

Brown Deer Water Utility

2013 WATER QUALITY REPORT

ABOUT BROWN DEER'S WATER

Brown Deer purchases its water from the City of Milwaukee. The source of our drinking water is Lake Michigan. It is treated at the Linnwood Water Treatment Plant. Water travels through a network of 65 miles of underground mains to your home. Although we purchase our water wholesale from Milwaukee, the Brown Deer Water Utility controls its distribution once it enters Brown Deer.

Lake Michigan is a surface water source. Contaminants would be expected in untreated surface water. As water flows through rivers, lakes and over land, naturally occurring substances dissolve in the water. Animal and/or human activities can also affect the water. These substances are called contaminants. Surface water sources may be highly susceptible to contaminants. Contaminants that might be expected in *untreated* water include: inorganic contaminants, such as salts and metals; biological contaminants, such as viruses, protozoa and bacteria; organic chemicals from industrial or petroleum use; pesticides and herbicides; and radioactive materials.

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. Milwaukee Water Works (MWW) aggressively tests and monitors its drinking water in an effort to protect public health. MWW provides drinking water of the finest quality to 860,000 people in 16 communities. Their water meets standards more stringent than federal and state water quality requirements.

NOTICE TO PARENTS OF INFANTS SIX MONTHS OF AGE OR YOUNGER

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/129/3/e827.full> for more information.

As of Aug. 31, 2012, Milwaukee water is fluoridated at a level not to exceed 0.7 mg/L. According to the CDC for infants up to 6 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.

CUSTOMER QUESTIONS WELCOME

If you are interested in learning about water quality and the treatment of our drinking water, there are several opportunities available. Please visit our website at www.browndeerwi.org if you have questions about water rates, meter replacements, main or hydrant maintenance, as well as other topics. Or you can contact Brown Deer Water at (414) 371-3080. If you are interested in a water quality report in another language or tour information, you can contact the Milwaukee Water Works Customer Service Department at (414) 286-2830. Results are available for UCMR compounds by contacting the Utility. Milwaukee Water Works also has a webpage at <http://city.milwaukee.gov/water>

Your Water Commission: Tim Schilz (Pres.), Gerald Anderson, Zach Beanland, Ken Harmon, Erin Schmitz.
Brown Deer Water Utility Manager: Mike Rau.

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. Brown Deer has no lead water mains or service lines. When your water has been sitting for several hours, you can reduce the potential for lead exposure from components within your homes plumbing by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking.

IMMUNO-COMPROMISED PERSONS

Some people may be more vulnerable to contaminants in drinking water than the general population. These include people with compromised immune systems, those with cancer undergoing chemotherapy, people who have undergone organ transplants, those with HIV/AIDS or other immune system disorders, some elderly persons and infants can be particularly at risk from infections. These people should seek advice about drinking water from their healthcare providers. Additional information is available from the Centers for Disease Control (CDC) (<http://www.cdc.gov/>).

CRYPTOSPORIDIUM

Cryptosporidium is a microscopic protozoan that, when ingested, can result in diarrhea, fever, and other gastrointestinal symptoms. The Milwaukee Health Department and the Milwaukee Water Works have tested both raw and treated drinking water for *Cryptosporidium* since 1993. The organism is found in many surface water sources and comes from animal wastes in the watershed. *Cryptosporidium* is eliminated by an effective treatment combination including ozone disinfection, coagulation, sedimentation, biologically active filtration and chloramine disinfection.

HEALTH STANDARDS AND WATER QUALITY MONITORING

Federal and state drinking water standards are set after extensive review of the best-available science and public health needs. Water provided by the Milwaukee Water Works meets or surpasses all standards. Milwaukee Water Works has been recognized by the EPA for their collaboration with health agencies to track and respond to public health issues related to water.

Water quality monitoring and screening activities also look for organisms & contaminants not yet regulated but considered of emerging concern. Source and treated water are tested for over 500 contaminants while the EPA requires tests for only 91. Milwaukee Water Works does this as a precaution to ensure safe water, to collect baseline data for study, to help increase the understanding of how contaminants may affect public health and to meet future regulations. Brown Deer's customers can have assurance and confidence in their water quality. Of all the choices of water available to you, only one must meet all standards of the Safe Drinking Water Act: your tap water.

Call us at 414-371-3080 if you would like a paper copy of this report.

BROWN DEER WATER UTILITY

TREATED WATER QUALITY 2013

LISTED below are the regulated contaminants DETECTED in Milwaukee's drinking water during 2013. *All are below levels allowed by state and federal laws.* The table contains the name of each substance; the ideal goals for public health; the highest level allowed by regulation, the amount detected, the usual sources of such contamination, and footnotes explaining the findings and units of measurement. A list of the hundreds of other compounds for which the water was tested but not found can be located at: <http://www.milwaukee.gov/water/about/WaterQuality.htm>.

Substance	Ideal Goals (MCLG)	Highest Level Allowed (MCL)	Median Value	Highest Level Detected	Sources of Contaminant
Aluminum	0.2 mg/L	NR	0.041 mg/L	0.121 mg/L	Water treatment additive; natural deposits.
Barium	2 mg/L	2 mg/L	0.02 mg/L	0.02 mg/L	Natural deposits.
Bromate	10 µg/L	10 µg/L (RAA)	<5 µg/L (RAA)	7.3 µg/L	Disinfection by-product
Strontium	NA	NR	120 µg/L	120 µg/L	Natural deposits.
Nitrate	10.0 mg/L	10.0 mg/L	0.25 mg/L	0.30 mg/L	Natural deposits, farm runoff
Molybdenum	NA	NR	1.0 µg/L	1.1 µg/L	Natural deposits.
Manganese	50 µg/L	NR	<0.5 µg/L	0.7 µg/L	Natural deposits.
Chromium, total	NA	100 µg/L	0.3 µg/L	0.3 µg/L	Natural deposits, manufacturing.
Chromium, Hexavalent	NA	NR	0.2 µg/L	0.25 µg/L	Natural deposits, manufacturing.
Copper (2011)	1.3 mg/L	1.3 mg/L (AL)	.053mg/L	.313 mg/L	Natural deposits. Corrosion of household plumbing systems.
Lead (2011)	0 µg/L	15 µg/L (AL)	<1 µg/L	2 µg/L	Natural deposits. Corrosion of household plumbing systems
Iron	0.30 mg/L	NR	0.006 mg/L	0.020 mg/L	Natural deposits
Chlorate	NA	NR	60 µg/L	100 µg/L	Byproduct of drinking water disinfection
Fluoride	4 mg/L	4 mg/L	0.58 mg/L	.68 mg/L	Water treatment additive, natural deposits.
Gross Alpha particles (2011)	0	15pCi/L	2.7 pCi/L	2.8 pCi/L	Natural deposits
Gross Beta Particles (2011)	0	50 pCi/L	5.3 pCi/L	6.0 pCi/L	Natural deposits
Total Dissolved Solids	500 mg/L	NR	179 mg/L	187 mg/L	Natural deposits
Chlorine, Total	4 mg/L	4 mg/L	.80 mg/L	1.48 mg/L	Residual of water disinfection.
Haloacetic Acids , Total	NA	60 µg/L	1.95 µg/L	2.9 µg/L	Byproduct of drinking water disinfection.
Trihalomethanes, Total	NA	80 µg/L	6.65 µg/L	7.5 µg/L	Byproduct of drinking water disinfection.
Sulfate	500 mg/L	NR	26 mg/L	27 mg/L	Naturally present
Turbidity	NA	TT<0.3 NTU 95% of the time	0.04 NTU 95% of the time	0.22 NTU One day max	Natural sediment
Uranium, Total (2011)	0	30 pCi/L	0.23 pCi/L	0.25 pCi/L	Natural deposits.
Vanadium	NA	NR	0.3 µg/L	0.3 µg/L	Natural deposits.
Radium – Combined (2011)	0 pCi/L	5 pCi/L	1.98 pCi/L	1.99 pCi/L	Natural deposits.
Chloride	250 mg/L	NR	15.7 mg/L	18.9 mg/L	Natural deposits, road salt.
Total Coliform Bacteria	0	<5 % of samples/month	0.0%	0.0%	Naturally present in the environment.

DEFINITIONS

AL – Action Level: The concentration of a contaminant that 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 – mono-, di-, and tri-chloroacetic acid; mono- and di-bromoacetic acid; and bromochloroacetic acids

Median – The middle value of the entire data set for the parameter (range from high to low). < - means "less than"

MCL – **MAXIMUM CONTAMINANT LEVEL** - The highest level of a contaminant that is allowed in drinking water.

MCLG - **MAXIMUM CONTAMINANT LEVEL GOAL** – The level of a contaminant in drinking water below which there is no known or expected risk to health.

Mg/L Milligram per Liter equal to one part per million (ppm) **µg/L** microgram per liter, equal to one part per billion (ppb)

NR – not regulated **NTU** – Nephelometric Turbidity Units – unit to measure turbidity. **RAA = Running Annual Average** – the average of (4) quarterly samples collected in one year.

pCi/L – Picocuries per liter is a measure of radioactivity in water. A picocurie is 10⁻¹² curies and is the quantity of radioactive material producing 2.22 nuclear transformations per minute.

TT – Treatment Technique – A required process intended to reduce the level of a contaminant in drinking water.

Trihalomethanes – chloroform, Bromochloromethane, dibromochloromethane and bromoform.