

Milwaukee Water Works

Safe, Abundant Drinking Water.

2016 Quality of Lake Michigan Source Water

This report shows results of testing the Lake Michigan water we treat.

	MAXIMUM (mg/L)	MINIMUM (mg/L)	MEDIAN (mg/L)
Clarity			
Turbidity , NTU	29.3	0.1	1.0
Microbiological			
Coliform, Total, Presence in 100mL	201	<1	1
Cryptosporidium parvum, oocysts/1L*	<0.020	<0.020	<0.020
Giardia lamblia, cysts/1L**	0.020	<0.020	<0.020
Heterotrophic Plate Count, cfu/1mL	201	<1	<1
Viruses			
Coxsackie A (MPN/20L)	<1	<1	<1
Coxsackie B (MPN/20L)	<1	<1	<1
Echovirus (MPN/20L)	<1	<1	<1
Polio virus (MPN/20L)	<1	<1	<1
Reovirus (MPN/100L)	<1.10	<1.03	<1.05
Chemical & Physical Parameters			
Alkalinity, as CaCO ₃	137	98	118
Carbon dioxide, free, (calc.)	1.80	0.65	1.16
Conductivity, uS/cm	486	275	303
Hardness, Total, as CaCO ₃	170	129	137
Hardness, Calcium, as CaCO ₃	135	67	93
Hardness, Magnesium, as CaCO ₃	65	17	45
Odor (Threshold Odor Number)	1	1	1
pH	8.58	7.96	8.25
Saturation Index (calc.)	0.61	-0.01	0.22
Specific UV absorbance, L/mg-M, (calc.)	2.5	0.8	1.2
Temperature, degrees Celsius	24.2	-0.6	7.0
Total Dissolved Solids (TDS) (calc.)	263	166	176
Total Solids	160	160	160
Total Suspended Solids	<10	<10	<10
Total Organic Carbon	2.60	1.45	1.90
UV-254 (cm-1)	0.065	0.013	0.023
Inorganic Chemicals			
Aluminum	0.123	0.005	0.023
Ammonia, as Nitrogen	<0.1	<0.1	<0.1
Antimony	0.00013	0.00013	0.00013
Arsenic	0.0007	0.0007	0.0007
Barium	0.019	0.019	0.019
Beryllium	<0.00008	<0.00008	<0.00008
Boron	0.021	0.020	0.021
Bromate	0.003	<0.0021	<0.0021
Bromide	0.068	0.012	0.030
Cadmium	<0.0010	<0.0010	<0.0010
Calcium	34.0	34.0	34.0

	MAXIMUM	MINIMUM	MEDIAN
	(mg/L)	(mg/L)	(mg/L)
Cerium	<0.0010	<0.0010	<0.0010
Cesium	<0.0010	<0.0010	<0.0010
Chlorate	0.053	0.004	0.016
Chloride	51.9	9.5	12.6
Chlorite	<2.10	<2.10	<2.10
Chromium, total	<0.0002	<0.0002	<0.0002
Chromium, hexavalent	0.00022	0.00016	0.00019
Cobalt	<0.0020	<0.0020	<0.0020
Copper	0.049	<0.002	0.009
Cyanide	<0.0040	<0.0040	<0.0040
Dysprosium	<0.0010	<0.0010	<0.0010
Erbium	<0.0010	<0.0010	<0.0010
Europium	<0.0010	<0.0010	<0.0010
Fluoride	0.15	0.10	0.12
Gadolinium	<0.0010	<0.0010	<0.0010
Gallium	<0.0010	<0.0010	<0.0010
Germanium	<0.0010	<0.0010	<0.0010
Gold	<0.0010	<0.0010	<0.0010
Hafnium	<0.0010	<0.0010	<0.0010
Holmium	<0.0010	<0.0010	<0.0010
Iridium	<0.0010	<0.0010	<0.0010
Iron	0.126	<0.003	0.014
Lanthanum	<0.0010	<0.0010	<0.0010
Lead	<0.002	<0.002	<0.002
Lithium	0.0020	<0.0020	0.0020
Lutetium	<0.0010	<0.0010	<0.0010
Magnesium	12	12	12
Manganese	0.0039	<0.0005	<0.0005
Mercury	<0.0001	<0.0001	<0.0001
Molybdenum	<0.0020	<0.0020	<0.0020
Neodymium	<0.0010	<0.0010	<0.0010
Nickel	<0.001	<0.001	<0.001
Niobium (2015)	<0.0010	<0.0010	<0.0010
Nitrate, as Nitrogen	0.950	0.070	0.370
Nitrate and Nitrite, Total, as Nitrogen	0.955	0.074	0.371
Nitrite, as Nitrogen	0.033	<0.002	0.005
Osmium	<0.0010	<0.0010	<0.0010
Palladium	<0.0010	<0.0010	<0.0010
Perchlorate	0.00010	0.00010	0.00010
o-Phosphate as PO ₄	<0.020	<0.020	<0.020
Phosphorus as P	<0.050	<0.050	<0.050
Platinum	<0.0010	<0.0010	<0.0010
Potassium	1.7	1.0	1.5
Praseodymium	<0.0010	<0.0010	<0.0010
Protactinium (2014)	<0.0010	<0.0010	<0.0010
Rhenium	<0.0010	<0.0010	<0.0010
Rhodium	<0.0010	<0.0010	<0.0010
Rubidium	0.0012	0.0012	0.0012
Ruthenium	<0.0010	<0.0010	<0.0010
Samarium	<0.0010	<0.0010	<0.0010
Selenium	<0.0004	<0.0004	<0.0004
Silica, Total	1.9	1.7	1.8
Silver	<0.0005	<0.0005	<0.0005
Sodium	30.33	6.91	8.65
Strontium	0.110	0.110	0.110
Sulfate	26.2	16.7	21.9
Tantalum	<0.0010	<0.0010	<0.0010
Tellurium	<0.0010	<0.0010	<0.0010

	MAXIMUM	MINIMUM	MEDIAN
	(mg/L)	(mg/L)	(mg/L)
Thallium	<0.0002	<0.0002	<0.0002
Thorium	<0.0050	<0.0050	<0.0050
Thulium	<0.0010	<0.0010	<0.0010
Tin	<0.0020	<0.0020	<0.0020
Titanium	<0.0050	<0.0050	<0.0050
Tungsten	<0.0010	<0.0010	<0.0010
Uranium	0.00028	0.00026	0.00027
Vanadium	<0.0020	<0.0020	<0.0020
Ytterbium	<0.0020	<0.0020	<0.0020
Zinc	<0.010	<0.010	<0.010
Zirconium	<0.0010	<0.0010	<0.0010
Organic Chemicals			
Acenaphthene	<0.0001	<0.0001	<0.0001
Acenaphthylene	<0.0001	<0.0001	<0.0001
Acetaldehyde	<0.0052	<0.0052	<0.0052
Acetochlor	<0.0001	<0.0001	<0.0001
Acetone	<0.005	<0.005	<0.005
Acrylamide (2015)	<0.0005	<0.0005	<0.0005
Acrylonitrile	<0.0005	<0.0005	<0.0005
Adipate, di(2-ethylhexyl)	<0.0006	<0.0006	<0.0006
Alachlor	<0.00001	<0.00001	<0.00001
Aldehydes, Total	<0.0052	<0.0052	<0.0052
Aldicarb (Temik)	<0.0001	<0.0001	<0.0001
Aldicarb sulfone	<0.0001	<0.0001	<0.0001
Aldicarb sulfoxide	<0.0001	<0.0001	<0.0001
Aldrin	<0.00002	<0.00002	<0.00002
Allyl chloride	<0.0002	<0.0002	<0.0002
tert-Amyl Methyl ether	<0.0001	<0.0001	<0.0001
Ametryn	<0.0001	<0.0001	<0.0001
Anilazine	<0.0010	<0.0010	<0.0010
Aniline (2015)	<0.0005	<0.0005	<0.0005
Anthracene	<0.0001	<0.0001	<0.0001
Aspon	<0.0001	<0.0001	<0.0001
Atraton	<0.0001	<0.0001	<0.0001
Atrazine	0.00004	0.00004	0.00004
Azinphos-ethyl	<0.0005	<0.0005	<0.0005
Azinphos-methyl	<0.0005	<0.0005	<0.0005
Bendiocarb	<0.0005	<0.0005	<0.0005
Benfluralin	<0.0001	<0.0001	<0.0001
Benzaldehyde	<0.0052	<0.0052	<0.0052
Benzene	<0.0001	<0.0001	<0.0001
alpha-Benzene hexachloride	<0.0001	<0.0001	<0.0001
beta-Benzene hexachloride	<0.0001	<0.0001	<0.0001
delta-Benzene hexachloride	<0.0001	<0.0001	<0.0001
gamma-Benzene hexachloride (Lindane)	<0.00001	<0.00001	<0.00001
Benzo(a)anthracene	<0.0001	<0.0001	<0.0001
Benzo(b)fluoranthene	<0.0001	<0.0001	<0.0001
Benzo(k)fluoranthene	<0.0001	<0.0001	<0.0001
Benzo(g, h, l)perylene	<0.0001	<0.0001	<0.0001
Benzophenone (2015)	<0.0001	<0.0001	<0.0001
Benzo(a)pyrene	<0.00002	<0.00002	<0.00002
Benzyl chloride	<0.0005	<0.0005	<0.0005
Bifenthrin (2015)	<0.0005	<0.0005	<0.0005
Bolstar	<0.0001	<0.0001	<0.0001
Bromacil	<0.0001	<0.0001	<0.0001
Bromobenzene	<0.0001	<0.0001	<0.0001

	MAXIMUM	MINIMUM	MEDIAN
	(mg/L)	(mg/L)	(mg/L)
Bromochloromethane	<0.0001	<0.0001	<0.0001
Bromodichloromethane	<0.0002	<0.0002	<0.0002
Bromoform	<0.0001	<0.0001	<0.0001
Bromomethane	<0.0002	<0.0002	<0.0002
Butachlor	<0.00002	<0.00002	<0.00002
1,3-Butadiene	<0.0050	<0.0050	<0.0050
2-Butanone (MEK)	<0.0010	<0.0010	<0.0010
tert-Butyl alcohol	<0.0005	<0.0005	<0.0005
n-Butylacrylate	<0.0010	<0.0010	<0.0010
Butylate	<0.0001	<0.0001	<0.0001
n-Butylbenzene	<0.0001	<0.0001	<0.0001
sec-Butylbenzene	<0.0001	<0.0001	<0.0001
tert-Butylbenzene	<0.0001	<0.0001	<0.0001
Butylbenzylphthalate	<0.0010	<0.0010	<0.0010
Butyraldehyde (Butanal)	<0.0052	<0.0052	<0.0052
Carbaryl	<0.0001	<0.0001	<0.0001
Carbazole (2015)	<0.00005	<0.00005	<0.00005
Carbofuran	<0.0001	<0.0001	<0.0001
Carbon disulfide	<0.0005	<0.0005	<0.0005
Carbon Tetrachloride	<0.0001	<0.0001	<0.0001
Carbophenothion	<0.0005	<0.0005	<0.0005
Carboxin	<0.0001	<0.0001	<0.0001
Chlordane	<0.0001	<0.0001	<0.0001
Chlordane, alpha	<0.00002	<0.00002	<0.00002
Chlordane, gamma	<0.00002	<0.00002	<0.00002
Chlorfenvinphos	<0.005	<0.005	<0.005
Chloroacetonitrile	<0.0030	<0.0030	<0.0030
Chlorobenzene	<0.0001	<0.0001	<0.0001
Chlorobenzilate	<0.0001	<0.0001	<0.0001
2-Chlorobiphenyl	<0.0001	<0.0001	<0.0001
1-Chlorobutane	<0.0001	<0.0001	<0.0001
Chloroethane	<0.0002	<0.0002	<0.0002
Chloroform	<0.0002	<0.0002	<0.0002
Chloromethane	<0.0003	<0.0003	<0.0003
Chloroneb	<0.0001	<0.0001	<0.0001
Chloroprene	<0.0050	<0.0050	<0.0050
Chloropropylate	<0.0001	<0.0001	<0.0001
Chlorothalonil	<0.0001	<0.0001	<0.0001
o-Chlorotoluene	<0.0001	<0.0001	<0.0001
p-Chlorotoluene	<0.0001	<0.0001	<0.0001
Chlorpropham	<0.0001	<0.0001	<0.0001
Chlorpyrifos	<0.0001	<0.0001	<0.0001
Chlorpyrifos methyl	<0.0005	<0.0005	<0.0005
Chrysene	<0.0001	<0.0001	<0.0001
Clomazone	<0.0001	<0.0001	<0.0001
Clopyralid	<0.010	<0.010	<0.010
Coumaphos	<0.0001	<0.0001	<0.0001
Crotonaldehyde	<0.0052	<0.0052	<0.0052
Crotoxyphos	<0.0005	<0.0005	<0.0005
4-Cumyl phenol (2015)	<0.0001	<0.0001	<0.0001
Cyanazine	<0.00002	<0.00002	<0.00002
Cycloate	<0.0001	<0.0001	<0.0001
Cyclohexanone	<0.0052	<0.0052	<0.0052
2,4-D	<0.0001	<0.0001	<0.0001
DCPA	<0.0001	<0.0001	<0.0001
4,4'-DDD	<0.0001	<0.0001	<0.0001
4,4'-DDE	<0.0001	<0.0001	<0.0001
4,4'-DDT	<0.0001	<0.0001	<0.0001

	MAXIMUM	MINIMUM	MEDIAN
	(mg/L)	(mg/L)	(mg/L)
Dalapon	<0.0002	<0.0002	<0.0002
Decanal	<0.0052	<0.0052	<0.0052
Demeton O	<0.0005	<0.0005	<0.0005
Demeton S	<0.0005	<0.0005	<0.0005
Desethylatrazine	<0.00001	<0.00001	<0.00001
Desisopropylatrazine	0.00006	<0.00002	0.00006
Diazinon	<0.0001	<0.0001	<0.0001
Dibenzo(a,h)anthracene	<0.0001	<0.0001	<0.0001
1,2-Dibromoethane	<0.0002	<0.0002	<0.0002
Dibromochloromethane	<0.0001	<0.0001	<0.0001
Dibromomethane	<0.0002	<0.0002	<0.0002
1-2 Dibromo 3 chloropropane (DBCP)	<0.0002	<0.0002	<0.0002
Di-n-butylphthalate	<0.0020	<0.0020	<0.0020
Dicamba	<0.0001	<0.0001	<0.0001
Dichlobenil	<0.0001	<0.0001	<0.0001
Dichlofenthion	<0.0001	<0.0001	<0.0001
Dichloran	<0.0005	<0.0005	<0.0005
2,3-Dichlorobiphenyl	<0.0001	<0.0001	<0.0001
Dichlorvos	<0.0001	<0.0001	<0.0001
1,2-Dichlorobenzene	<0.0002	<0.0002	<0.0002
1,3-Dichlorobenzene	<0.0001	<0.0001	<0.0001
1,4-Dichlorobenzene	<0.0001	<0.0001	<0.0001
trans-1,4-Dichloro-2-butylene	<0.0002	<0.0002	<0.0002
Dichlorodifluoromethane	<0.0002	<0.0002	<0.0002
1,1-Dichloroethane	<0.0001	<0.0001	<0.0001
1,2-Dichloroethane	<0.0001	<0.0001	<0.0001
1,1-Dichloroethylene	<0.0001	<0.0001	<0.0001
1,2-Dichloroethylene, cis	<0.0001	<0.0001	<0.0001
1,2-Dichloroethylene, trans	<0.0001	<0.0001	<0.0001
Di(2-chloroethyl)ether	<0.0020	<0.0020	<0.0020
Dichloromethane (methylene chloride)	<0.0004	<0.0004	<0.0004
1,2-Dichloropropane	<0.0001	<0.0001	<0.0001
1,3-Dichloropropane	<0.0001	<0.0001	<0.0001
2,2-Dichloropropane	<0.0001	<0.0001	<0.0001
1,1-Dichloropropanone	<0.0010	<0.0010	<0.0010
1,1-Dichloropropene (2015)	<0.0005	<0.0005	<0.0005
1,3-Dichloropropene (2015)	<0.0005	<0.0005	<0.0005
1,1-Dichloropropylene	<0.0001	<0.0001	<0.0001
cis 1,3-Dichloropropylene	<0.0001	<0.0001	<0.0001
trans 1,3-Dichloropropylene	<0.0001	<0.0001	<0.0001
Dicrotophos	<0.0005	<0.0005	<0.0005
Dieldrin	<0.00002	<0.00002	<0.00002
Di (2-ethylhexyl) adipate	<0.0006	<0.0006	<0.0006
Di (2-ethylhexyl) phthalate	<0.0006	<0.0006	<0.0006
Diethylphthalate	<0.0010	<0.0010	<0.0010
Diisopropyl ether	<0.0005	<0.0005	<0.0005
Dimethoate	<0.0005	<0.0005	<0.0005
2,6-Dimethylnaphthalene (2016)	<0.0001	<0.0001	<0.0001
Dimethylphthalate	<0.0010	<0.0010	<0.0010
2,4-Dinitrotoluene	<0.0005	<0.0005	<0.0005
2,6-Dinitrotoluene	<0.0005	<0.0005	<0.0005
Di-n-octylphthataate	<0.0020	<0.0020	<0.0020
Dinoseb	<0.0001	<0.0001	<0.0001
1,4-Dioxane	<0.0050	<0.0050	<0.0050
Dioxathion A	<0.0005	<0.0005	<0.0005
Dioxathion B	<0.0005	<0.0005	<0.0005
Dioxin (2,3,7,8-TCDD)	<0.0000000005	<0.0000000005	<0.0000000005
Diphenamid	<0.0001	<0.0001	<0.0001

	MAXIMUM	MINIMUM	MEDIAN
	(mg/L)	(mg/L)	(mg/L)
Diquat	<0.0001	<0.0001	<0.0001
Disulfoton	<0.0001	<0.0001	<0.0001
Disulfoton sulfone	<0.0001	<0.0001	<0.0001
Disulfoton sulfoxide	<0.010	<0.010	<0.010
Endosulfan I	<0.0001	<0.0001	<0.0001
Endosulfan II	<0.0001	<0.0001	<0.0001
Endosulfan sulfate	<0.0001	<0.0001	<0.0001
Endothall	<0.0060	<0.0060	<0.0060
Endrin	<0.00001	<0.00001	<0.00001
Endrin aldehyde	<0.0010	<0.0010	<0.0010
Epichlorohydrin	<0.0010	<0.0010	<0.0010
EPN	<0.0005	<0.0005	<0.0005
EPTC	<0.0001	<0.0001	<0.0001
Erucylamide	0.0027	0.0020	0.0024
Esbiol (2016)	<0.0005	<0.0005	<0.0005
Esfenvalerate	<0.0005	<0.0005	<0.0005
Ethalfuralin	<0.0001	<0.0001	<0.0001
Ethion	<0.0050	<0.0050	<0.0050
Ethofumesate	<0.0005	<0.0005	<0.0005
Ethoprop	<0.0001	<0.0001	<0.0001
Ethylacrylate	<0.0010	<0.0010	<0.0010
Ethylbenzene	<0.0001	<0.0001	<0.0001
Ethylene dibromide (EDB)	<0.00001	<0.00001	<0.00001
Ethyl ether	<0.0002	<0.0002	<0.0002
Ethyl methacrylate	<0.0001	<0.0001	<0.0001
Ethyl tert-butyl ether	<0.0002	<0.0002	<0.0002
Etridiazole	<0.0001	<0.0001	<0.0001
Famphur	<0.0001	<0.0001	<0.0001
Fenamiphos	<0.0001	<0.0001	<0.0001
Fenarimol	<0.0010	<0.0010	<0.0010
Fenitrothion	<0.0005	<0.0005	<0.0005
Fenoxypop-ethyl	<0.0010	<0.0010	<0.0010
Fensulfothion	<0.0005	<0.0005	<0.0005
Fenthion	<0.0001	<0.0001	<0.0001
Fenvalerate (2016)	<0.0005	<0.0005	<0.0005
Fluazifop-butyl	<0.0001	<0.0001	<0.0001
Fluchloralin	<0.0001	<0.0001	<0.0001
Fluometuron	<0.0005	<0.0005	<0.0005
Fluoranthene	<0.0001	<0.0001	<0.0001
Fluorene	<0.0001	<0.0001	<0.0001
Fluridone	<0.0010	<0.0010	<0.0010
Fonofos	<0.0001	<0.0001	<0.0001
Formaldehyde	<0.0052	<0.0052	<0.0052
Glyoxal	<0.0052	<0.0052	<0.0052
Glyphosate (Round-up)	<0.0040	<0.0040	<0.0040
Heptachlor	<0.00002	<0.00002	<0.00002
Heptachlor epoxide	<0.00002	<0.00002	<0.00002
2,2',4,4',5,5'-Hexabromobiphenyl (HBB) (2016)	<0.0007	<0.0007	<0.0007
2,2',4,4',5,5'-Hexabromobiphenyl ether (BDE-153) (2016)	<0.0008	<0.0008	<0.0008
2,2',3,3',4,4',6-Heptachlorobiphenyl	<0.0005	<0.0005	<0.0005
Heptanal	<0.0052	<0.0052	<0.0052
Hexachlorobenzene	<0.00002	<0.00002	<0.00002
2,2',4,4',5,6'-Hexachlorobiphenyl	<0.0001	<0.0001	<0.0001
Hexachlorobutadiene	<0.0001	<0.0001	<0.0001
Hexachloroethane	<0.0003	<0.0003	<0.0003
Hexachlorocyclopentadiene	<0.00002	<0.00002	<0.00002
Hexanal	<0.0052	<0.0052	<0.0052
2-Hexanone	<0.0005	<0.0005	<0.0005

	MAXIMUM	MINIMUM	MEDIAN
	(mg/L)	(mg/L)	(mg/L)
Hexazione	<0.0001	<0.0001	<0.0001
3-Hydroxycarbofuran	<0.0001	<0.0001	<0.0001
Indeno(1,2,3-cd)pyrene	<0.0001	<0.0001	<0.0001
Iprodione	<0.0005	<0.0005	<0.0005
Isoborneol (2015)	<0.00005	<0.00005	<0.00005
Isofenphos	<0.0005	<0.0005	<0.0005
Isophorone	<0.0001	<0.0001	<0.0001
Isopropylbenzene	<0.0001	<0.0001	<0.0001
4-Isopropyltoluene (p-)	<0.0001	<0.0001	<0.0001
Kepone (2015)	<0.0005	<0.0005	<0.0005
Leptophos	<0.0005	<0.0005	<0.0005
Lindane	<0.00001	<0.00001	<0.00001
Malathion	<0.0001	<0.0001	<0.0001
Metalazyl	<0.0005	<0.0005	<0.0005
Methacrylonitrile	<0.0002	<0.0002	<0.0002
Methomyl	<0.0001	<0.0001	<0.0001
Methoxychlor	<0.00002	<0.00002	<0.00002
Methylacrylate	<0.0004	<0.0004	<0.0004
Methyl iodide (Iodomethane)	<0.0002	<0.0002	<0.0002
Methylmethacrylate	<0.0001	<0.0001	<0.0001
1-Methyl naphthalene	<0.0001	<0.0001	<0.0001
2-Methyl naphthalene	<0.0001	<0.0001	<0.0001
Methyl paraoxon	<0.0005	<0.0005	<0.0005
Methyl parathion	<0.0005	<0.0005	<0.0005
4-Methyl-2-pentanone (MIBK)	<0.0001	<0.0001	<0.0001
Methyl-t-butyl ether (MBTE)	<0.0002	<0.0002	<0.0002
Metolachlor (Dual)	<0.00001	<0.00001	<0.00001
Metribuzin (Sencor)	<0.00003	<0.00003	<0.00003
Metsulfuron methyl	<0.010	<0.010	<0.010
Mevinphos	<0.0001	<0.0001	<0.0001
MGK-264 isomer a	<0.0001	<0.0001	<0.0001
MGK-264 isomer b	<0.0001	<0.0001	<0.0001
MGK-326	<0.0001	<0.0001	<0.0001
Mirex	<0.0005	<0.0005	<0.0005
Molinate	<0.0001	<0.0001	<0.0001
Monocrotophos	<0.0005	<0.0005	<0.0005
Naled	<0.0005	<0.0005	<0.0005
Naphthalene	<0.0003	<0.0003	<0.0003
1-Naphthol	<0.0010	<0.0010	<0.0010
Napropamide	<0.0001	<0.0001	<0.0001
Nitrobenzene	<0.0020	<0.0020	<0.0020
Nitrofen (2015)	<0.0005	<0.0005	<0.0005
2-Nitropropane	<0.0003	<0.0003	<0.0003
cis-Nonachlor	<0.0001	<0.0001	<0.0001
trans-Nonachlor	<0.0001	<0.0001	<0.0001
Nonanal	<0.0052	<0.0052	<0.0052
Norflurazon	<0.0010	<0.0010	<0.0010
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	<0.0005	<0.0005	<0.0005
Octanal	<0.0052	<0.0052	<0.0052
Oryzalin	<0.010	<0.010	<0.010
Oxadiazon	<0.0001	<0.0001	<0.0001
Oxamyl (Vydate)	<0.0001	<0.0001	<0.0001
Oxychlorane	<0.0001	<0.0001	<0.0001
Oxyfluorfen	<0.0005	<0.0005	<0.0005
Paraquat	<0.0004	<0.0004	<0.0004
Parathion	<0.0005	<0.0005	<0.0005
Pebulate	<0.0001	<0.0001	<0.0001
Pendimethalin	<0.0001	<0.0001	<0.0001

	MAXIMUM	MINIMUM	MEDIAN
	(mg/L)	(mg/L)	(mg/L)
2,2',4,4',5-Pentabromodiphenyl ether (BDE-99) (2015)	<0.0009	<0.0009	<0.0009
2,2',4,4',6-Pentabromodiphenyl ether (BDE-100) (2015)	<0.0005	<0.0005	<0.0005
Pentachlorobenzene	<0.0005	<0.0005	<0.0005
Pentachloronitrobenzene	<0.0005	<0.0005	<0.0005
2,2',3',4,6-Pentachlorobiphenyl	<0.0001	<0.0001	<0.0001
Pentachloroethane	<0.0002	<0.0002	<0.0002
Pentachlorophenol	<0.00002	<0.00002	<0.00002
PAHs(benzo(a)-pyrene)	<0.00002	<0.00002	<0.00002
cis-Permethrin	<0.0001	<0.0001	<0.0001
trans-Permethrin	<0.0001	<0.0001	<0.0001
Phthalate, (di(2-ethylhexyl))	<0.0006	<0.0006	<0.0006
Phenanthrene	<0.0001	<0.0001	<0.0001
Phorate	<0.0001	<0.0001	<0.0001
Phosmet	<0.0005	<0.0005	<0.0005
E-Phosphamidon	<0.0005	<0.0005	<0.0005
Z-Phosphamidon	<0.0005	<0.0005	<0.0005
Picloram (Tordon)	<0.0001	<0.0001	<0.0001
Polychlorinated Byphenyls (PCB's), Total***			
Aroclor 1016	<0.00008	<0.00008	<0.00008
Aroclor 1221	<0.00020	<0.00020	<0.00020
Aroclor 1232	<0.00010	<0.00010	<0.00010
Aroclor 1242	<0.00010	<0.00010	<0.00010
Aroclor 1248	<0.0001	<0.0001	<0.0001
Aroclor 1254	<0.0001	<0.0001	<0.0001
Aroclor 1260	<0.0001	<0.0001	<0.0001
Profluralin	<0.0001	<0.0001	<0.0001
Prometon	<0.0010	<0.0010	<0.0010
Prometryn	<0.0001	<0.0001	<0.0001
Pronamide	<0.0001	<0.0001	<0.0001
Propachlor	<0.00001	<0.00001	<0.00001
Propanil	<0.0005	<0.0005	<0.0005
Propazine	<0.0001	<0.0001	<0.0001
Propiconazole isomer a	<0.0050	<0.0050	<0.0050
Propiconazole isomer b	<0.0050	<0.0050	<0.0050
Propionaldehyde (Propanal)	<0.0052	<0.0052	<0.0052
Propionitrile	<0.0020	<0.0020	<0.0020
n-Propylbenzene	<0.0001	<0.0001	<0.0001
Prothiofos	<0.0005	<0.0005	<0.0005
Pyrene	<0.0001	<0.0001	<0.0001
Pyruvaldehyde (Methylglyoxal)	<0.0052	<0.0052	<0.0052
Silvex (2,4,4-TP)	<0.0001	<0.0001	<0.0001
Simazine	<0.00002	<0.00002	<0.00002
Simetryn	<0.0001	<0.0001	<0.0001
Stirofos	<0.0001	<0.0001	<0.0001
Styrene	<0.0001	<0.0001	<0.0001
Sulfotep	<0.0005	<0.0005	<0.0005
2,3,7,8-TCDD (Dioxin)	<0.0000000005	<0.0000000005	<0.0000000005
Tebuthiuron	<0.010	<0.010	<0.010
TEPP	<0.0010	<0.0010	<0.0010
Terbacil	<0.0001	<0.0001	<0.0001
Terbufos	<0.0005	<0.0005	<0.0005
Terbufos-sulfone (2015)	<0.0004	<0.0004	<0.0004
Terbutryn	<0.0001	<0.0001	<0.0001
2,2',4,4'-Tetrabromodiphenyl ether (BDE-47) (2015)	<0.0003	<0.0003	<0.0003
1,2,4,5-Tetrachlorobenzene	<0.0005	<0.0005	<0.0005
2,2',4,4'-Tetrachlorobiphenyl	<0.0001	<0.0001	<0.0001
1,1,1,2-Tetrachloroethane	<0.0001	<0.0001	<0.0001
1,1,2,2-Tetrachloroethane	<0.0001	<0.0001	<0.0001

	MAXIMUM	MINIMUM	MEDIAN
	(mg/L)	(mg/L)	(mg/L)
Tetrachloroethylene	<0.0001	<0.0001	<0.0001
Tetrahydrofuran	<0.0006	<0.0006	<0.0006
Thiabendazole	<0.010	<0.010	<0.010
Thiobencarb	<0.0001	<0.0001	<0.0001
Thionazin (2015)	<0.0005	<0.0005	<0.0005
Toluene	<0.0001	<0.0001	<0.0001
Toxaphene	<0.0003	<0.0003	<0.0003
2,4,5-TP (Silvex)	<0.0001	<0.0001	<0.0001
Triademefon	<0.0005	<0.0005	<0.0005
Tribufos	<0.0001	<0.0001	<0.0001
1,2,3-Trichlorobenzene	<0.0003	<0.0003	<0.0003
1,2,4-Trichlorobenzene	<0.0003	<0.0003	<0.0003
2,4,5-Trichlorobiphenyl	<0.0001	<0.0001	<0.0001
1,1,1-Trichloroethane	<0.0001	<0.0001	<0.0001
1,1,2-Trichloroethane	<0.0001	<0.0001	<0.0001
Trichloroethylene	<0.0001	<0.0001	<0.0001
Trichlorofluoromethane	<0.0001	<0.0001	<0.0001
Trichloronate	<0.0005	<0.0005	<0.0005
1,2,3-Trichloropropane	<0.0002	<0.0002	<0.0002
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.0001	<0.0001	<0.0001
Tricyclazole	<0.0010	<0.0010	<0.0010
1,2,3-Trimethylbenzene	<0.0005	<0.0005	<0.0005
1,2,4-Trimethylbenzene	<0.0001	<0.0001	<0.0001
1,3,5-Trimethylbenzene	<0.0001	<0.0001	<0.0001
Trifluralin (2015)	<0.0001	<0.0001	<0.0001
Trihalomethanes, total	<0.0005	<0.0005	<0.0005
Urethane (2015)	<0.0010	<0.0010	<0.0010
n-Valeraldehyde (Pentanal)	<0.0052	<0.0052	<0.0052
Vernolate	<0.0001	<0.0001	<0.0001
Vinclozolin	<0.0005	<0.0005	<0.0005
Vinyl acetate	<0.00050	<0.00050	<0.00050
Vinyl Chloride	<0.0001	<0.0001	<0.0001
Xylene, total	<0.0001	<0.0001	<0.0001
Estrogens and Other Hormones (EDCs)			
Diethylstilbestrol (DES)	<0.0000005	<0.0000005	<0.0000005
17alpha-Estradiol	<0.0000005	<0.0000005	<0.0000005
17beta-Estradiol	<0.0000005	<0.0000005	<0.0000005
Estriol	<0.0000005	<0.0000005	<0.0000005
Estrone	0.0000008	<0.0000005	0.0000008
17alpha-Ethynl estradiol	<0.0000005	<0.0000005	<0.0000005
Progesterone	0.0000002	<0.0000001	0.0000002
cis-Testosterone	0.0000003	<0.0000001	0.0000003
trans-Testosterone	0.0000002	<0.0000001	0.0000002
Perfluorinated Compounds			
N-ethyl Perfluorooctanesulfonamidoacetic acid	<0.0000040	<0.0000040	<0.0000040
N-methyl Perfluorooctanesulfonamidoacetic acid	<0.0000040	<0.0000040	<0.0000040
Perfluorobutanesulfone acid (PFBS)	<0.0000020	<0.0000020	<0.0000020
Perfluorodecanoic acid (PFDA)	<0.0000020	<0.0000020	<0.0000020
Perfluoroheptanoic acid (PFHpA)	<0.0000020	<0.0000020	<0.0000020
Perfluorohexanesulfonic acid (PFHxS)	<0.0000020	<0.0000020	<0.0000020
Perfluorohexanoic acid (PFHxA)	<0.0000020	<0.0000020	<0.0000020
Perfluorolauric acid (PFDoA)	<0.0000020	<0.0000020	<0.0000020
Perfluoromyristic acid (PFTA)	<0.0000020	<0.0000020	<0.0000020
Perfluorononanoic acid (PFNA)	<0.0000020	<0.0000020	<0.0000020
Perfluorooctane sulfonate (PFOS)	<0.0000020	<0.0000020	<0.0000020
Perfluorocatanoic acid (PFOA)	<0.0000020	<0.0000020	<0.0000020

	MAXIMUM	MINIMUM	MEDIAN
	(mg/L)	(mg/L)	(mg/L)
Perfluoroundecanoic acid (PFUnA)	<0.000020	<0.000020	<0.000020
Perfluorobutanoic acid (PFBA)	<0.000020	<0.000020	<0.000020
Phosphate Flame Retardants			
Tributyl phosphate (2015)	<0.0001	<0.0001	<0.0001
Triphenyl phosphate (2015)	<0.0001	<0.0001	<0.0001
Tris(2-butoxyethyl) phosphate (2015)	<0.0010	<0.0010	<0.0010
Tris(2-chloroethyl) phosphate (2015)	<0.0001	<0.0001	<0.0001
Tris(1,3-dichloro-2-propyl) phosphate (2015)	<0.0001	<0.0001	<0.0001
Nitrosamines			
N-Nitropyrrolidine (NPYR)	<0.000020	<0.000020	<0.000020
N-Nitrosodi-N-butylamine (NDBA)	<0.000020	<0.000020	<0.000020
N-Nitrosodiethylamine (NDEA)	0.000022	<0.000020	<0.000020
N-Nitrosodimethylamine (NDMA)	<0.000020	<0.000020	<0.000020
N-Nitrosomorpholine	<0.000020	<0.000020	<0.000020
N-Nitrosodiphenylamine	<0.000020	<0.000020	<0.000020
N-Nitrosodi-N-propylamine (NDPA)	<0.000020	<0.000020	<0.000020
N-Nitrosomethylethylamine (NMEA)	<0.000020	<0.000020	<0.000020
N-Nitrosopiperidine (NPIP)	<0.000020	<0.000020	<0.000020
Phenolic Endocrine Disruptors (EDCs)			
Bisphenol A	<0.0001	<0.0001	<0.0001
Nonylphenol, isomer mix	<0.0005	<0.0005	<0.0005
4-n-Octylphenol	<0.0005	<0.0005	<0.0005
4-tert-Octylphenol	<0.0005	<0.0005	<0.0005
Pentachlorophenol	<0.0001	<0.0001	<0.0001
Phenylphenol	<0.0001	<0.0001	<0.0001
Tetrabromobisphenol A	<0.0001	<0.0001	<0.0001
2, 4, 6-Trichlorophenol	<0.0001	<0.0001	<0.0001
Pharmaceuticals & Personal Care Products			
Acesulfame-K	<0.000005	<0.000005	<0.000005
Acetaminophen (2015)	<0.000005	<0.000005	<0.000005
Acetophenone (2015)	<0.00005	<0.00005	<0.00005
9, 10-Anthracenedione	<0.000001	<0.000001	<0.000001
Antipyrine	<0.000001	<0.000001	<0.000001
Atenolol	<0.000001	<0.000001	<0.000001
Azithromycin	<0.000005	<0.000005	<0.000005
Bacitracin (2015)	<0.0010	<0.0010	<0.0010
Bezafibrate	<0.0000005	<0.0000005	<0.0000005
Caffeine	<0.00005	<0.00005	<0.00005
Camphor (2015)	<0.00005	<0.00005	<0.00005
Carbadox	<0.000005	<0.000005	<0.000005
Carbamazepine	<0.000001	<0.000001	<0.000001
Chloramphenicol	<0.000005	<0.000005	<0.000005
Chlorotetracycline	<0.00005	<0.00005	<0.00005
Cholesterol (2015)	0.0022	<0.0010	0.0022
Ciprofloxacin (2015)	<0.00005	<0.00005	<0.00005
Clofibric acid	<0.0000005	<0.0000005	<0.0000005
Cotinine	0.000001	0.000001	0.000001
DEET	0.000013	0.000012	0.000013
Dexamethasone	<0.00005	<0.00005	<0.00005
Diazepam	<0.000001	<0.000001	<0.000001
Diclofenac	<0.0000005	<0.0000005	<0.0000005
Dilantin	<0.000002	<0.000002	<0.000002
Diltiazem	<0.0000001	<0.0000001	<0.0000001
Doxycycline (2015)	<0.00005	<0.00005	<0.00005

	MAXIMUM	MINIMUM	MEDIAN
	(mg/L)	(mg/L)	(mg/L)
Enrofloxacin (2015)	<0.00005	<0.00005	<0.00005
Erythromycin	<0.000001	<0.000001	<0.000001
Fluoxetine (Prozac)	<0.000001	<0.000001	<0.000001
Galaxolide (2015)	<0.00005	<0.00005	<0.00005
Gemfibrozil	<0.0000005	<0.0000005	<0.0000005
Ibuprofen	<0.00005	<0.00005	<0.00005
Indole (2015)	<0.00005	<0.00005	<0.00005
Iopromide	<0.00005	<0.00005	<0.00005
Isoquinoline (2015)	<0.0004	<0.0004	<0.0004
Lasalocid (2015)	<0.000001	<0.000001	<0.000001
Levothyroxine (Synthroid)	<0.000002	<0.000002	<0.000002
Lincomycin	<0.0000001	<0.0000001	<0.0000001
Menthol (2015)	<0.0001	<0.0001	<0.0001
Meprobamate	<0.000001	<0.000001	<0.000001
Methyl salicylate (2015)	<0.0001	<0.0001	<0.0001
4-Methylphenol (2015)	<0.0001	<0.0001	<0.0001
Monensin	<0.000001	<0.000001	<0.000001
Naproxen	<0.000002	<0.000002	<0.000002
Narasin (2015)	<0.000001	<0.000001	<0.000001
Nicotine	<0.00001	<0.00001	<0.00001
Norfloxacin (2015)	<0.00005	<0.00005	<0.00005
Oleandomycin	<0.000001	<0.000001	<0.000001
Oxytetracycline (2015)	<0.0005	<0.0005	<0.0005
Paraxanthine	<0.000005	<0.000005	<0.000005
Penicillin G	<0.000002	<0.000002	<0.000002
Penicillin V	<0.000002	<0.000002	<0.000002
Phenol (2015)	<0.0004	<0.0004	<0.0004
Prednisone	<0.000002	<0.000002	<0.000002
Primidone	<0.000005	<0.000005	<0.000005
Roxithromycin	<0.000001	<0.000001	<0.000001
Salicylic acid	<0.00005	<0.00005	<0.00005
Salinomycin	<0.0000001	<0.0000001	<0.0000001
Simvastatin (2015)	<0.000005	<0.000005	<0.000005
Sitosterol (2015)	<0.0020	<0.0020	<0.0020
Stigmastanol (2015)	<0.0020	<0.0020	<0.0020
Sucralose	0.000070	0.000049	0.000060
Sulfachloropyridazine (2015)	<0.000005	<0.000005	<0.000005
Sulfadiazine	<0.000001	<0.000001	<0.000001
Sulfadimethoxine	<0.0000001	<0.0000001	<0.0000001
Sulfamerazine (2015)	<0.000001	<0.000001	<0.000001
Sulfamethazine	<0.000001	<0.000001	<0.000001
Sulfamethizole	<0.000001	<0.000001	<0.000001
Sulfamethoxazole	0.000002	<0.000001	0.000002
Sulfasalazine	<0.000005	<0.000005	<0.000005
Sulthiazole	<0.000001	<0.000001	<0.000001
Tetracycline (2015)	<0.0005	<0.0005	<0.0005
Theobromine	<0.00005	<0.00005	<0.00005
Theophylline	<0.000005	<0.000005	<0.000005
Tonalid (2015)	<0.00005	<0.00005	<0.00005
Triclocarban	<0.0000005	<0.0000005	<0.0000005
Triclosan	<0.000050	<0.000050	<0.000050
Triethyl citrate (2015)	<0.0004	<0.0004	<0.0004
Trimethoprim	<0.000001	<0.000001	<0.000001
Tylosin	<0.000001	<0.000001	<0.000001
Virginiamycin M1	<0.000001	<0.000001	<0.000001

Radionuclides (pCi/L) (2015)

	MAXIMUM	MINIMUM	MEDIAN
	(mg/L)	(mg/L)	(mg/L)
Gross Alpha, excluding Uranium and Radon	3.38 ± 2.15	2.20 ± 1.85	2.79 ± 2.00
Gross Alpha	3.6 ± 2.2	2.4 ± 1.8	3.0 ± 2.0
Gross Beta	6.6 ± 2.0	4.5 ± 1.9	5.5 ± 2.0
Radium - 226	0.37 ± 0.20	0.26 ± 0.17	0.32 ± 0.19
Radium - 228 total	0.87 ± 0.49	0.66 ± 0.45	0.77 ± 0.47
Radium - 226 + Radium 228 total	1.24 ± 0.53	0.92 ± 0.48	1.08 ± 0.51
Uranium, Total mg/L	<0.0010	<0.0010	<0.0010
Microcystins (2014)			
Microcystin-RR (2014)	<0.0005	<0.0005	<0.0005
Microcystin-LA (2014)	<0.0005	<0.0005	<0.0005
Microcystin-LR (2014)	<0.0005	<0.0005	<0.0005
Microcystin-YR (2014)	<0.0005	<0.0005	<0.0005
Nodularin (2014)	<0.0005	<0.0005	<0.0005

D = Sample collected in distribution system

NR = Not Regulated

R = Not Regulated in raw water, only finished water

MPN = Most Probable Number

AL=Action level

*There were no detections of *Cryptosporidium parvum* in 24 tests.

***Giardia lamblia* was detected in 1 of 24 tests.

***PCB's are summation of Aroclor 1016, 1221, 1232, 1242, 1248, 1254, 1260. None were detected.

****The list of Flame Retardants and Selected Pesticides is tested using USEPA Method 527. This chemicals are included in the Unregulated Contaminant Monitoring Rule-2.

Note for Lead and Copper: There is little to no detectable lead in Lake Michigan water, the source of Milwaukee's supply.

The major sources of copper and lead in drinking water in Milwaukee are service lines, building plumbing, and fixtures.

From these sources, some homes in the community have lead levels above the EPA action level of 0.015 mg/L.

Milwaukee Water Works has installed and is operating treatment facilities to reduce lead in drinking water.

Revised: March 3, 2017.

For more information, please call the Water Quality Section of the Milwaukee Water Works at (414) 286-2585.