



2016 Consumer Confidence Report Data

WATERWORKS, PWS ID: 40504684

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

Dlaim ntawv tshaabzu nuav muaj lug tseemceeb heev nyob rua huv kws has txug cov dlej mej haus. Kuas ib tug paab txhais rua koj, los nrug ib tug kws paub lug thaam.

Water System Information

Howard Waterworks Annual Water Quality Report takes you inside the world of your high-quality drinking water, spanning the months of January through December, 2016. Your tap water is safe and healthy for drinking, and meets and exceeds all water quality standards. In line with our commitment to providing you with useful information, this report summarizes the quality of the water provided to our customers in 2016.

In 2016, Howard Waterworks detected twenty (20) contaminants in the drinking water and zero (0) of them were above EPA acceptable levels for drinking water.

Questions are welcome, if you would like to know more about the information contained in this report please contact Public Works Director Geoff Farr, P.E. or Water Utility Operator-In-Charge Dave Fonder at (920) 434-4060. Howard Waterworks staff members are available to answer your questions about drinking water quality and the operations of our utility.

Opportunity for input on decisions affecting your water quality

Village Board Meetings occur at 6:30 P.M. on the 2nd and 4th Mondays of each month at the Village Hall, 2456 Glendale Avenue, Howard, WI. 54313

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 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).

Source(s) of Water

Source ID	Source	Depth (in feet)	Status
Well 2	Groundwater	886	Active
Well 3	Groundwater	785	Emergency
CBCWA	Purchased Surface Water		Active

Purchased Water

PWS ID	PWS Name
43602878	Central Brown County Water Authority
43603648	Manitowoc Waterworks

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 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.

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.

Definitions

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.
NTU	Nephelometric Turbidity Units
pCi/l	picocuries per liter (a measure of radioactivity)
ppm	parts per million, or milligrams per liter (mg/l)
ppb	parts per billion, or micrograms per liter (ug/l)

Detected Contaminants in the Distribution System

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 tables 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.

Disinfection Byproducts

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2016)	Violation	Typical Source of Contaminant
HAA5 (ppb)	DBP-1	60	60	13	11	01/13/2013	No	By-product of drinking water chlorination
TTHM (ppb)	DBP-1	80	0	21.1	16.8	01/13/2013	No	By-product of drinking water chlorination
HAA5 (ppb)	DBP-2	60	60	14	10	01/13/2013	No	By-product of drinking water chlorination
TTHM (ppb)	DBP-2	80	0	22.0	16.8	01/13/2013	No	By-product of drinking water chlorination
HAA5 (ppb)	DBP-3	60	60	16	11	01/13/2013	No	By-product of drinking water chlorination
TTHM (ppb)	DBP-3	80	0	26.2	20.1	01/13/2013	No	By-product of drinking water chlorination
HAA5 (ppb)	DBP-4	60	60	17	12	01/13/2013	No	By-product of drinking water chlorination
TTHM (ppb)	DBP-4	80	0	28.6	20.9	01/13/2013	No	By-product of drinking water chlorination
HAA5 (ppb)	SM5	60	60	20	17-25		No	By-product of drinking water chlorination
TTHM (ppb)	SM5	80	0	41.9	27.3-64.5		No	By-product of drinking water chlorination
HAA5 (ppb)	SM6	60	60	20	14-23		No	By-product of drinking water

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2016)	Violation	Typical Source of Contaminant
								chlorination
TTHM (ppb)	SM6	80	0	45.3	29.3-60.9		No	By-product of drinking water chlorination
HAA5 (ppb)	SM7	60	60	22	17-33		No	By-product of drinking water chlorination
TTHM (ppb)	SM7	80	0	45.6	28.5-66.7		No	By-product of drinking water chlorination
HAA5 (ppb)	SM8	60	60	23	15-34		No	By-product of drinking water chlorination
TTHM (ppb)	SM8	80	0	48.6	30.9-64.3		No	By-product of drinking water chlorination

Inorganics

Contaminant (units)	Action Level	MCLG	90th Percentile Level Found	# of Results	Sample Date (if prior to 2016)	Violation	Typical Source of Contaminant
COPPER (ppm)	AL=1.3	1.3	0.363	0 of 30 results were above the action level.	8/31/2014	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
LEAD (ppb)	AL=15	0	2.00	0 of 30 results were above the action level.	8/31/2014	No	Corrosion of household plumbing systems; Erosion of natural deposits

Additional Health Information

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. Howard Waterworks 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.

Detected Contaminants from Purchased Water

Inorganic Contaminants

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2016)	Violation	Typical Source of Contaminant
ANTIMONY TOTAL (ppb)		6	6	0.2	0.2	05/07/2014	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
ARSENIC (ppb)		10	n/a	1	1	05/07/2014	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
BARIUM (ppm)		2	2	0.02	0.02	05/07/2014	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
CYANIDE (ppb)		200	200	10	10	05/07/2014	No	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
FLUORIDE (ppm)		4	4	0.7	0.7		No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
NICKEL (ppb)		100		0.91	0.90	05/07/2014	No	Nickel occurs naturally in soils, ground water and surface waters and is often used in electroplating, stainless steel and alloy products.
NITRATE (NO ₃ -N) (ppm)		10	10	0.37	0.37		No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Radioactive Contaminants

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2016)	Violation	Typical Source of Contaminant
RADIUM, (226 + 228) (pCi/l)		5	0	1.5	1.5	5/7/2014	No	Erosion of natural deposits

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.

Contaminant (units)	Level Found	Range	Sample Date (if prior to 2016)
BROMODICHLORMETHANE (ppb)	3.7	3.7	
CHLOROFORM (ppb)	2.5	2.5	
DIBROMOCHLORMETHANE (ppb)	2.5	2.5	
SODIUM (ppm)	6.8	6.8	
SULFATE (ppm)	22	22	5/29/2014
CHROMIUM (ppb)	0.3	0.2-0.3	2014-2015 Manitowoc and Howard UCMR Monitoring
CHROMIUM-6 (ppb)	0.2	0.2	2014-2015 Manitowoc and Howard UCMR Monitoring
STRONTIUM (ppb)	456	110-456	2014-2015 Manitowoc and Howard UCMR Monitoring
VANADIUM (ppb)	0.3	0.2-0.3	2014-2015 Manitowoc and Howard UCMR Monitoring

Turbidity Monitoring

In accordance with s. NR 810.29, Wisconsin Administrative Code, the treated surface water is monitored for turbidity to confirm the effectiveness of our filtration system. Turbidity is a measure of the cloudiness of water. During the year, the highest single entry point turbidity measurement was 0.23 NTU.

Detected Contaminants from our Wells

Inorganic Contaminants

Contaminant (units)	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2016)	Violation	Typical Source of Contaminant
BARIUM (ppm)	2	2	0.150	0.150	4/1/2014	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
FLUORIDE (ppm)	4	4	1.0	1.0	4/1/2014	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
NITRATE (N03-N) (ppm)	10	10	0.3	0.3		No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
SODIUM (ppm)	n/a	n/a	7.60	7.60	4/1/2014	No	n/a

Radioactive Contaminants

Contaminant (units)	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2016)	Violation	Typical Source of Contaminant
RADIUM, (226 + 228) (pCi/l)	5	0	3.0	3.0		No	Erosion of natural deposits

Unregulated Contaminants

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Contaminant (units)	Level Found	Range	Sample Date (if prior to 2016)
SULFATE (ppm)	22	22	04/01/2014