

What is this report?

Is our water safe? Yes, it is! Manitowoc Public Utilities' Water Department produces some of the highest quality drinking water in the nation. Last year, as in years past, your tap water met and exceeded every federal and state drinking water health standard. In line with our commitment to providing you with useful information, this report summarizes the quality of the water provided to our customers in 2008.

As mandated by the Safe Drinking Water Act (SDWA), this "Consumer Confidence Report" details our water sources, the results of our water tests and how they compare to regulatory standards. You can count on Manitowoc Public Utilities for quality water from your tap. Our results show it.

Where does our water come from?

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.

Questions or concerns welcome

If you would like to know more about the information contained in this report, please contact Robert Michaelson, PE at 920-686-4354.

The MPU Commission normally meets the 2nd and 4th Monday of each month at 4 pm at the MPU Main Office.

Health Information

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.

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).

Required additional health information

To ensure that tap water is safe to drink, the EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water.

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).

Additional Information, Monitoring Requirements

Important Information about your Drinking Water. Monitoring Requirements Not Met for Manitowoc Waterworks.

MPU regularly performs dozens of water quality tests each month, to ensure your drinking water meets health standards. One of these water quality tests is monitoring the Fluoride level in your drinking water. In accordance with City of Manitowoc Ordinance 12.19(1), Fluoride is added to the water supply to promote healthy teeth and prevent tooth decay. This Fluoride level is monitored daily and reported monthly.

While sampling for Fluoride in April/May 2008, we mistakenly collected the May 2008 sample on April 30, 2008...one day early for the month of May 2008. This resulted in two Fluoride samples in April 2008, and no Fluoride sampling in May 2008. We did not monitor for Fluoride contaminants between 5/1/2008 and 5/31/2008, and therefore we cannot be sure of the quality of your drinking water at that time. There are no special precautions you need to take at this time.

This problem was identified immediately, and additional samples were taken in June 2008 to confirm the Fluoride is within acceptable limits. You can be assured that we have corrected our sampling procedures to avoid this type of problem in the future. If you have questions regarding the safety of our drinking water, please contact Robert Michaelson PE, MPU Water Systems Manager, 920-686-4354.

What else should I know?

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 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 can also come from gas stations, urban stormwater runoff and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities

Cryptosporidium monitoring/filtration

Our water utility monitors our water for *cryptosporidium*, a microbial parasite naturally found in surface water throughout the world. If ingested, cryptosporidium can cause intense gastrointestinal distress in otherwise healthy people.

In accordance with the EPA Rule LT2ESWTR, MPU is required to sample our **raw (untreated)** water source monthly for cryptosporidium. Of the nine months that were sampled in 2008, two of the **raw (untreated)** water samples detected cryptosporidium, both of which were below 0.9 oocysts/L. However, our state-of-the-art Microfiltration water treatment plant provides an absolute physical barrier to water borne pathogens such as cryptosporidium and giardia. This membrane process ensures that cryptosporidium is not present in your drinking water.



MANITOWOC PUBLIC UTILITIES

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The 2008 Annual Water Quality Report



MANITOWOC PUBLIC UTILITIES



Sources of water

Source	Name
Groundwater	Ranney Well #1 -Collector A
Groundwater	Ranney Well #3 -Collector C
Surface Water	Lake Michigan

A source water assessment was conducted by the Wisconsin Department of Natural Resources Bureau of Drinking Water and Groundwater on May 7, 2003. The assessment identified land areas that contribute water to each system, significant potential contaminant sources within those areas and the susceptibility of drinking water systems to contamination. A copy of the report can be obtained from Manitowoc Public Utilities or by visiting the WDNR website at www.dnr.state.wi.us/org/water/dwg/swap/surface/manitowoc.pdf



Number of contaminants required to be tested

The table below displays the number of contaminants that were required to be tested in the last five years. This Consumer Confidence Report (CCR) may contain water quality results spanning five years. If a water system was tested annually, or more frequently, the results from the most recent year are shown on the CCR. If testing was done less frequently, the results shown on the CCR are from the past five years.

Contaminant Group	# of Contaminants
Disinfection By-products	1
Inorganic Contaminants	17
Microbiological Contaminants	2
Radioactive Contaminants	2
Synthetic Organic Contaminants including Pesticides and Herbicides	29
Unregulated Contaminants	34
Volatile Organic Contaminants	21



Water-Quality Data Table footnotes

Although we ran many tests, only the substances listed in the Water-Quality Data Table were found. They are all below the MCL (Maximum Contaminant Level) required. Not listed are the hundreds of other compounds not found during water testing.

Water-Quality Data Table

Contaminant	Year Tested	Unit	MCL	MCLG	Detected Level	Range	Major Sources	Violation
Disinfection By-products								
HAA5	2008	ppb	60	60	16 (Avg.)	6-30	By-product of drinking water chlorination	NO
Inorganic Contaminants								
Antimony	2008	ppb	6	6	.2 (Avg.)	nd- .7	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder	NO
Arsenic	2008	ppb	10	n/a	1 (Avg.)	nd- 1	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes	NO
Barium	2008	ppm	2	2	.041 (Avg.)	.019-.067	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	NO
Chromium	2008	ppb	100	100	4 (Avg.)	nd- 17	Discharge from steel and pulp mills; Erosion of natural deposits	NO
Copper	2008	ppm	AL=1.3	1.3	.247 (Avg.)	.0346-.3320	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives	NO
Fluoride	2008	ppm	4	4	1.1 (Avg.)	.3-1.3	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	NO
Lead	2008	ppb	AL=15	0	6.2 (Avg.)	nd- 26.50	Corrosion of household plumbing systems; Erosion of natural deposits	*
Nickel	2008	ppb	100	0	30.7320 (Avg.)	nd- 144.0000	Nickel occurs naturally in soils, ground water and surface waters and is often used in electroplating, stainless steel and alloy products	NO
Nitrate (NO ₃ -N)	2008	ppm	10	10	.60 (Avg.)	.40- 1.15	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	NO
Selenium	2008	ppb	50	50	1 (Avg.)	nd- 2	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines	NO
Sodium	2008	ppm	n/a	n/a	23.72 (Avg.)	6.58-66.10	n/a	NO
Unregulated Contaminants								
1,1-Dichloroethane	2008	ppb	n/a	n/a	.03 (Avg.)	nd-20	n/a	NO
Bromodichloromethane	2008	ppb	n/a	n/a	7.78 (Avg.)	nd-17.00	n/a	NO
Bromoform	2008	ppb	n/a	n/a	.16 (Avg.)	nd-.59	n/a	NO
Chloroform	2008	ppb	n/a	n/a	12.60 (Avg.)	1.54-35.40	n/a	NO
Dibromochloromethane	2008	ppb	n/a	n/a	3.11 (Avg.)	nd-5.25	n/a	NO
Sulfate	2008	ppm	n/a	n/a	55.93 (Avg.)	21.70-120.00	n/a	NO
Volatile Organic Contaminants								
Dichloromethane	2008	ppb	5	0	.1 (Avg.)	nd-.6	Discharge from pharmaceutical and chemical factories.	NO
TTHM	2008	ppb	80	0	30 (Avg.)	13.68-57.65	By-product of drinking water chlorination	NO

*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.



Water-Quality Data Table terms

This report is based upon tests conducted in the year 2008 by Manitowoc Public Utilities' Water Department. Terms used in the Water-Quality Table and in other parts of this report are defined here:

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 contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's 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 of health. MCLG's 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)

pCi/l-picocuries per liter (a measure of radioactivity)

nd-none detected