



SHOREWOOD WATER WORKS

Village of Shorewood, Department of Public Works
3801 N. Morris Blvd. Shorewood, WI 53211-0016

2014 Consumer Confidence Report

This report is for you

The U.S. Environmental Protection Agency (EPA) requires drinking water utilities to provide an annual Consumer Confidence Report, or Water Quality Report.

This is our opportunity to inform you about the source and high quality of your drinking water, compliance and detected contaminants, and other information reflecting results from treating and monitoring water Jan. 1 – Dec. 31, 2014.

Shorewood's water is purchased from the City of Milwaukee Water Works. Milwaukee's water source is surface water from Lake Michigan. Shorewood and Milwaukee Water Works are committed to ensuring your water quality, reliability, and security. We encourage you to learn the facts and be confident in your water.

Water system contact information

Public meetings are held the 1st and 3rd Monday of every month at 7:30 p.m. in the Shorewood Village Hall located at 3930 North Murray Avenue, Shorewood, Wisconsin 53211. This information was omitted in the 2013 CCR.

Contact Information :

Shorewood Water Works Office

Monday–Thursday, 7:00 a.m. – 3:30 p.m.

Friday, 7–11:00 a.m.

(414) 847-2650 • Fax: (414) 847-2651

email: dpw@villageofshorewood.org

website: www.villageofshorewood.org/water

24-Hour Emergency: (414) 847-2610

North Shore Health Department

(414) 371-2980 • Fax: (414) 371-2988

24-Hour Water Control Center: (414) 286-3710

Email for non-emergency contact:

watwebcs@milwaukee.gov

Visit milwaukee.gov/water

What's in the water?

As water flows through rivers and lakes and over land surfaces, naturally occurring substances may be dissolved in the water that reaches Lake Michigan. These substances are referred to as contaminants. Surface water sources may be highly susceptible to contaminants. Surface water is also affected by animal and human activities. Read the DNR Source Water Assessment for Milwaukee at milwaukee.gov/water/about/WaterQuality.htm. Contaminants that may be present in source water include microbial contaminants such as viruses, protozoa and bacteria; inorganic contaminants such as salts and metals, pesticides and herbicides, organic chemical contaminants, and radioactive contaminants.

To ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. 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 the 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. The table of contaminants detected by the Milwaukee and Shorewood Water Works can be found in the rest of this report.

Detected Contaminants

The table below shows the regulated contaminants detected in Milwaukee's and Shorewood's drinking water during 2014. It also includes any detected contaminants found in the recently completed (2014) Unregulated Contaminant Monitoring Rule – Phase 3 (UCMR-3) mandatory monitoring program. **All contaminant levels are within applicable state and federal laws.** The table contains the name of each contaminant, the highest level regulated (Maximum Contaminant Level, or MCL), the ideal goals for public health (Maximum Contaminant Level Goal, or MCLG), the median value detected, the usual sources of such contamination, and footnotes explaining the findings and units of measurement. The presence of a substance in drinking water does not necessarily indicate the water poses a health risk. Certain quantities of some substances are essential to good health, but excessive quantities can be hazardous.

Substance	Ideal Goals (MCLG)	Highest Level Allowed (MCL)	Median Value	Highest Level Detected	Source(s) of Contaminant	Meets Standard
Aluminum	0.2 mg/L	NR	0.055 mg/L	0.112 mg/L	Water treatment additive; Natural deposits	NR
Barium	2 mg/L	2 mg/L	0.019 mg/L	0.019 mg/L	Natural deposits	√
Bromochloroacetic acid	NA	Regulated as a group (HAA5)	1 µg/L	1.6 µg/L	Byproduct of drinking water disinfection	√
Bromodichloroacetic acid	NA	Regulated as a group (HAA5)	1 µg/L	4 µg/L	Byproduct of drinking water disinfection	√
Bromate	10 µg/L	10 µg/L (RAA)	< 5 µg/L (RAA)	6.9 µg/L	Byproduct of drinking water disinfection	√
Bromodichloro-methane **	NA	Regulated as a group (TTHMs)	2.1 µg/L	4.8 µg/L	Byproduct of drinking water disinfection	√
Bromoform **	NA	Regulated as a group (TTHMs)	.3 ug/l	.5 ug/l	Byproduct of drinking water disinfection	√
Chloroform **	NA	Regulated as a group (TTHMs)	1.7 µg/L	5.1 µg/L	Byproduct of drinking water disinfection	√
Coliform bacteria, Total **	Zero	< 5 % of all monthly samples	Zero	0.0 %	Naturally present in the Environment	√
Chlorite	0.8 mg/L	1.0 mg/L	0.003 mg/L	0.006 mg/L	Byproduct of drinking water disinfection	√
Chlorate *	NA	NR	32 µg/L	34 µg/L	Byproduct of drinking water disinfection	NR
Chlorine, total	4 mg/L	4 mg/L	1.68 mg/L	2.00 mg/L	Residual of drinking water disinfection	√
Chloride	250 mg/L	NR	13.3 mg/L	26.3 mg/L	Natural deposits and road salt	NR
Chromium, Hexavalent *	NA	NR	0.16 µg/L	0.22 µg/L	Natural deposits and manufacturing	NR
Chromium, Total *	NA	100 µg/L	0.23 µg/L	0.24 µg/L	Natural deposits and manufacturing	√
Copper **	1.3 mg/L	1.3 mg/L (AL)	0.012 mg/L (AL)	0.13 mg/l	Corrosion of household plumbing systems	√
Dibromodichloro-methane **	NA	Regulated as a group (TTHMs)	1.4 µg/L	2.9 µg/L	Byproduct of drinking water disinfection	√
Dibromoacetic acid **	NA	Regulated as a group (HAA5)	.45 ug/l	.83 ug/l	Byproduct of drinking water disinfection	√
Dichloroacetic acid **	NA	Regulated as a group (HAA5)	1.3 µg/L	4.8 µg/L	Byproduct of drinking water disinfection	√
Fluoride	4 mg/L	4 mg/L	0.53 mg/L	0.60 mg/L	Water treatment additive; Natural deposits	√
Gross Alpha particles	Zero	15 pCi/L	2.7 pCi/L	2.8 pCi/L	Natural deposits	√
Gross Beta particles	Zero	50 pCi/L	5.3 pCi/L	6.0 pCi/L	Natural deposits	√
Haloacetic Acids, total **	NA	60 µg/L	2.9 µg/L	8.0 µg/L	Byproduct of drinking water disinfection	√
Heterotrophic Plate Count Bacteria	NA	TT	< 1 cfu/mL	412 cfu/mL in one sample	Naturally present in the environment	√
Iron	0.30 mg/L	NR	0.007 mg/L	0.032 mg/L	Natural deposits	NR
Lead **	Zero	15 µg/L (AL)	2.1 µg/L (AL)	13 ug/l	Corrosion of household plumbing systems	√
Nitrate, as N	10.0 mg/L	10.0 mg/L	0.30 mg/L	0.30 mg/L	Natural deposits and farm runoff	√
Molybdenum *	NA	NR	1.0 µg/L	1.0 µg/L	Natural deposits	NR
pH	NA	6.5 to 8.5	7.63	7.89	Naturally present in the environment	√
Perchlorate (UCMR -1 Contaminant)	NA	Regulation Pending	0.10 µg/L	0.11 ug/L	Byproduct of drinking water disinfection	NR
Radium, combined 226 + 228	Zero	5 pCi/L	1.98 pCi/L	1.99 pCi/L	Natural deposits	√
Strontium *	NA	NR	120 µg/L	120 µg/L	Natural deposits	NR
Sulfate	500 mg/L	NR	29 mg/L	35 mg/L	Natural deposits	NR
Trihalomethanes, total **	NA	80 µg/L	11.0 µg/L	13.0 µg/L	Byproduct of drinking water disinfection	√
Total Dissolved Solids	500	NR	179 mg/L	205 mg/L	Natural deposits	NR
Trichloroacetic acid **	NA	Regulated as a group (HAA5)	< 0.4 µg/L	2.4 µg/L	Byproduct of drinking water disinfection	√
Turbidity	NA	<0.3 NTU 95% of the time	0.04 NTU 95% of the time	0.28 NTU 1-day max	Natural deposits	√
Uranium, total	Zero	30 µg/L	0.23 µg/L	0.25 µg/L	Natural deposits	√
Vanadium *	NA	NR	0.26 µg/L	0.22 µg/L	Natural deposits	NR

*Shorewood UCMR3 Data from 2014 ** Other sampling data results specific to Shorewood

Definitions

<	"less than" or not detected
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirement that a water system must follow. Action Levels are reported at the 90th percentile for homes at greatest risk.
Haloacetic Acids	HAA5: Monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, dibromoacetic acid, tribromoacetic acid, bromochloroacetic acid, dibromochloroacetic acid, and bromodichloroacetic acid.
HA	Health Advisory: An estimate of acceptable drinking water levels for a chemical substance based on health effects information; a Health Advisory is not a legally enforceable federal standard, but serves as technical guidance to assist federal, state and local officials.
Median	The middle value of the entire data set for the parameter (range from high to low)
µg/L	microgram per liter or parts per billion
MCL	Maximum Contaminant Level: The highest level of a contaminant 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.
Median	The middle value of the entire data set for the parameter (range from high to low).
MRDL	Maximum residual disinfectant level: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MRDLG	Maximum residual disinfectant level goal: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
mg/L	milligram per liter or parts per million
NA	Not Applicable
NR	Not Regulated
NTU	Nephelometric Turbidity Unit: A unit to measure turbidity.
pCi/L	Picocuries per Liter: A measure of radioactivity. A picocurie is 10 ⁻¹² curies.
RAA	Running Annual Average: The average of four quarterly samples collected in one 12-month period.
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water
Trihalomethanes	TTHMs: Chloroform, bromodichloromethane, dibromochloromethane, and bromoform
Turbidity	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. For 2013, the highest value detected or Maximum Value was 0.22 NTU and < 0.3 NTU 100% of the time. For 2014, the highest value detected or Maximum Value was 0.28 NTU and < 0.3 NTU 100% of the time.

Unregulated Substances

The table below shows the unregulated substances detected in Milwaukee's drinking water during 2014. **There is no known adverse health effect from these substances in drinking water at these levels.** The complete list of over 500 substances tested for can be found at www.milwaukee.gov/water/about/WaterQuality.htm.

Substance	Range of Values Detected	Substance	Range of Values Detected
Ammonia ¹ , as N	0.41- 0.60 mg/L	Magnesium Hardness	39-55 mg/L
Boron ²	0.023 mg/L	Nicotine	0.006 µg/L
Bromide	0.035-0.071 mg/L	Paraxanthine	0.007 µg/L
Bromochloroacetonitrile	0.5-1.2 µg/L	Phosphate, as PO ₄	1.86-2.31 mg/L
Calcium	34-35 mg/L	Potassium	1.4-1.7 mg/L
Cholesterol	1.4-1.5 µg/L	Progesterone	< 0.0001-0.0004 µg/L
Di-ethyl (meta) toluamide	0.014-0.018 µg/L	Rubidium	1.4 µg/L
Dibromoacetonitrile	< 0.5-1.3 µg/L	Silica	.95-2.0 mg/L
Dichloroacetonitrile	< 0.5-1.0 µg/L	Sodium	10-17.1 mg/L
Dichloropropanone	< 0.5-0.9 µg/L	Total Organic Carbon	1.44-1.64 mg/L
Erucylamide	< 0.5-0.9 µg/L	Trichloroacetonitrile	< 0.5-1.3 µg/L
Isophorone ³	0.12 µg/L	Trichloropropanone	< 0.1-0.7 µg/L
Lithium	2.2 µg/L	cis-testosterone	< 0.0001-0.0003 µg/L
Magnesium	12-14 mg/L	trans-testosterone	< 0.00005-0.0001 µg/L

Compliance with Other Drinking Water Regulations (no violations)

Shorewood and Milwaukee Water Works had no MCL exceedances, monitoring or reporting violations of the Safe Drinking Water Act in 2014

Health Precautions

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 tap water from their health care providers. EPA/CDC (Centers for Disease Control) 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 at 800-426-4791, and the CDC at cdc.gov/parasites/cypto.

Cryptosporidium

Cryptosporidium is a microscopic protozoan that when ingested, can result in diarrhea, fever, and other gastrointestinal symptoms. In collaboration with the Milwaukee Health Department, we consider *Cryptosporidium* detection a priority, and since 1993, we have continued to test source and treated water for *Cryptosporidium*. The organism is found in many surface water sources (lakes, rivers, streams) and comes from human and animal wastes in the watershed. The risk of *Cryptosporidium* from drinking water in Milwaukee has been reduced to extremely low levels by an effective treatment combination including ozone disinfection, coagulation, sedimentation, biologically active filtration, and chloramine disinfection.

The Milwaukee Water Works provides a brochure based on EPA and CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium*. Obtain a copy from our Customer Service Center, (414) 286-2830, or at milwaukee.gov/water/about/WaterQuality.htm; scroll down to Resource Links, choose "Information for Persons with High Risk Immune Systems."

Cryptosporidium was detected in one source water sample in Milwaukee out of 22 source water samples during 2014. There was no detection of *Cryptosporidium* in the finished water in 2014.

Lead and Copper

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. The Milwaukee Water Works 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 two 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 EPA Safe Drinking Water Hotline, 1-800-426-4791, or at epa.gov/safewater/lead.

Notice to Parents of Infants Six Months of Age or Younger

According to the CDC, the proper amount of fluoride from infancy and at all ages throughout life helps prevent and control tooth decay (cavities). Therefore, the Milwaukee Water Works, following public health recommendations, maintains a level of fluoride in our drinking water that is both safe and effective. Per Common Council File No. 120187 adopted on July 24, 2012, we are required to include the following advisory regarding fluoride and young infant in our annual water quality reports and on our website.

The American Academy of Pediatrics recommends exclusive breastfeeding for the first six months of a child's life, followed by continued breastfeeding as complementary foods are introduced, for optimal short- and long-term health advantages. Go to <http://pediatrics.aappublications.org/content/129/3/e827.full> for more information.

As of August 31, 2012, Milwaukee water is fluoridated at a level not to exceed 0.7 mg/L. According to the CDC, for infants up to six months of age, if tap water is fluoridated or has substantial natural fluoride (0.7 mg/L or higher) and is being used to dilute infant formula, a parent may consider using a low-fluoride alternative water source. Bottled water known to be low in fluoride is labeled as purified, deionized, demineralized, distilled, or prepared by reverse osmosis. Ready-to-feed (no-mix) infant formula typically has little fluoride and may be preferable at least some of the time. If breastfeeding is not possible, parents should consult a pediatrician about an appropriate infant formula option. Parents should be aware that there may be an increased chance of mild dental fluorosis if the child is exclusively consuming infant formula reconstituted with fluoridated water. Dental fluorosis is a term that covers a range of visible changes to the enamel surface of the tooth. Go to http://www.cdc.gov/fluoridation/safety/infant_formula.htm for more information on dental fluorosis and the use of fluoridated drinking water in infant formula.

Use Water Wisely — Control Water Costs

As your drinking water provider, we work to control costs by eliminating leaks in the treatment and distribution systems. Leaks inside homes and businesses are the responsibility of the property owner.

Leaks waste large amounts of water. A toilet that "keeps running" or a dripping faucet can waste hundreds of gallons and dollars in a short time. Sewer charges are based on the amount of water that passes through your water meter, whether you used the water or it leaked and was wasted. A leaky toilet that keeps running can waste about 200 gallons a day down the sewer. At that rate, it would cost you \$174.65 each quarter (water charge \$64.25 + Shorewood Village sewer charge \$110.40 = \$174.65), or \$698.60 a year.

Check for leaks throughout your home at least once every season of the year and control your water costs by fixing leaks. Check your Municipal Water Services Bill each quarter for water use and compare it to past bills. Large fluctuations in use can indicate leaks. Expect increased water use during warm weather months if you water your lawn and garden, fill a pool, or frequently wash your car. Water use is measured in units called Ccf, which stands for 100 cubic feet. One Ccf of water equals 748 gallons of water. The typical person in Shorewood uses 10 Ccf of water per quarter. Multiply 10 by the number of people in your household to give you the number of Ccf for water used in one quarter (for example, 4 people x 10 = 40 Ccf). If you are using considerably much more than 10 Ccf per person per quarter, you may have water leaks.

Most leaks are easy to repair with parts from your local hardware store. Ask for assistance from the local store in choosing the correct parts. Or, call a professional plumber for help.