

System Rehabilitation Program

The rehabilitation program addresses water quality, pressure, and an aging infrastructure. The program is intended to modernize the water utility.

Why is Rehabilitation Needed?

Customer dissatisfaction with dirty water

- 19 wells exceed the standard for iron. Elevated levels of iron result in red or orange water.
- 7 wells exceed the standard for manganese. Elevated levels of manganese may result in black or gray water at the tap.



Rockford must comply with the radium standard by 2009

- 5 wells exceed the standard for radium. Public notice regarding these sites is sent quarterly to customers.

Customers in the Rockford area receive inconsistent and/or low service pressure

The physical infrastructure is aging. Some wells are still in use that were drilled in the early 1900's.



Aging Infrastructure

- Reconstruct a major pumping station
- Demolish 3 dilapidated concrete storage tanks
- Abandon 5 wells

For the first time in the history of the City's water utility, we will be filtering most of the water delivered to City water users. Eighteen well sites will serve as the primary source of water for the City supply. Equipment at these sites will be modernized and treatment plants constructed as needed. Thirteen sites will be placed on a standby status. Standby wells will be available for use during periods of high consumption or as backup to the primary sites. Improvements will be made to ensure reliability.



How Much Will The Rehabilitation Program Cost?

The rehabilitation project will be completed over a 3-year period. The project will be financed with bonds paid back over 20 years. Total estimated costs are \$75,000,000. A water rate increase totaling 35% will be phased in over three years (compounded to 39%)

Rehabilitation Program Schedule

The following is a schedule showing the major components of the program.

	2006	2007	2008	2009	2010
Pilot Testing					
Engineering					
Construction					
Operational Refinements					

Water Information Sources

City of Rockford

<http://www.ci.rockford.il.us> www.ci.rockford.il.us

Illinois Environmental Protection Agency

<http://www.epa.state.il.us> www.epa.state.il.us

Illinois Department of Public Health

<http://www.idph.state.il.us> www.idph.state.il.us

What Does This Program Involve?

Water Quality

- 10 treatment plants will remove iron and manganese. Additionally, 3 plants will also remove radium.
- 2 new wells will be constructed. One will replace an aging facility in the center of the city. The other will add supply to growth in the north-west.
- Automated control at zone boundaries

Pressure

- Variable speed pump & controls at primary sites will reduce fluctuations in water pressure.
- 15 miles of trunk water main
- An additional high pressure zone will increase pressure in the northeast section of the city.



Is our water safe to drink?

Yes, Rockford's water is safe to drink.

This past year, Rockford received a violation notice from the Illinois EPA for exceeding the drinking water standard for radium and gross alpha. In response, we notified our customers of the violation as required by law, identifying the wells that exceeded the standard.

The EPA and other health experts believe the levels found in our wells do not pose an immediate health threat. In May 2005, the City entered into an agreement with the Illinois EPA to make improvements that will reduce these levels in the drinking water.

We invite public comment about water issues. Find out more about Rockford Water Division on the Internet at www.ci.rockford.il.us or contact our Water Quality Technician at (815) 987-5736.

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



Need help?

Service Problems, Leaks, etc.

Call Customer Service 987-5700

Water Quality

Call Water Production 987-5736

Billing Problems

Call Rockford Finance Dept. 987-5700

After Hours Emergencies

Call Public Works 987-5712

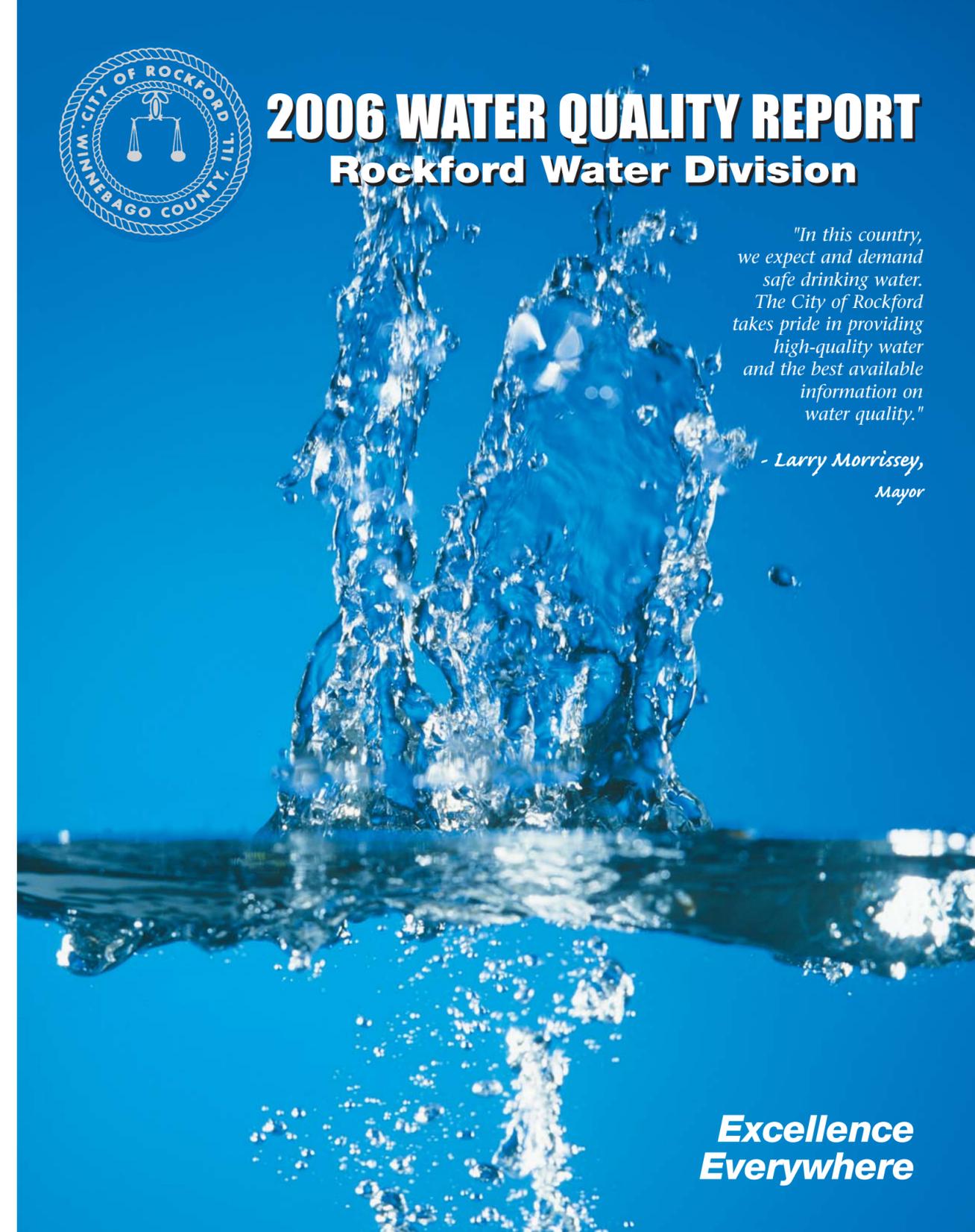


2006 WATER QUALITY REPORT

Rockford Water Division

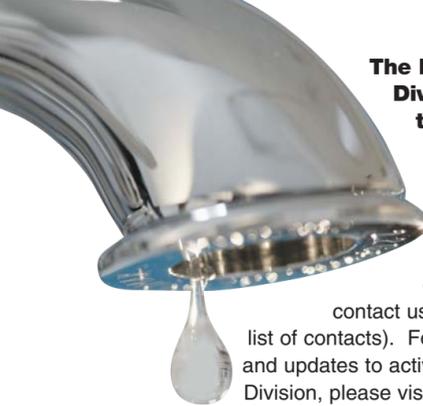
"In this country, we expect and demand safe drinking water. The City of Rockford takes pride in providing high-quality water and the best available information on water quality."

*- Larry Morrissey,
Mayor*



**Excellence
Everywhere**

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

If, upon its review, you should have questions or concerns please contact us (see back page for list of contacts). For other information and updates to activities at the water Division, please visit our web site at www.ci.rockford.il.us.

Water Treatment

The quality of ground water in the Rockford area is generally good. The City treats the water in order to ensure it is safe to drink and enhance its quality. The types of treatment applied are:

Chlorination – All water has the potential of containing harmful bacteria. We add chlorine to kill these bacteria.

Fluoridation – Fluoride is added to promote dental health. It is monitored daily to ensure optimal levels are maintained. This year Rockford received the Albert A. Oltmann Memorial Fluoridation Award for twenty-one consecutive years of perfect compliance for fluoridation.

Sequestering – Phosphorus-based additives are used to reduce the corrosiveness of the water. This inhibits absorption of lead and copper found in household plumbing. It also prevents naturally occurring iron and manganese from discoloring the water.

Filtration – Three wells have activated carbon filters to remove low levels of volatile organic compounds.

Water System Rehabilitation Program

Last December, after numerous citizen meetings and deliberations, the City Council approved a critical plan to overhaul the City's water system. Driven by both Federal and State environmental mandates as well as the need to improve an old and deteriorating water system, the City is now on its way to delivering a much improved system for our citizens.

See page 4 for further details.

2005 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	Fecal Coliform or E. Coli MCL: A routine sample and a repeat sample are total coliform positive, and one is also fecal coliform or E. coli positive		No	Naturally present in the environment

Lead and Copper Date Sampled: 9/29/2004

Lead MCLG	Lead Action Level (AL)	Lead 90th Percentile	Number of Sites Over Lead AL	Copper MCLG	Copper Action Level (AL)	Copper 90th Percentile	No. of Sites Over Copper AL	Likely Source of Contamination
0	15 ppb	<5 ppb	1	1.3 ppm	1.3 ppm	0.99 ppm	0	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
Chlorine	6/30/2005	0.8836	0.7475 - 0.8836	MRDLG=4	MRDL=4	ppm	No	Water additive used to control microbes
TTHMs [Total Trihalomethanes]	7/18/2005	16.7	Not Applicable	N/A	80	ppb	No	By-product of drinking water chlorination
Total Haloacetic Acids [HAAS]	7/18/2005	4.4	Not Applicable	N/A	60	ppb	No	By-product of drinking water chlorination

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Arsenic	1/18/2005	7.8	0 - 7.8	0	50	ppb	No	Erosion of natural deposits; Runoff from orchards; Runoff from electronics production wastes
<i>Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.</i>								
Barium	1/27/2005	0.52	0.053 - 0.52	2	2	ppm	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	1/27/2005	1.51	0.35 - 1.51	4	4	ppm	No	Erosion of natural deposits; Water additive which promotes strong teeth; Fertilizer discharge
Mercury	1/24/2005	0.15	0 - 0.15	2	2	ppb	No	Erosion of naturally occurring deposits, discharge from refineries and factories, runoff from landfills and croplands
Nickel	1/24/2005	50	0 - 50	N/A	N/A	ppb	No	Erosion of natural deposits; Leaching
Nitrate-Nitrite	6/1/2005	3.1	0 - 3.1	10	10	ppm	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrate (As N)	6/1/2005	3.1	0 - 3.1	10	10	ppm	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Combined Uranium	4/15/2005	3.6	0.06 - 3.6	0	30	ppb	No	Erosion of natural deposits
Alpha Emitters	10/7/2005	29	1 - 29	0	15	pCi/L	No	Erosion of natural deposits
Alpha Emitters (Adjusted)	10/7/2005	27.5	12.4 - 27.5	0	15	pCi/L	Yes	Erosion of natural deposits
Combined Radium	1/14/2005	7.9	1.4 - 7.9	0	5	pCi/L	Yes	Erosion of natural deposits

Volatile Organic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Trichloroethylene	7/26/2005	3.08	0 - 3.08	0	5	ppb	No	Discharge from metal degreasing sites and other factories
cis-1,2-Dichloroethylene	11/14/2005	11.8	0 - 11.8	70	70	ppb	No	Discharge from industrial chemical factories
1,1-Dichloroethylene	11/14/2005	3.92	0 - 3.92	7	7	ppb	No	Discharge from industrial chemical factories
trans-1,2-Dichloroethylene	7/26/2005	0.51	0 - 0.51	100	100	ppb	No	Discharge from industrial chemical factories
1,1,1-Trichloroethane	11/14/2005	6.98	0 - 6.98	200	200	ppb	No	Discharge from metal degreasing sites and other factories
Tetrachloroethylene	3/29/2005	2.77	0 - 2.77	0	5	ppb	No	Discharge from factories and dry cleaners

Synthetic Organic Contaminants (including pesticides and herbicides)	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Heptachlor	3/7/2005	52	0 - 52	0	400	ppt	No	Residue of banned termiticide

State Regulated Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Sodium	1/11/2005	35	2.2 - 35	N/A	N/A	ppm	No	Erosion of naturally occurring deposits; used in water softener regeneration
Iron	4/25/2005	5610	0 - 5610	N/A	1000	ppb	No	Erosion of naturally occurring deposits
Manganese	7/26/2005	379	0 - 379	N/A	150	ppb	No	Erosion of naturally occurring deposits

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.

2005 Violation Summary Table:

Rule or Contaminant	Violation Type	Violation Duration
GROSS ALPHA, INCLUDING RA, EXCLUDING RN & U Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.	MCL, AVERAGE, WITHOUT NO. EXCEEDANCE	10/1/2005 To 12/31/2005
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.	MCL, AVERAGE, WITHOUT NO. EXCEEDANCE	1/1/2005 To 12/31/2005

Please refer to page 4 of this brochure for actions Rockford is taking specific to the violation(s) listed above.

Definitions of Terms and 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.

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.

Additional Health Information

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some 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 USEPA's Safe Drinking Water Hotline (1-800-426-4791).

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. USEPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

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 can dissolve naturally occurring minerals and radioactive materials, and pick up substances resulting from the presence of animals or human activity. Possible contaminants consist of:

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife;
- **Inorganic contaminants**, such as salts and metals, which may be naturally occurring or 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; and
- **Radioactive contaminants**, which may be naturally occurring or be the result of oil and gas production and mining activities

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

Why Did You Receive This Report?

The Rockford Water Division is required to provide this report to all of our customers. Regulations of the Illinois and U.S. Environmental Protection Agency (EPA) prescribe much of the information it contains. Thus, the focus of this report is Rockford's compliance with drinking water standards. We have also included information of general interest to our water customers.

Source Water

The Illinois EPA considers the source water of Rockford's water supply to be susceptible 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 on request.

There is no such thing as naturally pure water. All water contains some impurities. The ground water used as the source of Rockford's drinking water flows through layers of soil and rock. As it does, it dissolves tiny amounts of the substances that it touches. Most of these are harmless. However, at certain levels, some substances are considered contaminants. It is these contaminants that can make water less desirable or even unsafe.

In Rockford, ground water is pumped from 39 wells located throughout the City. Eight of the wells pump from the sand

