



Science and Licensing Division

Permit to Operate a Waterworks

Altered pursuant to section 28(1)(h) of *The Environmental Management and Protection Act, 2010*

Page: 1 of 11

Permit No.: 00002449-10-00

File: 21020-50/WW/OP/REGINA

ISSUED TO **The City of Regina (the permittee)**, the person responsible for a waterworks that is used to provide water intended for human consumption to the City of Regina. The permittee shall ensure that the water supplied by this waterworks is safe for human consumption. This waterworks consists of a **Class IV** water distribution facility, 8 groundwater wells and piping in the Rural Municipality (R.M.) of Sherwood No.159 and the City of Regina, and a 1050mm and a 900 mm diameter treated water supply line that originate in the R.M. of Moose Jaw No.161 at the Buffalo Pound Water Treatment Corporation water treatment facility, which must supply water for human consumptive use to its users in the City of Regina and the R.M of Moose Jaw No.161, the R.M. of Pense No.160, and the R.M. of Sherwood No.159 in the Province of Saskatchewan. located in the City of Regina, in the Province of Saskatchewan.

PURSUANT to section 28(1)(h) of *The Environmental Management and Protection Act, 2010*, the Permit to Operate a Waterworks No. 00002449-09-00 issued to the permittee on January 1st, 2021, whose waterworks is located in the City of Regina and the R.M of Moose Jaw No.161, the R.M. of Pense No.160, and the R.M. of Sherwood No.159, in the Province of Saskatchewan, is hereby altered and amended, subject to the terms and conditions attached to this permit.

This permit takes effect on the 1st day of January, 2024.

This permit expires on the 1st day of January, 2027, unless cancelled or suspended before that date.

Issued

A handwritten signature in blue ink, appearing to read "D. Hoehn", positioned above a horizontal line.

*

Derrick Hoehn, A.Sc.T
Supervisor, Environment Officer
Water Security Agency

* This digital signature affixed to the permit is legally binding and is considered a sufficient electronic signature as required under *The Electronic Information and Documents Act, 2000*. The original copy is retained by the Water Security Agency and shall be considered the official record.

Terms and Conditions

Section One: Definitions

- 1.1 All words and phrases have the same definitions as set out in *The Environmental Management and Protection Act, 2010*, or *The Waterworks and Sewage Works Regulations*, as the case may be.
- 1.2 In this permit:
- (a) "Act" means *The Environmental Management and Protection Act, 2010*;
 - (b) "Regulations" means *The Waterworks and Sewage Works Regulations*;
 - (c) "Science and Licensing Division" means the Science and Licensing Division of the Water Security Agency of Saskatchewan;
 - (d) "Environment officer" has the same meaning as defined in the Act;
 - (e) "Accredited" means a laboratory accredited pursuant to the requirements of the Canadian Association for Laboratory Accreditation in accordance with the parameters for which the laboratory has been accredited;
 - (f) "Positive bacteriological result" means a test result showing the presence of total coliforms, *Escherichia coli* or 200 or more organisms per 100 milliliters as an overgrowth of background bacteria;
 - (g) "Water Rights License" is a water rights license issued pursuant to section 50 of *The Water Security Agency Act*;
 - (h) "Approval to Operate Works" is an approval to operate a raw water surface water/groundwater supply works that is issued pursuant to section 59 of *The Water Security Agency Act*;
 - (i) "Remote monitoring" is the ability to continuously receive real time data, operational conditions, and alarms indicating adverse operational conditions from a remote location via various methods of electronic data transfer; and
 - (j) "Remote process control" is the ability to employ remote monitoring in addition to having the ability to make operational or process adjustments from a remote location.

Section Two: Operation

- 2.1 The permittee shall comply with the Act and the Regulations, and the terms and conditions of this permit.
- 2.2 In the event of an inconsistency between the Act and this permit, or the Regulations and this permit, the more stringent requirement shall apply.
- 2.3 The permittee shall have a valid Water Rights License and a valid Approval to Operate Works issued pursuant to *The Water Security Agency Act*.
- 2.4 The permittee shall not extend or alter the waterworks without approval of the Science and Licensing Division.
- 2.5 The permittee shall have a written quality assurance and quality control policy in place that is satisfactory to the minister. The permittee shall update its quality assurance and quality control policy from time to time to incorporate changes to the waterworks equipment, operational procedures, chemical use, or any other matter or thing that could affect the quality of the water produced by the waterworks. The permittee shall:
- (a) provide a copy of the policy to any employee, agent or contractor performing work or service in relation to the waterworks; and
 - (b) inform the persons mentioned in 2.5(a) of the contents of the quality assurance and quality control policy.
- 2.6 Where all or part of a distribution system is new, extended, altered or repaired, the permittee shall after completion of the new waterworks or the alteration, extension or repair:
- (a) disinfect the portion of the distribution system that is new, extended, altered or repaired, in accordance with American Water Works Association Standard C651 *Disinfecting Water Mains*, or a standard that would offer an equivalent or greater level of protection of human health, before the commencement of its use; and
 - (b) take water samples from the distribution system that is new or has been extended, altered or repaired, and have the samples analyzed for bacteria.
- 2.7 The permittee shall ensure that the operation, repair and maintenance of the waterworks is under the direction of an operator who holds at least the corresponding certificate for the classification of the waterworks as set out in the Saskatchewan Water and Wastewater Works Operator Certification Standards, December 2016.

Section Three: Sampling, Monitoring and Water Quality

- 3.1 The permittee shall cause water samples to be taken from the waterworks to test for bacteria, turbidity, chlorine and for the other parameters listed in Appendix A, at the locations, times and frequency set out in Appendix A.
- 3.2 The permittee shall ensure that the water provided to consumers does not exceed the limits set out in Appendix B

- for bacteria, turbidity, and the chemical parameters listed in that appendix. The permittee shall cause the chlorine residuals to be maintained as set out in Appendix B.
- 3.3 Subject to 3.4, the permittee shall have water samples analyzed by an accredited laboratory, in accordance with the *Regulations*.
- 3.4 The permittee may perform water sampling and on-site analysis for the parameters indicated for “on-site testing” in Appendix A or by continuous water quality monitoring equipment, when authorized to do so.
- 3.5 The permittee shall take water samples in accordance with the instructions provided by the institution or laboratory that provides the sampling bottles or containers.
- 3.6 The permittee shall ensure that all water quality monitoring and testing equipment is maintained and calibrated on a frequency as recommended by the manufacturer; verification of the accuracy of online continuous monitoring equipment shall occur weekly.
- 3.7 The permittee shall perform and record the turbidity analysis and chlorine analysis manually and by means of on-site test equipment every 4 hours in the event of an unplanned continuous online turbidimeter or chlorine analyzer failure or outage.
- 3.8 The permittee shall immediately notify the minister if a continuous chlorine analyzer or continuous online turbidimeter failure or outage is expected to last longer than 24 hours and results in manual readings as per 3.7.
- 3.9 The permittee shall employ a security system at the waterworks that ensures the public water supply is protected from vandalism, tampering and other destructive activities.

Section Four: Recordkeeping

- 4.1 The permittee shall maintain records containing the following information:
- (a) total water pumped into the distribution system on a daily basis or the total raw water used;
 - (b) the types, dosages and total amounts of chemicals applied to the water for treatment;
 - (c) the locations from which samples for any tests conducted by the permittee of the waterworks were taken, in accordance with this permit, and the name of the person who conducted the sampling or testing and the results of those tests;
 - (d) any departures from normal operating procedures that may have occurred and the time and date that they occurred;
 - (e) any instructions that were given during operation of the waterworks to depart from normal operating practices and the name of the person who gave the instructions;
 - (f) any upset condition or bypass condition, the time and date of the upset condition or bypass condition and measures taken to notify others and resolve the upset condition or bypass condition;
 - (g) any condition of low disinfectant levels, the time, date and location of occurrence and measures taken to restore disinfectant levels to required values;
 - (h) the dates and results of calibrating any metering equipment and testing instruments; and
 - (i) the dates and types of maintenance performed on equipment and any actions taken to ensure the normal operation of the waterworks.
- 4.2 The permittee shall cause the operational records or logs mentioned in 4.1 to be recorded and maintained in the following manner:
- (a) operational records or logs must be made in chronological order, with the dates, times and testing locations clearly indicated;
 - (b) entries in an operational record or log must only be made by the permittee, which includes by definition any principal or agent of a permittee;
 - (c) any person making an entry in an operational record or log must do so in a manner that allows the person to be unambiguously identified as the maker of the entry;
 - (d) operational records or logs must be maintained on a daily basis and retained for at least five years;
 - (e) any anomalies or instances of missing entries in an operational record or log must be accompanied by explanatory notes;
 - (f) operational records or logs must only contain data or information that is actually observed or produced;
 - (g) operational records or logs must not contain default values generated manually or by automated means; and
 - (h) operational records or logs maintained pursuant to clause (d) must be made available promptly on request of the minister.
- 4.3 The permittee shall review the records and logs mentioned in 4.1 on a monthly basis to ensure that the operating parameters are being achieved and that the limits set out in Appendix B are not exceeded.

- 4.4 The permittee shall report the findings to the minister as soon as is reasonably practicable after each review required by 4.3 should the review of the records and logs indicate that the quality of water from the waterworks has been adversely affected, that any upset condition, bypass condition or event at the waterworks has not been reported, or that on-site water quality testing records are missing.

Section Five: Reporting and Consumer Reporting

- 5.1 The permittee shall submit the results of water sampling analysis performed in accordance with this permit to the minister:
- (a) in the case of a positive bacteriological result, within 24 hours following completion of the sampling analysis; and
 - (b) in the case of all other parameters, within 7 days following completion of the sampling analysis.
- 5.2 The permittee shall direct the laboratory performing its water sampling analyses to submit the results within the timeframes mentioned in 5.1 directly to the Science and Licensing Division, in a format in accordance with EPB 383 Water Security Agency and Ministry of Environment - Environmental Management System (SEEMS) Lab-Operator (LAB-OPR) Data File Format, in addition to submitting the written results to the permittee.
- 5.3 The permittee shall immediately report to the minister any known or anticipated upset condition, bypass condition or events at or affecting a waterworks that could adversely affect the quality of water produced by the waterworks.
- 5.4 The permittee shall immediately report to the minister any instance where:
- (a) disinfection equipment fails;
 - (b) the level of disinfection identified in Appendix B is not achieved or is not anticipated to be achieved;
 - (c) any other parameter level identified in Appendix B is not achieved or is not anticipated to be achieved;
 - (d) there is a retirement, suspension, resignation, scheduled absence or termination of employment of any certified waterworks distribution or waterworks treatment operator, or any anticipated retirement, suspension, resignation or termination that results in the waterworks not being under the direction of a certified operator that holds at least the corresponding certificate for the classification of those works; or
 - (e) a system depressurization has occurred.
- 5.5 The permittee shall instruct its employees, agents and contractors performing work or service in relation to the waterworks, of their obligation under section 34(1) of the *Regulations* and to report to the minister any instance as described in 5.4 and any known or anticipated upset condition, bypass condition or events at or affecting a waterworks that could adversely affect the quality of water produced by the waterworks.
- 5.6 The permittee shall as soon as reasonably practical report any of the events mentioned in 5.3 or 5.4 to the minister.
- 5.7 The permittee shall, once per calendar year, provide the consumers supplied by the waterworks with a notification of:
- (a) the quality of water produced or supplied by the waterworks in comparison with the levels set out in this permit; and
 - (b) the permittee's compliance with sample submission requirements described in this permit.
- 5.8 Within 30 days after providing consumer notification required by 5.7, the permittee shall provide a written copy of the notification to the minister.
- 5.9 The permittee shall maintain records for all parameters that are specified to be tested "on-site" as indicated in Appendix A and make them available to the minister upon request. For all other parameters, the permittee shall ensure that reporting is conducted in accordance with section 37 of the *Regulations*.

Section Six: Inspection

- 6.1 An environment officer may enter the waterworks at any time to conduct an inspection to ensure that the permittee is complying with this permit, the *Act* or the *Regulations*.
- 6.2 Upon the request of an environment officer, the permittee shall immediately provide any books, records, logs, graphs, papers, documents, or data, including any computer, digital or electronic records, logs, graphs, files or data maintained with respect to the waterworks.

Section Seven: General

- 7.1 A copy of this permit shall be posted in a conspicuous place at the waterworks.
- 7.2 The permittee shall provide each operator of the waterworks with a copy of this permit and the *Regulations*.
- 7.3 The minister may cancel, alter or suspend this permit for the reasons and in the manner set out in the *Act*.
- 7.4 The permittee shall apply for renewal/alteration of this permit at least 60 days prior to its expiry.

- 7.5 In the event of any inconsistency between a previously issued Permit to Operate a Waterworks, and the terms and conditions of this Permit to Operate a Waterworks, the terms and conditions of this permit prevail.
- 7.6 This permit does not replace or supersede any approvals, licenses or authorizations that may be required due to municipal, provincial or federal legislation. The permittee shall maintain in force any and all such approvals, licenses or authorizations that may be required.
- 7.7 Where any notice or reporting is required to be given by the permittee, it shall be provided to:

Water Security Agency

Science and Licensing Division
256 – 2nd Avenue West, Box 2170
Melville, Saskatchewan, S0A 2P0
Telephone: (306) 728-7091
Email: EPOMelville@wsask.ca

After hours, weekends and holidays, the Water Security Agency can be contacted by calling the Upset Report Line at 1.844.536.9494.

Appendix A
Permit to Operate a Waterworks
Monitoring Schedule

Parameter	Station Number	Testing Required	Limit ¹ Applied	Treated Water Sampling Locations and Minimum Sampling Frequency
		Yes	Yes	
1. Bacteriological Total Coliform <i>Escherichia Coli.</i>	SK05JF0014	X	X	Eighteen (18) samples every week from representative locations in the distribution system. Repeat and Special samples resulting from follow-up to a contaminated regular sample are not considered as regular sample submission.
2. Chlorine Residual (on-site testing)	SK05JF0016 SK05JF0015 SK05JF0622 SK05JF0014	X	X	Continuous chlorine monitoring for total chlorine residual in the treated water entering the distribution system at: North Pumping Station (Stn. No. SK05JF0016) Farrell Pumping Station (Stn. No. SK05JF0015) North Pressure Zone Pumping Station (Stn. No. SK05JF0622); AND During every event of groundwater use after the wells have been in service for at least 4 hours and every 4 hours after that, for free chlorine residual in the treated water entering the distribution system at the: North Pumping Station (Stn. No. SK05JF0016) Farrell Pumping Station (Stn. No. SK05JF0015) North Pressure Zone Pumping Station (Stn. No. SK05JF0622) AND at the same frequency and locations as for bacteriological sampling, for free and total residuals(Stn. No. SK05JF0014)
3. Turbidity (on-site testing)	SK05JF0016 SK05JF0015 SK05JF0622 SK05JF0014	X	X	Continuously from the treated water entering the distribution system at: North Pumping Station (Stn. No. SK05JF0016) Farrell Pumping Station (Stn. No. SK05JF0015) North Pressure Zone Pumping Station (Stn. No. SK05JF0622) AND At the same frequency and locations as for bacteriological sampling. (Stn. No. SK05JF0014)
4. Manganese	SK05JF0014	X		Eight (8) every 3 months from the water in the water distribution system. Four samples must be taken in each of the following periods of every year: (January to March, April to June, July to September, and October to December)
5. Trihalomethanes	SK05JF0014	X	X	Four (4) every 3 months from the water in the water distribution system. Four samples must be taken in each of the following periods of every year: (January to March, April to June, July to September, and October to December) Samples are to be collected from a representative location at the extremities of the distribution system.
6. Haloacetic Acids (HAA₅)	SK05JF0014	X	X	Four (4) every 3 months from the water in the water distribution system. Four samples must be taken in each of the following periods of every year: (January to March, April to June, July to September, and October to December) Samples are to be collected from a representative location at the extremities of the distribution system.
7. Lead and Copper (In the distribution system)²	SK05JF0014	X		Yearly. Majority of samples to be collected between April 1 st and October 31 st See Table ² for method of sample collection and required number of sampling points per location.

8. Chemical - General Alkalinity Bicarbonate Calcium Carbonate Chloride Conductivity Fluoride Hardness Magnesium Nitrate pH Sodium Sulphate Total dissolved solids	SK05JF0016 SK05JF0015 SK05JF0622	X	Limits apply to Nitrate and Fluoride	Once (1) during every event of groundwater use from the treated water after the wells have been in service for at least 8 hours at: North Pumping Station (Stn. No. SK05JF0016) Farrell Pumping Station (Stn. No. SK05JF0015) North Pressure Zone Pumping Station (Stn. No. SK05JF0622)
9. Chemical – Health Category Aluminium Antimony Arsenic Barium Boron Cadmium Chromium Copper Iron Lead Manganese Selenium Silver Uranium Zinc	SK05JF0016 SK05JF0015 SK05JF0622	X	Limits apply to Arsenic, Barium, Boron, Cadmium, Chromium, Lead, Selenium and Uranium	Once (1) during every event of groundwater use from the treated water after the wells have been in service for at least 8 hours at: North Pumping Station (Stn. No. SK05JF0016) Farrell Pumping Station (Stn. No. SK05JF0015) North Pressure Zone Pumping Station (Stn. No. SK05JF0622)
10. Ammonia and Dissolved Organic Carbon	SK05JF0016 SK05JF0015 SK05JF0622	X		During every event of groundwater use after the wells have been in service for at least 4 hours and every 4 hours after that at: North Pumping Station (Stn. No. SK05JF0016) Farrell Pumping Station (Stn. No. SK05JF0015) North Pressure Zone Pumping Station (Stn. No. SK05JF0622)

¹: Limits for identified parameters are provided in Appendix B

² **Lead and Copper**

Sample locations should focus on areas which are known to contain lead services or older buildings which may contain lead service lines. It is acceptable if a small portion of the service lines are non-lead or unknown materials.

Sampling will include samples from within private residences and commercial business, along with points from the distribution system not influenced by service lines or internal plumbing fixtures. These samples from “points in the distribution system” can be taken from hydrants or flush out points.

Either random daytime (RDT), 30-minute stagnation (30MS) sampling protocols or other approved sampling protocols can be used for single or multi-family (fewer than eight units) residential sites. These protocols capture typical exposures and are considered appropriate for identifying priority areas for actions to reduce lead concentrations. For large residential buildings such as apartment buildings or seniors’ residences, an RDT sampling protocol is recommended for these sites to capture typical exposures.

RDT sampling: A 1-liter sample should be collected randomly during the day from a drinking water tap in each of the residences. Samples should be collected without prior flushing; no stagnation period is prescribed, to better reflect consumer use.

30MS sampling: The tap should be flushed for 5 minutes, allowed to stand for a 30-minute stagnation period, during which time no water should be drawn from any outlet within the residence (including flushing of toilets). Two 1 L samples should then be collected at a medium to high flow rate (greater than 5 L/minute). The lead concentration is determined by averaging the results from the two samples.

STANDARD SAMPLING FOR LEAD		
Number of Sampling Points in Plumbing that Serves Private Residences	Number of Sampling Points in Plumbing that Does Not Serve Private Residences	Number of Sampling Points in Distribution System
50	5	10

Requirements for Flushing and Sampling Groundwater Wells

Well Designation	Well location	WSA Station No.	Depth-m	Aquifer
W2A	9 th Ave North	SK05JF0156	49.38	Regina
W6	Rural-NW Regina	SK05JF0149	61.87	Regina
W7	Rural- NW Regina	SK05JF0150	49.98	Regina
W8	Rural-NW Regina	SK05JF0151	55.16	Regina
BC6	Rural-East Regina	SK05JF0284	66.8	Zehner
BC7	Rural-East Regina	SK05JF0293	60.80	Zehner
BC8	Rural-East Regina	SK05JF0152	68.27	Zehner
BC9	Rural-East Regina	SK05JF0153	64.0	Zehner

- The wells must be flushed a minimum of 2 times per year; once in each of the spring and fall seasons prior to sampling;
- The Permittee will follow the procedures in the City of Regina document “Revised Procedures for Maintenance and Flushing of Wells” January 2012 version;
- Individual wells must be shock chlorinated should bacteriological testing indicate the presence of coliforms;
- The wells listed above will be sampled as per the Monitoring schedule below following the flushing process.

Groundwater Well Monitoring Schedule

Parameter	Testing Required	Limit ¹ Applied	Treated Water Sampling Locations and Minimum Sampling Frequency
	Yes	Yes	
1. Bacteriological Total Coliform <i>Escherichia Coli.</i>	X	X	Twice (2) per year (one spring + one fall) from each well following routine flushing.
2. Turbidity (on-site testing)	X		Twice (2) per year (one spring + one fall) from each well following routine flushing.
3. Chemical - General Alkalinity Bicarbonate Calcium Carbonate Chloride Conductivity Fluoride Hardness Magnesium Nitrate pH Sodium Sulphate Total dissolved solids	X	Limits apply to Nitrate & Fluoride Only	One (1) sample every year to be taken from each well following routine flushing.
4. Chemical – Health Category Aluminium Antimony Arsenic Barium Boron Cadmium Chromium Copper Iron Lead Manganese Selenium Silver Uranium Zinc	X	Limits apply to Arsenic, Barium, Boron, Cadmium, Chromium, Lead, Selenium and Uranium	One (1) sample every year to be taken from each well following routine flushing.

5. Ammonia and Dissolved Organic Carbon	X		One (1) sample every year to be taken from each well following routine flushing.
6. Pesticides Atrazine Bromoxynil Carbofuran Chlorpyrifos Dicamba 2,4-D Diclofop-methyl Dimethoate Glyphosate Malathion MCPA Pentachlorophenol Picloram Trifluralin	X	X	One (1) sample every 2 years to be taken from each well following routine flushing. Sampling to be done in 2025 & 2027.
7. Synthetic Organics Benzene Benzo(a)pyrene Carbontetrachloride Dichlorobenzene 1,2 Dichlorobenzene 1,4 Dichloroethane 1,2 Dichloroethylene 1,1 Dichloromethane Dichlorophenol 2,4 Ethylbenzene Monochlorobenzene Perfluorooctane- sulfonate Perfluorooctanoic Acid Tetrachloroethylene Tetrachlorophenol 2,3,4,6 Toluene Trichloroethylene Trichlorophenol 2,4,6 Vinyl chloride Xylene	X	X	One (1) sample every 2 years to be taken from each well following routine flushing. Sampling to be done in 2025 & 2027.
8. Cyanide and Mercury	X	X	One (1) sample every 2 years to be taken from each well following routine flushing. Sampling to be done in 2025 & 2027.

¹ Limits for identified parameters are provided in Appendix B

Appendix B

Permit to Operate a Waterworks Permit Limits Permit No.: 00002449-10-00

The following water quality limits apply where identified in Appendix A.

Bacteriological:

Accredited laboratory may use method 9222 or 9223 as per *Standard Methods for the Examination of Water and Wastewater, 22nd edition, 2012*, to comply with the following limits:

- (a) total coliform levels of zero organisms detectable per 100 millilitres;
- (b) *Escherichia coli* levels of zero organisms detectable per 100 millilitres; and
- (c) background bacteria levels of less than 200 organisms per 100 millilitres or no overgrowth.

Chlorine Residual

- (a) a total chlorine residual of not less than 0.5 milligrams per litre or a free chlorine residual of not less than 0.1 milligrams per litre in the water entering the City of Regina distribution system (i.e. leaving North Pumping Station, North Pressure Zone Pumping Station and Farrell Pumping Station) and throughout the distribution system.
- (a) If the groundwater wells are in use a free chlorine residual of not less than 0.1 milligrams per litre in the water entering the distribution system. (i.e. leaving North Pumping Station, North Pressure Zone Pumping Station and Farrell Pumping Station)

Turbidity:

Waterworks, regardless of the source, must maintain turbidity levels for water entering the distribution systems at levels that will always result in acceptable microbiological quality and that will not compromise disinfection.

- (a) Less than 1.0 NTU entering the distribution system, at least 95% of the time each calendar year.

Chemical – Health

Parameter	MAC ¹ (mg/L)	IMAC ² (mg/L)
Arsenic	0.01	
Barium	1.0	
Benzene	0.005	
Benzo(a)pyrene	0.00001	
Boron		5
Bromate	0.01	
Cadmium	0.005	
Carbon tetrachloride	0.005	
Chlorate	1.0	
Chlorite	1.0	
Chromium	0.05	
Cyanide	0.2	
Dichlorobenzene,1,2	0.2	
Dichlorobenzene,1,4	0.005	
Dichloroethane,1,2		0.005
Dichloroethylene,1,1	0.014	
Dichloromethane	0.05	
Dichlorophenol,2,4	0.9	
Fluoride	1.5	
Haloacetic Acids ³	0.08	
Lead	0.01	
Mercury	0.001	
Microcystin-LR	0.0015	
Monochlorobenzene	0.08	
Nitrate as NO ₃	45	
Selenium	0.01	

Tetrachlorophenol,2,3,4,6	0.1
Trichloroethylene	0.05
Trichlorophenol,2,4,6	0.005
Trihalomethanes ⁴	0.1
Uranium	0.02
Vinyl Chloride	0.002

Radiological⁵

Parameter	MAC (Becquerels/L)
Gross Alpha	0.5
Gross Beta	1.0
Lead-210 (²¹⁰ Pb)	0.2
Radium-226 (²²⁶ Ra)	0.5
Tritium (³ H)	7000
Strontium-90 (⁹⁰ Sr)	5
Iodine (¹³¹ I)	6
Cesium-137 (¹³⁷ Cs)	10

Chemical – Pesticides

Parameter	MAC (mg/L)	IMAC (mg/L)
Atrazine		0.005
Bromoxynil		0.005
Carbofuran	0.09	
Chlorpyrifos	0.09	
Dicamba	0.12	
2,4-D ⁶		0.1
Diclofop-methyl	0.009	
Dimethoate		0.02
Malathion	0.19	
MCPA ⁷	0.10	
Pentachlorophenol	0.06	
Picloram		0.19
Trifluralin		0.045

¹ Maximum Acceptable Concentration

² Interim Maximum Acceptable Concentration

³ Haloacetic acids refer to the total levels of monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid and dibromoacetic acid and is based on a locational running average of a minimum of quarterly samples taken from the water mains within a distribution system.

⁴ Trihalomethanes refers to the total levels of chloroform, bromodichloromethane, dibromochloromethane, and bromoform and is based on an annual average of 4 seasonal samples collected from the water mains within the distribution system.

⁵ Radiological - Water samples may be initially screened for radioactivity using gross alpha and gross beta activity determinations. Compliance with the standards may be inferred if the measurements for gross alpha and gross beta activity are less than 0.5 Bq/L (becquerels per litre) and 1.0 Bq/L, respectively, as these are lower than the strictest Maximum Acceptable Concentrations. If these values are exceeded then Table 3 of the *Guidelines for Canadian Drinking Water Quality—Summary Table, Health Canada, 2012*, as amended from time to time, applies.

⁶ 2,4 Dichlorophenoxyacetic Acid

⁷ 2-Methyl-4-Chlorophenoxyacetic Acid