

Document 1

City of Ottawa Drinking Water Systems 2022

Regulatory requirements and compliance with Safe Drinking Water Act (2002)

Drinking water systems: Lemieux Island WPP; Britannia WPP and Central Distribution System; Carp Well System; Munster Well System; Kings Park Well System; Richmond West Well System; Shadow Ridge Well System; Vars Well System

Source Water: Ottawa River & various groundwater sources for municipal well systems

Date of report: March 31st, 2023

Description	Legislation	Regulatory Requirement	Britannia WPP	Lemieux Island WPP	Carp Well	Munster Well	Kings Park Well	Richmond West Well	Shadow Ridge Well	Vars Well
Water Treatment										
Raw (river/well) water taking	PTTW	Raw water flow must be <PTTW	√	√	√	√	√	√	√	√
Raw (river/well) water taking	PTTW	Daily raw water taking flow rates for previous year must be submitted to MECP by March 31	√	√	√	√	√	√	√	√
Treated water production	MDWL Sch.(C) 1.0	Treated water flow must be <MDWL	√	√	√	√	√	√	√	√
Treatment barriers	O.Reg.170/03 Sch.1.4	Treatment must include chemically assisted filtration for surface water systems	√	√	n/a	n/a	n/a	n/a	n/a	n/a

Description	Legislation	Regulatory Requirement	Britannia WPP	Lemieux Island WPP	Carp Well	Munster Well	Kings Park Well	Richmond West Well	Shadow Ridge Well	Vars Well
Well protection	O.Reg.170/03 Sch.1.2	Wells must be constructed and maintained to prevent surface water and contaminants from entering the well	n/a	n/a	√	√	√	√	√	√
Treatment barriers	O.Reg.170/03 Sch.1.2	Treatment barriers must be operated: (i) whenever water is being supplied, (ii) in accordance with the <i>Procedure for Disinfection</i> , & (iii) to achieve the design capability	√	√	√	√	√	√	√	√
Pathogen removal	MDWL Sch.(E) 1.0	Treatment plants must be designed and operated to achieve: 3-log (99.9%) reduction of Crypto-plants 4-log (99.99%) reduction of Giardia-plants 5-log (99.999%) reduction of Virus-plants 2 (99%) log-Virus inactivation for Carp, KP, Munster, Vars; 2/3/4-log reduction Crypto/Giardia/Virus for Shadow Ridge; 4-log virus inactivation for Richmond West;	√	√	√	√	√	√	√	√
Filter turbidity monitoring	O.Reg.170/03 Sch.7.3	Each filter must operate with a dedicated continuous analyzer to monitor filter effluent turbidity	√	√	n/a	n/a	n/a	n/a	√	n/a

Description	Legislation	Regulatory Requirement	Britannia WPP	Lemieux Island WPP	Carp Well	Munster Well	Kings Park Well	Richmond West Well	Shadow Ridge Well	Vars Well
Annual reports	O.Reg.170/03 Section 11	Prepare Annual Report for each water system and make available to public by February 28 th of the next calendar year	√	√	√	√	√	√	√	√
Alterations to the system	DWWP Sch.B 4.0	Any alteration of the treatment system must be documented in Forms 2/3 – Record of Minor Modification, retained on-site for 10 years	√	√	√	√	√	√	√	√
Alterations to the system	DWWP Sch.B 4.0	Any alteration of the water mains must be documented in Form 1 – Record of Water Mains Authorized as a Future Alteration, retained on-site for 10 years	√	√	√	√	√	√	√	√

Notes for items of non-compliance:

1. Lead testing in consumer tap water In March of 2020, as a result of the COVID-19 pandemic, all in-home lead sampling was suspended in order to protect both the homeowner and our employees. Since the MECP lead sampling requires water operators to enter the resident's home to conduct testing, the City of Ottawa applied for and received relief for the winter (Dec 15, -Apr 15, 2020/2021 & 2021/2022) & summer (Jun 15 – Oct 15, 2021 & 2022) rounds of lead sampling. The City complied with regulatory requirements since relief was granted by MECP due to COVID.
2. Delayed resolution notification of Adverse Water Quality Incident (AWQI): A low chlorine residual was reported, in a distribution system water sample, from a watermain on Fallowfield Road on October 31, 2022 and was not closed off (form 2B) within the required time limit of seven days from date of resolution. Field staff verbally notified the Ministry and Ottawa Public Health and provided the required written notification but did not send the resolution (form 2B) within the required seven days from resolution. Additional training was provided for Water Distribution staff to review AWQI reporting requirements and going forward the Distribution branch has added AWQI follow-up to their weekly meetings
3. Training related to Harmful Algal Bloom (HAB) monitoring: As part of the harmful algal monitoring requirements under the MDWL, all relevant drinking water staff are to be trained each year on the HAB monitoring plan, in addition to the reporting and sampling procedures, prior to the summer season. When the plan was first implemented, staff were trained during the biannual operator training sessions. Further training of plant operating staff has not been repeated since the sampling is being completed by a smaller team of trained

operators from the Water Quality Assurance unit. The City will provide training to relevant staff prior to further HAB monitoring seasons and will document the completion of the training in accordance with our MDWLs.

Regulations, Licenses, & Permits:

MDWL – Municipal Drinking Water License

DWWP – Drinking Water Works Permit

PTTW – Permit To Take Water

O.Reg.170/03 – Drinking Water Systems Regulation

O.Reg.169/03 – Ontario Drinking Water Quality Standards

O.Reg.248/03 – Drinking Water Testing Services

O.Reg.128/04 – Certification of Drinking Water Systems Operators

O.Reg.188/07 – Licensing of Municipal Drinking Water systems

O.Reg.170/03 (Appendix) – Procedure for Disinfection of Drinking Water in Ontario

O.Reg.170/03 (Sch.15.1) – Community Lead Testing Program

AWWA – American Water Works Association

Glossary:

NOTE: water quality testing refers to treated_water samples unless otherwise stated

ML/d = mega-Litres per day = million Litres per day

WPP = Water Purification Plant

TC = Total Coliform bacteria, units of (cfu/100mL)

EC = E.coli bacteria, units of (cfu/100mL)

HPC = Heterotrophic Plate Count bacteria, units of (cfu/mL)

PS = Pump Station

MAC = maximum acceptable concentration for Ontario Drinking Water Standards

MOH = Medical Officer of Health

MECP = Ministry of Environment and Climate Change

n/a=not applicable for that system

*regulatory relief provided by Ministry during COVID19 for in-home testing of lead in tap water