

Two Rivers Water & Light 2009 Annual Water Quality Report

We are pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

Lake Michigan provides the sole source of Two Rivers' drinking water. With our new Ultra Filtration Membrane Plant the water quality of Lake Michigan has no impact on the water leaving the ultra filtration membranes. The membranes are a positive barrier to cryptosporidium and giardia.

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

All 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 Environmental Protection Agency's safe drinking water hotline (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 systems 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/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the Environmental Protection Agency's safe drinking water hotline (800-426-4791).

For more information on impacts to your source of drinking water see the ASource Water Assessment for Two Rivers Waterworks® available at the Lester Public Library or visit the Wisconsin DNR Source Water Assessment Program website at <http://www.dnr.state.wi.us/org/water/dwg/swap/surface/twoRivers.pdf> on the World Wide Web.

If you have any questions about this report or concerning your water utility, please contact Kevin Perry at 793-5558. We want our valued customers to be informed about their water utility. Decisions that may affect the quality of the water are made by the Two Rivers City Council. If you would like to attend their meetings, they are held on the first and third Mondays of each month in the Council Chambers on the third floor of Two Rivers City Hall, 1717 East Park Street, at 7:00 p.m.

Two Rivers Water & Light routinely monitors for constituents in your drinking water according to Federal and State laws. The following tables shows the results of our monitoring for the period of January 1st, 2009 to December 31st, 2009.

Number of Contaminants Required to be Tested

This table displays the number of contaminants that were required to be tested in the last five years. The Water Quality Report may contain up to five years worth of water quality results. If a water system tests annually, or more frequently, the results from the most recent year are shown on the Water Quality Report. If testing is done less frequently, the results shown on the Water Quality Report are from the past five years.

<i>Contaminant Group</i>	<i># of Contaminants</i>
Disinfection Byproducts	2
Inorganic Contaminants	16
Radioactive Contaminants	3
Microbiological Contaminants	1
Synthetic Organic Contaminants Including Pesticides & Herbicides	25
Unregulated Contaminants	34
Volatile Organic Contaminants	20

Unregulated Contaminants

Contaminant (units)	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2009)	Violation	Typical Source of Contaminant
BROMODICHLOROMETHANE (ppb)	n/a	n/a	7.33	5.80-9.00		NO	n/a
BROMOFORM (ppb)	n/a	n/a	.29	.26- .36		NO	n/a
CHLOROFORM (ppb)	n/a	n/a	11.13	6.10-16.00		NO	n/a
DIBROMOCHLOROMETHANE (ppb)	n/a	n/a	3.58	3.10-4.20		NO	n/a
SULFATE (ppm)	n/a	n/a	24.00	24.00		NO	n/a

Disinfection Byproducts

Contaminant (units)	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2009)	Violation	Typical Source of Contaminant
HAA5 (ppb)	60	60	16	8- 14		NO	
TTHM (ppb)	80	0	26.7	15.3- 29.6		NO	By-product of drinking water chlorination

Radioactive Contaminants

Contaminant (units)	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2009)	Violation	Typical Source of Contaminant
GROSS BETA PARTICLE ACTIVITY (pCi/l)	n/a	n/a	2.6	2.6		NO	Decay of natural and man-made deposits. MCL units are in millirem/year. Calculation for compliance with MCL is not possible unless level found is greater than 50 pCi/l.
RADIUM, (226 + 228) (pCi/l)	5	0	.9	.9		NO	Erosion of natural deposits

Inorganic Contaminants

Contaminant (units)	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2009)	Violation	Typical Source of Contaminant
ANTIMONY TOTAL (ppb)	6	6	.2	.2		NO	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
ARSENIC (ppb)	10	n/a	1	1		NO	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
BARIUM (ppm)	2	2	.019	.019		NO	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
CHROMIUM (ppb)	100	100	1	1		NO	Discharge from steel and pulp mills; Erosion of natural deposits
COPPER (ppm)	AL=1.3	1.3	.072	0 of 60 results were above the action level.		NO	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
FLUORIDE (ppm)	4	4	1.4	1.4		NO	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
LEAD (ppb)	AL=15	0	14.40	13 of 156 results were above the action level.		*	Corrosion of household plumbing systems; Erosion of natural deposits
NICKEL (ppb)	100		1.2000	1.2000		NO	Nickel occurs naturally in soils, ground water and surface waters and is often used in electroplating, stainless steel and alloy products.
NITRATE (N03-N) (ppm)	10	10	.45	.45		NO	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
SODIUM (ppm)	n/a	n/a	8.00	8.00		NO	n/a

* Systems exceeding a lead and/or copper action level must take actions to reduce lead and/or copper in the drinking water. The lead and copper values represent the 90th percentile of all compliance samples collected. If you want information on the NUMBER of sites or the actions taken to reduce these levels, please contact your water supply operator.

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. Lead in drinking water is rarely the sole cause of lead poisoning, but it can add to a person's total lead exposure. All potential sources of lead in the household should be identified and removed, replaced or reduced. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (1-800-426-4791).

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic contaminants, such as 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, which may come from a variety of sources such as agriculture, urban storm water runoff and residential uses.
- Organic chemical contaminants, including 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, which can be naturally occurring or be the result of oil and gas production and mining activities.

Definition of Terms

Term	Definition
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
MCL	Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
MCLG	Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
ppm	parts per million, or milligrams per liter (mg/l)
ppb	parts per billion, or micrograms per liter (ug/l)

In order to ensure that tap water is safe to drink, EPA 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 shall provide the same protection for public health.

In our continuing efforts to maintain a safe and dependable water supply it may be necessary to make improvements in your water system. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements.

We at Two Rivers Water & Light work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.