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, and years past, your tap water met and exceeded every federal and state drinking water health standard. With our commitment to providing you with useful information, this report summarizes the quality of the water provided to our customers in 2015.

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 MPU for quality water from your tap. Our results show it.

Sources of Water

Source	Depth	Name
Groundwater	66 ft	Ranney Well #1- Collector A
Groundwater	84 ft	Ranney Well #3- Collector C
Surface Water		Lake Michigan

To obtain a summary of the source water assessment please call Robert Michaelson at 686-4354.

Health Information

Drinking water, including bottled water, may sensibly 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 Environmental Protection Agency's (EPA) safe drinking water hotline 800-426-4791.

Some people may be more exposed to contaminants in drinking water than the general public. 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 rules on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the EPA's safe drinking water hotline 800-426-4791.

Educational Information

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.

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 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 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.

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.

Find us on facebook

Water System Information

If you would like to know more about the information contained in this report, please contact Robert Michaelson, PE at 920-686-4354. MPU's Water Department staff members are also available to answer your questions about drinking water quality and the operations of our water treatment plant. You may also attend monthly MPU Commission meetings to participate in decisions. For more information please call 920-686-4378.

Planned Improvements for 2016

- Replace 1900 feet of water main throughout the City to improve reliability.
- Install a new 12" water main on STH 42 to serve a new development.
- Retain an engineering consultant to study the condition of the 1999 microfiltration plant and provide recommendations for replacement of the plant membranes and equipment.

On the Cover

Manitowoc citizens rely on clean, safe water in our daily lives. MPU puts public safety at the top of the list when it comes to planning for your water needs now and in the future.

Manitowoc Public Utilities
PO Box 1090
1303 South 8th Street
Manitowoc WI 54221-1090
920-683-4600
www.mpu.org

The 2015 Annual

Drinking Water Quality Report

Manitowoc Public Utilities

Detected Contaminants

Your water was tested for many contaminants last year. We are allowed to monitor for some contaminants less frequently than once a year.

The following table list only those contaminants which were detected in your water. If a contaminant was detected last year, it will appear in the following tables without a sample date. If the contaminant was not monitored last year, but was detected within the last 5 years, it will appear in the tables below along with the sample date.

Unregulated Contaminants

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. EPA required us to participate in this monitoring.

Turbidity Monitoring

In accordance with s. NR 810.29, Wisconsin Administrative Code, the treated surface water is monitored for turbidity to confirm the filtered water is less than 0.1 NTU. Turbidity is a measure of the cloudiness of water. We monitor for it because it is a good indicator of the efficiency of our filtration system. During the year, the highest single entry point turbidity measurement was 0.06 NTU.

Additional Health Info

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. MPU 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 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 www.epa.gov/safewater/lead.

Drinking Water Quality Data Table

Contaminant	Year Tested	Unit	MCL	MCLG	Detected Level	Range	Major Sources	Violation
Disinfection By-products								
HAA5, D-26	2015	ppb	60	60	19	13-18	By-product of drinking water chlorination	No
HAA5, D-18	2015	ppb	60	60	17	14-19	By-product of drinking water chlorination	No
TTHM, D-26	2015	ppb	80	0	28.9	17.6-51	By-product of drinking water chlorination	No
TTHM, D-18	2015	ppb	80	0	30.4	19.4-44.7	By-product of drinking water chlorination	No
Inorganic Contaminants								
Antimony	2014	ppb	6	6	0.2	0-0.2	Discharge from petroleum refineries; fire retardants; ceramics; electronics; and solder	No
Arsenic	2014	ppb	10	n/a	1	0-1	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes	No
Barium	2014	ppm	2	2	0.070	0.020-0.070	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	No
Cyanide	2014	ppb	200	200	10	10.00	Discharge from steel/metal, plastic, and fertilizer factories	No
Copper	2014	ppm	AL=1.3	1.3	0.23 (90th Perc.)	0 of 30 results were above the action level	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	No
Fluoride	2014	ppm	4	4	0.7	0.1-0.7	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	No
Lead	2014	ppb	AL=15	0	7.0 (90th Perc.)	0 of 30 results were above the action level	Corrosion of household plumbing systems; erosion of natural deposits	No
Nickel	2014	ppb	100	n/a	4.9	0.91-4.90	Naturally occurring in soils, ground & surface waters and is often used in electroplating, stainless steel and alloy products	No
Nitrite (NO2-N)	2014	ppm	1	1	0.013	0-0.013	Runoff from fertilizer use; leaching from septic tanks; sewage and erosion of natural deposits	No
Nitrate (NO3-N)	2015	ppm	10	10	1.20	0.41-1.2	Runoff from fertilizer use; leaching from septic tanks; sewage and erosion of natural deposits	No
Selenium	2014	ppb	50	50	2	0-2	Discharge from petroleum and metal refineries; erosion of natural deposits; and discharge from mines	No
Sodium	2015	ppm	n/a	n/a	7.1	6.60-7.10	Widely distributed in soils, plants, water, and foods	No
Radioactive Contaminants								
Gross Alpha, Excl. R & U	2014	(pCi/l)	15	0	2.5	0-2.5	Erosion of natural deposits	No
Gross Alpha, Incl. R & U	2014	n/a	n/a	n/a	2.5	0-2.5	Erosion of natural deposits	No
Radium, (226 + 228)	2014	(pCi/l)	5	0	3.4	0.9-3.4	Erosion of natural deposits	No
Unregulated Contaminants								
Chromium	2015	ppb	n/a	n/a	0.3	0.2-0.3	Naturally occurring element; used in steel and other alloys	No
Chromium-6	2015	ppb	n/a	n/a	0.22	0.18-0.22	Naturally occurring element; used in steel and other alloys; dyes, pigments, leather tanning and wood preservation	No
Strontium	2015	ppb	n/a	n/a	120	120	Naturally occurring element; commercial use in faceplate glass of cathode-ray tube televisions to block x-ray emissions	No
Sulfate	2014	ppm	n/a	n/a	130	22.00-130.0	Naturally occurs in mineral salts found in soil	No
Vanadium	2015	ppb	n/a	n/a	0.3	0.2-0.3	Naturally occurring elemental metal; used as a chemical intermediate and a catalyst	No
Methyl-Tert-Butyl-Ether	2015	ppb	n/a	n/a	0.14	0.14	Sources can occur from leaking underground/above ground fuel storage tanks, pipelines, refueling spills, auto accidents damaging the fuel tank, and consumer disposal of “old gasoline"	No
Volatile Organic Contaminants								
Tetrachloroethylene	2015	ppb	5	0	1.0	1.0	Leaching from PVC pipes, discharge from factories and dry cleaners	No

Data Table Definitions

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.

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

ppm- parts per million, or milligrams per liter (mg/l)

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.

ppb- parts per billion, or micrograms per liter (ug/l)

nd– none detected