

Winnipeg Water



Winnipeg is the last location where we add chlorine to the water - at the outlet from each of the three pumping stations. The other locations are at the Shoal Lake Intake and at the Deacon Reservoir outlet. We maintain an average free chlorine residual of between 0.3 and 0.4 mg/L in the distribution system.

Winnipeg water is intensively monitored on a routine basis to ensure that the water is safe and that regulatory requirements are met. Because water quality is so important, our level of monitoring and sampling exceeds Provincial regulatory requirements.

- ▶ We monitor chlorine at the places where it is added, and at 19 sites throughout the distribution system. Equipment is used to continuously monitor chlorine levels at the pumping stations and the distribution system levels are checked weekly from about the beginning of May to about the end of October, and every two weeks at other times.
- ▶ Microbiological samples are taken weekly at over 60 locations throughout the system. Tests are conducted for general bacteria and for coliform bacteria according to Provincial regulations.

We also test Winnipeg water for:

- ▶ Routine water chemistry
- ▶ Metals (analyzed both by us and the Province)
- ▶ Disinfection by-products

We measure how water quality changes within the distribution system and the quality of water delivered to customers with these tests. We also respond to customer inquiries and complaints about water quality.

For more information, please contact our Customer Service Centre during regular business hours, Monday - Friday, 8:30 am to 4:30 pm:

Telephone 986-5858

Email

wwd-customer-service@winnipeg.ca

What is Being Measured	How it's Measured	Guideline or Regulation	Winnipeg Average	Winnipeg Range	Comments
Odour	odour number	inoffensive	40	15 to 70	Offensive to some customers at times
Geosmin	parts per trillion	no guideline	4	<2 to 63	Common taste and odour compound
IPMP - 2- isopropyl-3-methoxypyrazine	parts per trillion	no guideline	<2	<2	Common taste and odour compound
IBMP - 2-isobutyl-3-methoxypyrazine	parts per trillion	no guideline	<2	<2	Common taste and odour compound
MIB - 2-methylisborneol	parts per trillion	no guideline	<10	<10	Common taste and odour compound
246 TCA - 2,4,6-trichloroanisole	parts per trillion	no guideline	<2	<2	Common taste and odour compound
236 TCA - 2,3,6-trichloroanisole	parts per trillion	no guideline	<2	<2	Common taste and odour compound
345 TCV - 3,4,5-trichloroveratrole	parts per trillion	no guideline	<2	<2	Common taste and odour compound
Chlorophyll-a	parts per billion	no guideline	<1.0	<1.0	Chlorophyll is found in algae
Microcystin LR	parts per billion	no more than 1.5	<0.3	<0.3	Meets the guideline
Turbidity (clearness)	units	no more than 1.0	0.62	0.3 to 3.5	Does not always meet the guideline
Colour, True	units	no more than 15	<5	<5 to 5	Meets the guideline
Total Dissolved Solids	parts per million	no more than 500	102	97 to 106	Meets the guideline
Conductivity	microsiemens per centimetre	no guideline	166	161 to 169	Another measure of dissolved solids
pH	units	between 6.5 and 8.5	7.23	6.72 to 7.77	Meets the guideline
Temperature	° C	no more than 15	10.5	3 to 26	Does not always meet the guideline
Total Alkalinity	parts per million as calcium carbonate	no guideline	67.8	60 to 77.5	–
Total Hardness	parts per million as calcium carbonate	no guideline	76.7	71 to 82	80 to 100 parts per million is recommended
Total Organic Carbon	parts per million	no guideline	10.1	9.3 to 11	–
Total Inorganic Carbon	parts per million	no guideline	16.3	11 to 21	–
Fluoride	parts per million	no more than 1.5	0.8	0.71 to 1.0	Meets the guideline
Nitrate	parts per million	no more than 10	<0.01	<0.01	Meets the guideline
Phosphorus as Phosphate	parts per million	no guideline	1.82	0.93 to 1.98	Added for Lead Control Program
Chloride	parts per million	no more than 250	8.6	7.1 to 10.1	Meets the guideline
Sulfate	parts per million	no more than 500	2.9	2.3 to 3.6	Meets the guideline
Chlorine (combined)	parts per million	no more than 3	0.44	0.37 to 0.47	Meets the guideline
Chlorine (free)	parts per million	no guideline	0.46	0.09 to 0.95	–
Trihalomethanes	parts per billion	no more than 100	116	86 to 144	Does not always meet the guideline
Haloacetic acids	parts per billion	no guideline	95.9	55.6 to 119	Guideline under review by Health Canada
Calcium	parts per million	no guideline	22.9	20.3 to 24.5	Contributes to hardness
Magnesium	parts per million	no guideline	6.12	5.20 to 6.60	Contributes to hardness
Sodium	parts per million	no more than 200	2.19	1.9 to 2.40	Meets the guideline
Potassium	parts per million	no guideline	1.29	1.20 to 1.40	–
Iron	parts per million	no more than 0.30	0.07	0.06 to 0.09	Meets the guideline

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Copper	parts per million	no more than 1.0	0.09	0.06 to 0.14	Meets the guideline
Lead	parts per million	no more than 0.010	<0.002	<0.002	Meets the guideline
Aluminum	parts per million	no guideline	<0.02	<0.02	–
Arsenic	parts per million	no more than 0.025	<0.002	<0.002 to 0.002	Meets the guideline
Chromium	parts per million	no more than 0.05	<0.0003	<0.0003	Meets the guideline
Nickel	parts per million	no guideline	<0.0010	<0.0010	–
Cadmium	parts per million	no more than 0.005	<0.00005	<0.00005	Meets the guideline
Manganese	parts per million	no more than 0.05	<0.05	<0.05	Meets the guideline
Zinc	parts per million	no more than 5.0	<0.05	<0.05	Meets the guideline
Antimony	parts per million	no more than 0.006	0.0004	0.0003 to 0.0004	Meets the guideline
Barium	parts per million	no more than 1.0	0.015	0.014 to 0.016	Meets the guideline
Beryllium	parts per million	no guideline	<0.0002	<0.0002	–
Bismuth	parts per million	no guideline	<0.0002	<0.0002	–
Boron	parts per million	no more than 5	<0.01	<0.01 to 0.01	Meets the guideline
Cesium	parts per million	no guideline	<0.0001	<0.0001	–
Cobalt	parts per million	no guideline	<0.0002	<0.0002	–
Lithium	parts per million	no guideline	0.0021	0.0020 to 0.0022	–
Molybdenum	parts per million	no guideline	<0.0002	<0.0001 to <0.0002	–
Rubidium	parts per million	no guideline	0.0016	0.0015 to 0.0018	–
Selenium	parts per million	less than 0.01	<0.0004	<0.0002 to <0.0004	Meets the guideline
Silicon	parts per million	no guideline	1.06	0.70 to 1.58	–
Silver	parts per million	no guideline	<0.00002	<0.00002	–
Strontium	parts per million	no guideline	0.037	0.033 to 0.040	–
Tellurium	parts per million	no guideline	<0.0002	<0.0002	–
Thallium	parts per million	no guideline	<0.00002	<0.00002	–
Thorium	parts per million	no guideline	<0.0001	<0.0001	–
Tin	parts per million	no guideline	<0.0002	<0.0002	–
Titanium	parts per million	no more than 0.02	0.0006	0.0005 to 0.0007	Meets the guideline
Uranium	parts per million	no guideline	<0.0001	<0.0001 to 0.0001	–
Vanadium	parts per million	no guideline	<0.0002	<0.0002	–
Zirconium	parts per million	no more than 0.1	<0.002	<0.002	Meets the guideline

*For more information on lead in drinking water [click here for link to www.winnipeg.ca/waterandwaste/pdfs/Lead Control Program QA.pdf](http://www.winnipeg.ca/waterandwaste/pdfs/Lead%20Control%20Program%20QA.pdf)

Bacterial Testing

What is Being Measured	Guideline	Our Test Results	Comments
Number of total coliform bacteria tests done in year	1820 samples	3208 samples	More testing than required by the guideline / provincial regulation.
Number of times that total coliform bacteria show up in a test	no more than 320 positive total coliform tests per year	33 positive test results	All locations with positive results were resampled for total coliform and fecal coliform testing. All resamples were negative and met the guideline / provincial regulation.
Number of times that more than 10 total coliform bacteria show up in a test	no more than 10 bacteria per sample	6 samples with greater than 10 bacteria	The locations were resampled as per the guideline. All resamples were negative and met the guideline/ provincial regulation.
Number of heterotrophic (bacteria) plate count (HPC) tests done	no guideline	3208 samples	–
Number of times that HPC counts are more than 500 colonies	no more than 500 bacteria per sample	17 samples with bacteria count greater than 500	Resamples for HPC were no more than 500 and met the guideline/ provincial regulation.

Guidelines from 'Summary of Guidelines for Canadian Drinking Water Quality' by Health Canada, March 2001