736

Billing Problems

Call Rockford Finance Dept. . . 815-987-5700

After Hours Emergencies

Call Public Works 815-987-5712



We invite public comment about water issues. Find out more about the Rockford Water Division on the Internet at www.rockfordil.gov or contact Water Quality at (815)-987-5736 or (815)-987-5701.

El informe contiene información importante sobre la calidad del agua en su comunidad. Tradúzcalo o hable con alguien que lo entienda bien.

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