

Schedule A

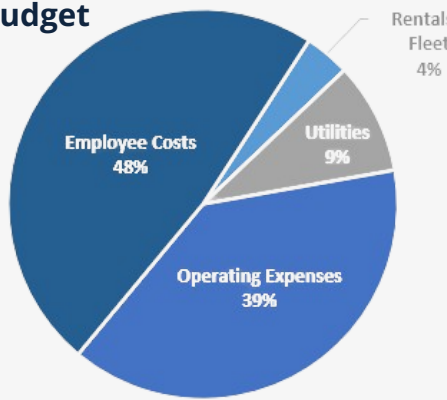
2025 Drinking Water System Operations Report



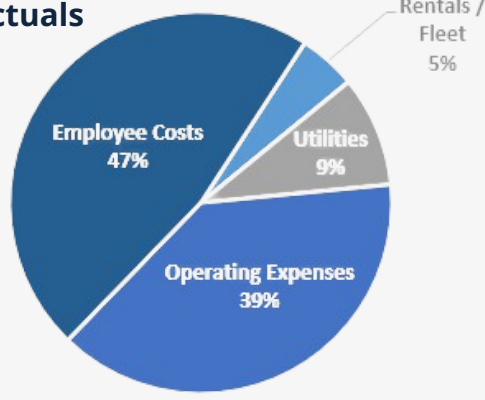
2025 Operations Report

Operational Highlights

2025 Budget



2025 Actuals



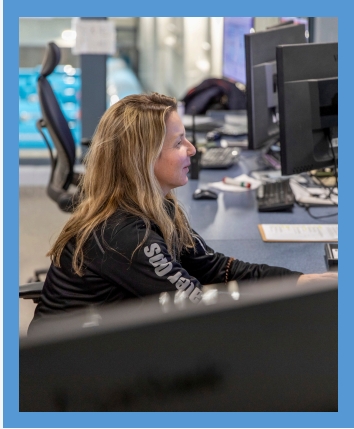
Budget and Cost

2025 Budget: \$36.5 million

- 53% of the budget was utilized for operating the Drinking Water System
- 47% was transferred to reserves and other departments to fund projects and positions

Staff Training

- Approximately 3,472 hours of certified operator training



Research Partnerships

- Partner: Natural Sciences and Engineering Research Council
- Research includes membrane ageing, microplastics, odour control and more



Energy Optimization

- Class A Customer under the Industrial Conservation Initiative
- Staff saved \$117,724 in energy costs by adjusting water production output during peak hours

Well 12 - Well Column Liner Installation



- Installed a stainless steel liner extension that connects the well screen to the pump base
- Total Project Cost: \$115,000.00

Watermain Break Repairs



- 31 watermain breaks occurred
- Total Repair Cost: \$294,500.00

Well 13 - Sand Separator Replacement



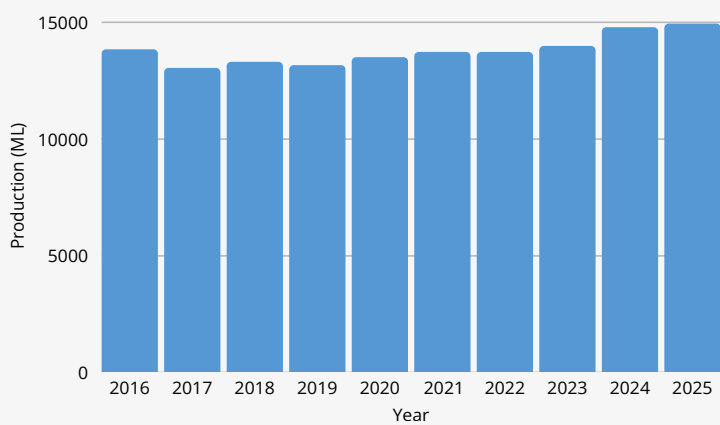
- Total Project Cost: \$90,000.00

Service Delivery

Water Supply Services

14,946.19 ML of drinking water was produced

Total Production Volume



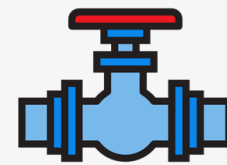
Water Distribution Services

The City's distribution system continues to reliably direct potable water to the community

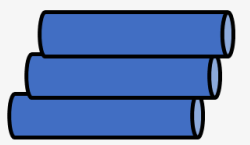
9.25 kilometers of watermain (new and lined watermain) were commissioned



1,275 Hydrants Flushed



2,059 Valves Turned



23.1 Km of Watermain Swabbed

Water Customer Services



Averaged 8 water quality complaints averaged 8 complaints per month

Quality Management System Summary

Adverse Water Quality Incidents (AWQIs)



- 10 AWQIs were reported
- Continual Improvement Plans were initiated for all AWQIs
- No boil water advisories were issued

External Audit



- 0 non-conformances
- 2 opportunities for improvement
- Accreditation was maintained until 2027

Ministry of the Environment, Conservation and Parks (MECP) Inspection



An announced, focused inspection was conducted. The Final Inspection Score was 100%

Schedule B

2025 Annual Report, Section 11

Ontario Regulation 170/03



2025

Drinking Water System Annual Report

City of Barrie

Water Operations Branch

January 1, 2025 to December 31, 2025

Section 11, O.Reg. 170/03

Effective Date: 2026-02-06

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1.0 Introduction

The City of Barrie Water Operations Branch (Branch) prepared this Annual Report (Report) to meet the requirements of Section 11 of Ontario Regulation (O.Reg.) 170/03. The regulation requires drinking water system owners to prepare an annual report that summarizes system performance and water quality for the previous calendar year. The Report must be prepared no later than February 28th of each year.

This Report covers the period of January 1st to December 31st, 2025, and the information provided complies with the reporting requirements described in Section 11 of O.Reg.170/03.

A summary of the City of Barrie's Municipal Drinking Water System (the System) description is outlined below:

- Drinking-Water System Number: 220001192
- Drinking-Water System Name: City of Barrie Drinking Water System
- Drinking-Water System Owner: Corporation of the City of Barrie
- Drinking-Water System Category: Large Municipal Residential

2.0 Reporting Requirements

Section 11 requires that the Report include the following information relating to the period covered by the report:

- Include a statement of where a Report prepared under Schedule 22 will be available for inspection by any member of the public during normal business hours without charge;
- Contain a brief description of the drinking water system, including a list of water treatment chemicals used by the system;
- Describe any major expenses incurred to install, repair, or replace required equipment;
- Summarize any reports made to the Ministry of Environment, Conservation and Parks (MECP) for Adverse Water Quality Incidents;
- Summarize the results of tests required under O.Reg.170/03, or under an approval; Municipal Drinking Water Licence or order, including any Ontario Water Resources Act order, if tests required under this Regulation in respect of a parameter were not

required during that period, summarize the most recent results of tests of that parameter;

- Specify the number of points sampled during the periods, the number of samples taken, and the number of points where samples exceeded the prescribed standard regarding Schedule 15.1 - Lead; and
- Describe any corrective actions taken.

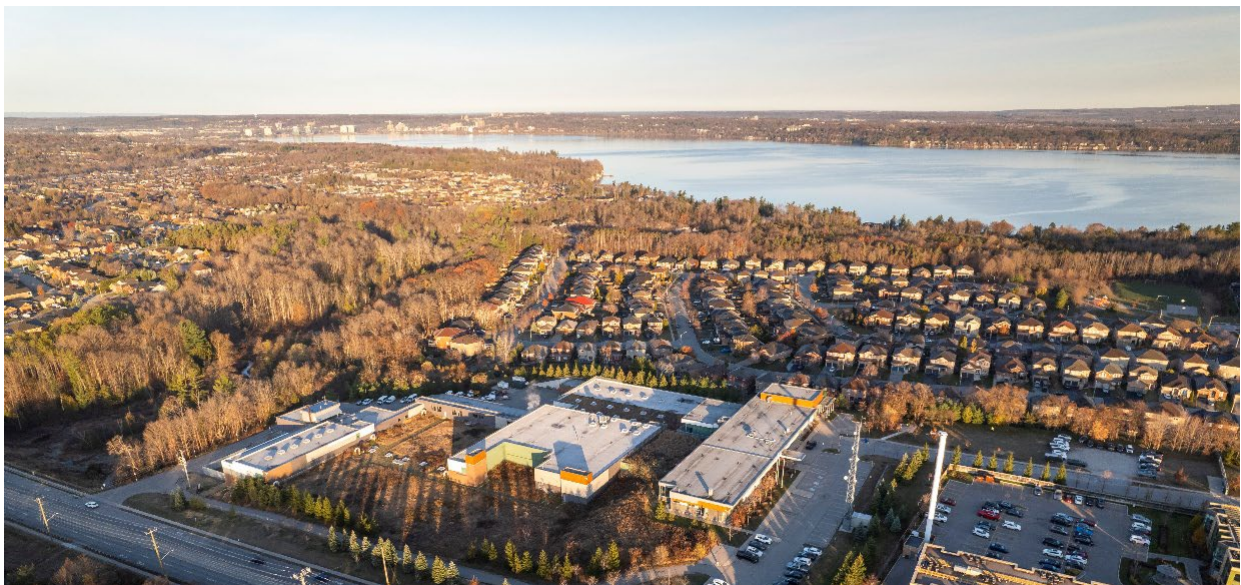
3.0 Evidence of Compliance

3.1 Availability of the Annual Report

In accordance with Section 11 of O.Reg.170/03, the Report is available to the public at no cost on the City of Barrie's website or upon request from the Branch. Notice of its availability will be posted on the City's website and social media channels by February 28th, 2026.

3.2 Description of the Municipal Drinking Water System

The System consists of a Surface Water Treatment Plant (SWTP) and associated low lift pumping station (LLPS), 12 groundwater wells, 3 in-ground storage facilities, 7 booster stations, and 3 elevated storage towers.



Treatment at the SWTP includes screening, flocculation, membrane filtration, granular activated carbon (for taste and odour control) and chlorination. Primary disinfection is provided through chlorine contact time in the contact chamber and reservoir, with secondary disinfection achieved by maintaining chlorine residual as water enters the distribution system.

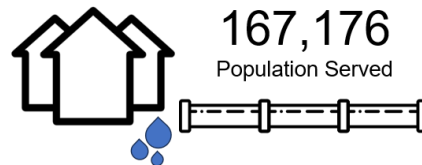


Water from the municipal wells is treated with sodium silicate for iron control and then disinfected with chlorine. Primary disinfection is achieved through chlorine contact time before the water reaches customers. Well 5 uses ultraviolet disinfection instead of chlorine contact time.

Secondary disinfection is maintained throughout the distribution system with booster chlorination applied at 7 locations.



The distribution system consists of approximately 4,267 hydrants and 693 kilometers of watermain. As of January 2026, the system supplies drinking water to an estimated population of 167,176 residents.



3.3 Water Treatment Chemicals

The following water treatment chemicals were used during the reporting period:

- Polyaluminum Chloride – Pre-filtration Coagulant – SWTP
- Chlorine – Primary and Secondary Disinfection – SWTP and Wells
- Sodium Silicate – Iron and Manganese Sequestration – Wells



3.4 Significant Expenses Incurred

A summary of the major expenses incurred during the reporting period to install, repair, or replace required equipment, and the value of each is included in Table 1.

Table 1 – Summary of Expenses Incurred

Activity	Cost Incurred (2025)
Emergency Watermain Replacement - Rose Steet & Blue Mound Drive	\$56,665.06
Hydrovac Contractors for Linear Water Infrastructure Repairs	\$57,738.86
Valve Replacement – Harvie Road Reservoir	\$74,000.00
Sand Separator Replacement – Well 13	\$90,000.00
Excess Soil Disposal	\$95,049.24
Spare Back Pulse Pump - SWTP	\$97,500.00
Security Fence Installation – Well 3A	\$101,000.00
Well Column Liner Installation – Well 12	\$115,000.00
Sand Separator Replacement – Well 14	\$130,000.00
Advanced Metering Infrastructure (AMI) Service Agreement & Tower Maintenance	\$131,897.74
Standby Generator Rental – Low Lift Pumping Station (SWTP)	\$180,000.00
Long Term Membrane Replacement – SWTP	\$249,996.00
Watermain Break Repairs (31)	\$294,500.00

3.5 Operational Checks, Sampling and Testing

Throughout the reporting period, the City completed operational checks and collected drinking water samples as required by O.Reg.170/03 and the Municipal Drinking Water Licence. Well 3A was not in service during this time, and only sodium samples were collected at that location. An accredited laboratory analyzed all drinking water samples collected across the system.

The results of all analyzed samples are summarized in Tables 2 through 10 in Appendix A. Additional details on the 2025 sampling and testing program are provided in Sections 3.5.1 to 3.5.5.

3.5.1 Schedule 7 – Operational Checks

Operational checks, including measurements of free chlorine in both treated and distribution water, as well as turbidity levels in raw and treated water, were conducted as required by Schedule 7 of the regulation.

The operational checks conducted during this reporting period are summarized in Table 2, included in Appendix A for reference.

3.5.2 Schedule 10 – Microbiological Sampling and Testing

Raw, treated, and distribution water samples were analyzed for microbiological parameters specified in O.Reg.170/03.

Laboratory results for samples analyzed for E.coli, Total Coliforms and Background met the requirements and did not exceed the applicable standards set out in O.Reg.169/03 and the Ontario’s Public Health Inspectors Guide.


The samples analyzed for microbiological parameters during this reporting period are summarized in Table 3, included in Appendix A for reference.



3.5.3 Schedule 13 – Chemical Testing

Treated water samples collected from the Water Distribution and Supply Subsystem were analyzed for organic and inorganic chemical parameters as required by O.Reg.170/03. Test results for samples analyzed for organic and inorganic chemical parameters met the requirements and remained within the applicable standards set out in O.Reg.169/03.

Treated water samples from the distribution system were tested for trihalomethanes (THMs) and haloacetic acids (HAAs) and samples collected from the wells and the SWTP were tested for nitrate, nitrite, fluoride, and sodium, as required by the same regulation. All results for THMs, HAAs, fluoride, nitrate, and nitrite met the applicable drinking water standards. Sodium levels were above the guideline value; however, these results did not require reporting to the MECP during the 2025 reporting period.



Chemical Testing:

- Trihalomethanes (THMs)
- Haloacetic Acids (HAAs)
- Nitrates
- Nitrites
- Fluoride
- Sodium

Tables 4, 5, and 6 in Appendix A provide a summary of these results.

Where analysis of a specific parameter required under the regulation was not conducted during the reporting period, the most recent test results for that parameter have been included in this Report.

3.5.4 Schedule 15.1 – Lead – O.Reg. 170/03

Lead samples were collected from ten hydrants in the distribution system during the winter and summer sampling periods, as required by regulatory requirements. All samples showed lead levels below the provincial limit of 10 µg/L (0.01 mg/L).

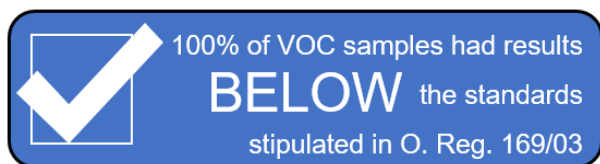
A summary of the results is provided in Table 7 in Appendix A.

3.5.5 Municipal Drinking Water Licence

In addition to the sampling and monitoring required under O.Reg.170/03, the City's Municipal Drinking Water Licence requires extra sampling at certain locations for volatile organic compounds (VOCs), sodium, and UV disinfection at Well 5.

All VOC test results were below the drinking water standards set out in O.Reg.169/03.

Additional sodium testing is required of raw water from six wells. Sodium levels exceeded the guideline value; however, these results did not require reporting to the MECP during the 2025 reporting period.



A summary of VOC and sodium test results is provided in Tables 8 and 9, respectively, in Appendix A. UV monitoring results for Well 5 are summarized in Table 10 in Appendix A.

3.6 Reporting and Corrective Actions

3.6.1 Schedule 16 and 17 - Reporting Adverse Test Results and Other Problems and Corrective Actions

Ten (10) Adverse Water Quality Incidents (AWQIs) were reported during the 2025 reporting period, as required by O.Reg.170/03. All required corrective actions were completed as described in the regulation. The incidents were resolved in a timely manner through consultation with the Simcoe Muskoka District Health Unit and the MECP.

A summary of the AWQIs and the related corrective actions is provided in Table 11 in Appendix A.

Appendix A

Tables

Table 2 – Schedule 7 Operational Checks*

Sample Location	Sample Count	Free Chlorine		Turbidity			
		(min)	(max)	(min)	(max)	(min)	(max)
		Treated Water		Raw Water		Treated Water	
Well 5	**8760	0.05	5.00	0.00	1.36	-	-
Well 7	**8760	0.35	2.38	0.00	9.99	-	-
Well 9	**8760	0.53	1.90	0.00	4.93	-	-
Well 11	**8760	0.39	0.49	0.06	4.90	-	-
Well 12	**8760	0.32	3.68	0.04	2.37	-	-
Well 13	**8760	0.41	1.90	0.02	4.78	-	-
Well 14	**8760	0.28	3.86	0.02	9.97	-	-
Well 15	**8760	0.46	1.89	0.03	6.35	-	-
Well 16	**8760	0.41	2.55	0.02	0.06	-	-
Well 17	**8760	0.29	5.00	0.01	1.82	-	-
Well 18	**8760	0.35	2.78	0.01	1.16	-	-
Surface Water Treatment Plant	**8760	0.00	5.00	0.00	117.84	0.00	6.04
Bayfield Tower	**8760	0.00	4.99	-	-	-	-
Ferndale Tower	**8760	0.00	1.47	-	-	-	-
Mapleview Tower	**8760	0.00	2.16	-	-	-	-
Anne Reservoir	**8760	0.02	2.22	-	-	-	-
Harvie Reservoir	**8760	0.00	3.87	-	-	-	-
Sunnidale Reservoir	**8760	0.00	5.00	-	-	-	-

Notes:

** 8760 - Represents continuous monitoring

-- - Analysis not required

NTU - Turbidity measured in Nephelometric Turbidity Units

mg/L - Free Chlorine measured in milligrams per litre

* Data used to populate this table contains numbers reflective of analyzer calibration and maintenance activities and are not an indication of improperly treated water

Table 3 – Schedule 10 Microbiological Sampling and Testing

Sample Location	E.Coli		Total Coliform		Background		HPC		Sample Count
	(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)	
Distribution System									
North Sampling Points	0	0	0	0	-	-	<10	70	777
South Sampling Points	0	0	0	0	-	-	<10	20	779
Other (i.e., main breaks, maintenance)	0	0	0	0	0	0	-	-	10
Sub-Total Distribution Samples									1566
Treated Water									
Well 5	0	0	0	0	0	1	<10	10	52
Well 7	0	0	0	0	0	0	<10	10	52
Well 9	0	0	0	0	0	0	<10	10	51
Well 11	*	*	*	*	*	*	*	*	*
Well 12	0	0	0	0	0	0	<10	<10	13
Well 13	0	0	0	0	0	2	<10	10	43
Well 14	0	0	0	0	0	0	<10	10	52
Well 15	0	0	0	0	0	0	<10	10	52
Well 16	0	0	0	0	0	0	<10	10	50
Well 17	0	0	0	0	0	3	<10	10	44
Well 18	0	0	0	0	0	0	<10	20	52
Surface Water Treatment Plant	0	0	0	0	0	0	<10	20	52
Sub-Total Treated Samples									513
Raw Water									
Well 5	0	0	0	0	0	0	-	-	52
Well 7	0	0	0	0	0	0	-	-	52
Well 9	0	0	0	0	0	1	-	-	51
Well 11	*	*	*	*	*	*	-	-	*
Well 12	0	0	0	0	0	2	-	-	13
Well 13	0	0	0	6	0	58	-	-	43
Well 14	0	0	0	0	0	22	-	-	52
Well 15	0	0	0	0	0	0	-	-	52
Well 16	0	0	0	0	0	3	-	-	50
Well 17	0	0	0	0	0	3	-	-	44
Well 18	0	0	0	0	0	0	-	-	52
Surface Water Treatment Plant	0	4	0	30	0	120	-	-	52
Sub-Total Raw Samples									513

Notes:

- CFU/100mL - E. coli, Total Coliform and Background results are expressed as Colony Forming Units (CFU)/100mL
- CFU/1mL - Heterotrophic Plate Count (HPC) results are expressed as CFU/1mL
- - Analysis not required
- * - Well 11 was offline for a significant portion of the year, including during the sampling period.

Table 4 – Schedule 13 Chemical Sampling and Testing – Inorganics and Organics

Sample Location	Well 5	Well 7	Well 9	Well 11	Well 12	Well 13	Well 14	Well 15	Well 16	Well 17	Well 18	SWTP
Date Sampled	2024-04-15	2024-04-15	2024-04-15	2024-04-15	2024-09-18	2024-04-15	2024-04-15	2024-04-15	2024-04-15	2024-04-15	2024-04-15	2025-08-25
MDL	Analytical Result											
Treated Water - Inorganic Parameters												
Antimony	0.0005	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
Arsenic	0.001	<MDL	MDL	MDL	0.002	0.003	MDL	0.003	MDL	<MDL	<MDL	MDL
Barium	0.001	0.204	0.285	0.117	0.276	0.283	0.123	0.239	0.319	0.110	0.318	0.273
Boron	0.002	0.008	0.005	0.004	0.011	0.021	0.007	0.009	0.005	0.004	0.007	0.011
Cadmium	0.0001	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
Chromium	0.001	0.003	0.002	0.002	<MDL	<MDL	<MDL	0.002	<MDL	0.003	<MDL	0.002
Mercury	0.0001	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
Selenium	0.0002	0.0006	0.0004	0.0005	0.0005	0.0005	0.0005	0.0004	0.0003	0.0005	<MDL	0.0004
Uranium	0.0005	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	MDL*	<MDL*	<MDL*	<MDL*	MDL
Treated Water - Organic Parameters												
Alachlor	0.00023	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*
Atrazine+metabolites	0.0005	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
Azinphos-methyl	0.000169	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*
Benzene	0.0001	<MDL	<MDL	<MDL	<MDL	<MDL*	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
Benzo(a)pyrene	0.000008	<MDL	<MDL	<MDL	<MDL	<MDL*	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL*
Bromoxynil	0.00008	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL
Carbaryl	0.002	<MDL	<MDL	<MDL	<MDL	<MDL*	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL*
Carbofuran	0.002	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*
Carbon Tetrachloride	0.0002	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
Chlorpyrifos	0.000169	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*
Diazinon	0.000169	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*
Dicamba	0.00007	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL
1,2-Dichlorobenzene	0.0002	<MDL	<MDL	<MDL	<MDL	<MDL*	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL*
1,4-Dichlorobenzene	0.0003	<MDL	<MDL	<MDL	<MDL	<MDL*	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL*
1,2-dichloroethane	0.0002	<MDL	<MDL	<MDL	<MDL	<MDL*	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL*
1,1-Dichloroethylene (vinylidene chloride)	0.0003	<MDL	<MDL	<MDL	<MDL	<MDL*	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL*
Dichloromethane	0.001	<MDL	<MDL	<MDL	<MDL	<MDL*	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL*
2,4-Dichlorophenol	0.0002	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
2,4-Dichlorophenoxy acetic acid (2,4-D)	0.0003	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL
Diclofop-methyl	0.0001	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL
Dimethoate	0.000169	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*
Diquat	0.0002	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL*
Diuron	0.008	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*
Glyphosate	0.02	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL*
Malathion	0.000169	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*
MCPA	0.005	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL
Metolachlor	0.000113	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*
Metribuzin	0.000113	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*
Monochlorobenzene	0.0005	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
Paraquat	0.0002	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL*
Pentachlorophenol	0.0003	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
Phorate	0.000113	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*
Picloram	0.00007	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL
Polychlorinated Biphenyls (PCB)	0.00005	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL
Prometryne	0.00006	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL*
Simazine	0.000169	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*
Terbufos	0.000113	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*
Tetrachloroethylene (perchloroethylene)	0.0003	<MDL	<MDL	<MDL	<MDL	<MDL*	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL*
2,3,4,6-Tetrachlorophenol	0.00023	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL
Triallate	0.000113	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*
Trichloroethylene	0.0002	<MDL	<MDL	<MDL	MDL	<MDL*	<MDL	0.0004	<MDL	<MDL	<MDL	<MDL*
2,4,6-Trichlorophenol	0.0002	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
Trifluralin	0.000113	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*	<MDL*
Vinyl Chloride	0.0001	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL

Notes:

- mg/L - All units presented in milligrams per litre
- MDL - Method Detection Limit for laboratory analysis
- <MDL - Analytical Result did not exceed the laboratory Method Detection Limit (MDL)
- SWTP - Surface Water Treatment Plant
- * - Sample dilution was performed resulting in modified MDL

Table 5 – Schedule 13 Chemical Sampling and Testing – Trihalomethanes & Haloacetic Acids

Parameter	Running Annual Average
	2025
Trihalomethanes	0.0430
Haloacetic Acids	0.0395

Notes:

mg/L - Reported in milligrams per litre

Table 6 – Schedule 13 Chemical Sampling and Testing – Sodium, Fluoride, Nitrite and Nitrate

Parameter	MDL	Date Sampled	Analytical Results												
		Sample Location	Well 5	Well 7	Well 9	Well 11*	Well 12	Well 13	Well 14	Well 15	Well 16	Well 17	Well 18	SWTP	
Sodium	0.1	2021-08-30	--	--	--	--	--	--	--	--	--	--	--	32.0	
		2024-09-16	15.9	15.1	53*	99*	--	65*	41*	28.0*	12.0	15.9	9.6	--	
		2024-09-18	--	--	--	--	136*	--	--	--	--	--	--	--	
Fluoride	0.2	2021-08-30	--	--	--	--	--	--	--	--	--	--	--	<MDL	
		2024-09-16	<MDL	<MDL	<MDL	0.06	--	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	--	
		2024-09-18	--	--	--	--	0.06	--	--	--	--	--	--	--	
Nitrite	0.05	2025-02-24	--	--	--	--	--	--	--	--	--	--	--	<MDL	
		2025-03-03	--	--	--	--	--	--	--	--	--	<MDL	--	--	
		2025-03-10	<MDL	<MDL	<MDL	--	--	--	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	--
		2025-03-14	--	--	--	--	--	<MDL	--	--	--	--	--	--	--
		2025-05-26	--	--	--	--	--	--	--	--	--	--	--	--	<MDL
		2025-06-09	<MDL	<MDL	<MDL	--	--	<MDL	--	--	--	<MDL	<MDL	<MDL	--
		2025-06-10	--	--	--	--	--	--	<MDL	<MDL	--	--	--	--	--
		2025-07-07	--	--	--	--	--	--	--	--	--	--	--	--	<MDL
		2025-08-25	--	--	--	--	--	--	--	--	--	--	--	--	<MDL
		2025-09-08	<MDL	<MDL	<MDL	--	--	--	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	--
		2025-09-09	--	--	--	--	--	<MDL	--	--	--	--	--	--	--
		2025-10-10	--	--	--	--	<MDL	--	--	--	--	--	--	--	--
		2025-11-24	--	--	--	--	--	--	--	--	--	--	--	--	<MDL
		2025-12-08	<MDL	<MDL	--	--	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	--
		Nitrate	0.05	2025-02-24	--	--	--	--	--	--	--	--	--	--	--
2025-03-03	--			--	--	--	--	--	--	--	--	<MDL	--	--	
2025-03-10	<MDL			<MDL	3.2	--	--	--	--	0.23	<MDL	1.23	<MDL	<MDL	--
2025-03-14	--			--	--	--	--	2.46	--	--	--	--	--	--	--
2025-05-26	--			--	--	--	--	--	--	--	--	--	--	--	0.17
2025-06-09	<MDL			<MDL	3.49	--	--	1.9	--	--	1.24	<MDL	<MDL	<MDL	--
2025-06-10	--			--	--	--	--	--	0.29	<MDL	--	--	--	--	--
2025-07-07	--			--	--	--	--	--	--	--	--	--	--	--	0.07
2025-08-25	--			--	--	--	--	--	--	--	--	--	--	--	0.19
2025-09-08	<MDL			<MDL	3.03	--	--	--	0.37	<MDL	1.17	<MDL	<MDL	<MDL	--
2025-09-09	--			--	--	--	--	2.62	--	--	--	--	--	--	--
2025-10-10	--			--	--	--	0.1	--	--	--	--	--	--	--	--
2025-11-24	--			--	--	--	--	--	--	--	--	--	--	--	0.09
2025-12-08	<MDL			<MDL	--	--	<MDL	1.73	0.28	<MDL	0.98	<MDL	<MDL	<MDL	--
2025-12-09	--			--	2.9	--	--	--	--	--	--	--	--	--	--

- Notes:
- - Analysis not required
 - MDL - Method Detection Limit for laboratory analysis
 - <MDL - Analytical Result did not exceed the laboratory Method Detection Limit (MDL)
 - mg/L - All units reported in milligrams per litre
 - SWTP - Surface Water Treatment Plant
 - * - Sample dilution was performed resulting in modified MDL
 - Well 11 was offline for a significant portion of the year, including during the sampling period.

Table 7 – Schedule 15.1 – Lead

Parameter	MDL	Sample Count	Range of Results	
			(min)	(max)
Lead (Distribution System)	0.0001	20	<MDL	0.004

Notes:

mg/L - All units reported in milligrams per litre

MDL - Method Detection Limit for laboratory analysis

Table 8 – Municipal Drinking Water Licence – Raw Water Sampling and Testing – Volatile Organic Compound

Parameter	MDL	Analytical Results							
		(min)	(max)	(min)	(max)	(min)	(max)	(min)	(max)
Sample Location		Well 11*		Well 12		Well 14		Well 15	
Benzene	0.0001	-	-	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
Carbon Tetrachloride	0.0002	-	-	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
1,2-Dichlorobenzene	0.0005	-	-	<MDL	<MDL	<MDL*	<MDL	<MDL*	<MDL
1,4-Dichlorobenzene	0.0005	-	-	<MDL	<MDL	<MDL*	<MDL	<MDL*	<MDL
1,2-Dichloroethane	0.0005	-	-	<MDL	<MDL	<MDL*	<MDL	<MDL*	<MDL
1,1-Dichloroethene	0.0005	-	-	<MDL	<MDL	<MDL*	<MDL	<MDL*	<MDL
Cis-1,2-Dichloroethene	0.0005	-	-	<MDL	<MDL	<MDL	0.001	<MDL	0.0015
Dichloromethane	0.005	-	-	<MDL	<MDL	<MDL*	<MDL	<MDL*	<MDL
Monochlorobenzene	0.0005	-	-	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
Tetrachloroethylene	0.0005	-	-	<MDL	<MDL	<MDL*	<MDL	<MDL*	<MDL
Trichloroethylene	0.0005	-	-	<MDL	<MDL	<MDL	0.0006	<MDL*	<MDL
Vinyl Chloride	0.0001	-	-	<MDL	<MDL	<MDL	0.0001	<MDL	<MDL

Notes:

- mg/L - All units reported in milligrams per litre
- MDL - Method Detection Limit for laboratory analysis
- <MDL - Analytical result did not exceed the laboratory Method Detection Limit (MDL)
- * - Sample dilution was performed resulting in modified MDL
- Well 11 was offline for a significant portion of the year, including during the sampling period.

Table 9 – Municipal Drinking Water Licence – Raw Water Sampling and Testing - Sodium

Sample Location	Sodium	
	(min)	(max)
*Well 3A	39.0	46.2
Well 9	52.8	70.1
Well 11	-	-
Well 12	123.0	149.0
Well 13	31.0	75.0
Well 14	70.0	92.0

Notes:

mg/L - All units reported in milligrams per litre

* - Although 3A was not in service, analytical results required as a condition of the MDWL.

- Well 11 was offline for a significant portion of the year, including during the sampling period.

Table 10 – Municipal Drinking Water Licence – Ultra Violet Monitoring*

Parameter	Minimum	Well 5	
		(min)	(max)
UV Dosage <i>Monitored Continuously</i>	40	0	114
UVT <i>Monitored Weekly</i>	85	87.2	100

Notes: (mJ/cm²) - UV Dosage measured in millijoules per centimeter squared

% - UVT measured in percent

* Data used to populate this table contains numbers reflective of analyzer calibration and maintenance activities and are not an indication of improperly treated water

Table 11 – Schedule 16 and 17 – Summary of Adverse Water Quality Incidents (AWQIs)

AWQI #	Incident Date	Location	Parameter	Result	Unit of Measure	Summary	Corrective Action Date
167468	2025-03-03	Brownwood Well 16	Low Distribution Chlorine	0.01	mg/L	Low distribution chlorine was reported by the Operator-In-Charge at Brownwood Well 16 due to a chlorine booster bump failure. Upon confirmation of the low residual, onsite flushing was initiated to restore normal chlorine levels. Bacterial samples were collected both onsite and from the first downstream hydrant and sent to the contracted lab for analysis. The results came back clear, and the electrical issue that caused the fault was resolved. The site was fully restored to operation.	2025-03-06
167927	2025-04-18	Brownwood Well 16	Low Distribution Chlorine	0.00	mg/L	Low distribution chlorine was reported by the Operator-In-Charge at Brownwood Well 16 due to a chlorine booster pump failure. Upon confirmation of the low residual, onsite flushing was initiated to restore normal chlorine levels.	2025-04-18
167955	2025-04-21	Brownwood Well 16	Low Distribution Chlorine	0.00	mg/L	Low distribution chlorine was reported by the Operator-In-Charge at Brownwood Well 16 due to a chlorine booster pump failure. A faulty wire connection in the panel caused a loss of vacuum and subsequent pump failure. Onsite flushing was initiated to restore normal chlorine levels, and chlorine residuals were successfully restored. The chlorine injector and the connectors in the panel were replaced.	2025-04-21
168261	2025-05-18	Brownwood Well 16	Low Distribution Chlorine	0.02	mg/L	Low distribution chlorine was reported by the Operator-In-Charge at Brownwood Well 16 due to low chlorine levels caused by a PLC fault on the panel. This fault inhibited the silicate pump and rate controller for chlorine, resulting in a chlorine lock out. Onsite flushing was initiated to restore normal chlorine levels, and chlorine residuals were restored. An electrician replaced the I/O card inside the PLC panel, and normal operation was confirmed.	2025-05-18
168517	2025-06-11	John Well 5	Low Distribution Chlorine	0.00	mg/L	Operators were on site at John Well 5 performing maintenance with the station isolated. Upon start up after maintenance was completed, it was discovered that the ball valve on the chlorine booster pump line had been left closed. This resulted in low chlorine residual levels and triggered a well lockout. Onsite flushing was promptly initiated to restore normal chlorine levels, and chlorine residuals were restored.	2025-06-11
168842	2025-07-04	John Well 5	Low Distribution Chlorine	0.00	mg/L	During a routine cylinder swap-out, onsite operators conducted operational and switchover testing, which resulted in the detection of an air leak at the chlorine vacuum regulator. This leak led to a temporary loss of secondary chlorine residual. Primary disinfection remained effective via UV treatment, with a dosage of 63.65 mJ/cm ² at the time of lockout. Operators responded immediately by initiating flushing back to the station to restore chlorine residual levels. Residual was fully restored.	2025-07-04

169231	2025-07-29	Eden Drive	Observations of Improperly disinfected water directed to water users	-	-	<p>During the operation of the temporary watermain servicing Eden Drive (from Fox Run to Leacock Drive), irregular meter readings were observed. Specifically, 58 Eden Drive recorded negative consumption, while 70 and 82 Eden Drive showed both negative and positive readings. This raised concerns about a potential backflow issue, where potable water may have been inadvertently directed from 58 Eden Drive into the inactive main and subsequently to neighbouring properties. Corrective actions were implemented on July 29, 2025, including:</p> <ul style="list-style-type: none"> - Installation of two bleeder points on the temporary watermain to facilitate flushing and chlorine residual testing. - Closure of all curb boxes to isolate affected homes. - Flushing of the temporary main, achieving chlorine residuals of 0.84 mg/L at 107 Eden Drive (16:01) and 0.66 mg/L at 46 Eden Drive (15:50). - Opening of Hydrant #1040 for the duration of the relining project to allow controlled bleeding of the isolated main if necessary. <p>On July 30, 2025, all water meters on Eden Drive showed normal consumption with no further negative readings.</p>	2025-07-30
169717	2025-09-02	Brownwood Well 16	Low Distribution Chlorine	0.00	mg/L	<p>Low distribution chlorine was reported by the Operator-In-Charge at Brownwood Well 16 due to maintenance being performed on the chlorine system. The chlorine gas fitting was not tightened fully, resulting in improper chlorination of raw water. The Operator arrived onsite and initiated a backflush of the station to restore chlorine levels. Chlorine residuals were successfully restored.</p>	2025-09-02
171163	2025-12-24	Surface Water Treatment Plant	Operational	-	-	<p>An operational adverse water quality incident was reported by the Operator-In-Charge due to a loss of monitoring data caused by a time synchronization issue on the SCADA server. The data was unable to be recovered because the datalogger functionality was not programmed into the Programmable Logic Controllers. WOB worked with the Engineering Department and external contractors to prioritize the programming of the datalogger routines in the PLCs, and determine why this was not completed or included in the recent SCADA Controls Upgrade Project at the SWTP.</p>	2025-12-24
171164	2025-12-24	All Groundwater Facilities	Operational	-	-	<p>An operational adverse water quality incident was reported by the Operator-In-Charge due to a loss of monitoring data caused by a time synchronization issue on the SCADA server. The data was successfully retrieved by December 29, 2025 from the Programmable Logic Controllers in the system.</p>	2025-12-29

Schedule C

2025 Municipal Summary Report, Schedule 22
Ontario Regulation 170/03



2025

Drinking Water System Municipal Summary Report

City of Barrie

Water Operations Branch

January 1, 2025 to December 31, 2025

Schedule 22, O.Reg. 170/03

Effective Date: 2026-02-06

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1.0 Introduction

The City of Barrie Water Operations Branch (Branch) prepared this summary report (Report) to meet the requirements of Schedule 22-2 of Ontario Regulation 170/03 (O.Reg.170/03). The Report must be made available no later than March 31st of each year.

This Report covers the period from January 1st to December 31st, 2025, and the information provided complies with the reporting requirements outlined in Schedule 22-2 (2) and (3) of O.Reg.170/03.

2.0 Reporting Requirements

Schedule 22-2 requires that the report include the following:

- Schedule 22-2 (2) requires:
 - List the requirements of the Safe Drinking Water Act (SDWA), the regulations, the system's approval, drinking water works permit, municipal drinking water licence, and any orders applicable to the System that were not met at the time during the period covered by the report; and,
 - For each requirement referred to above that was not met, specify the duration of the failure and the measures that were taken to correct the failure.
- Schedule 22-2 (3) requires:
 - A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows; and
 - A comparison of the summary referred to above to the rated capacity and flow rates approved in the System's approval, drinking water works permit or municipal drinking water licence.

3.0 Evidence of Compliance

3.1 Compliance with Schedule 22-2 (2).

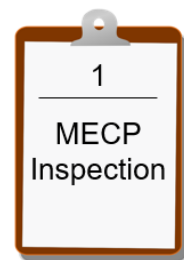
The following sections discuss the requirements in Schedule 22-2 (2).

3.1.1 Orders

The System was not issued any orders during the 2025 reporting period.

3.1.2 Ministry of Environment, Conservation and Parks (MECP) Drinking Water System Inspection

The MECP conducted one (1) announced, focused inspection of the System. The inspection was from October 2024 to September 2025. Following the System inspection, the MECP issued a report summarizing the findings, including regulatory non-compliances, best practice issues, and recommendations.



3.1.2.1 2025 Drinking Water System Inspection Findings

There were zero (0) non-compliances with regulatory requirements and zero (0) recommendations reported in the 2025 MECP Inspection Report issued on September 19th, 2025.

A copy of the MECP Drinking Water System Inspection Summary is included in Appendix A for reference.

3.1.2.2 Historical Drinking Water System Inspection Findings

The Branch reviewed regulatory non-compliances and MECP best practice recommendations identified in past Drinking Water System Inspection Reports. The Branch also documented the actions taken in response to these findings in the MECP Drinking Water System Inspection Summary, covering the 2021 to 2025 reporting periods.

A copy of the MECP Drinking Water System Inspection Summary is included in Appendix A for reference.

3.2 Compliance with Schedule 22-2 (3)

The following section discusses the requirements in Schedule 22-2 (3).

3.2.1 Drinking Water System Production and Flow Rates

In accordance with Schedule 22-2 (3) and to help the Owner assess whether the water system can meet current and future needs, the Branch prepared a summary of water supplied during the reporting period. The summary includes average monthly flows and highest daily flows, compared to the approved capacity of each water source. All water volumes are reported in megalitres (ML) to reflect the large quantities of water produced by the system.

During the reporting period, the Branch supplied 14,946 ML of water. The average monthly supplied from all system sources was 1,246 ML.

The Branch is approved to supply a total of 148.26 ML (148,264,000 L) of water per day from fifteen (15) sources. Approved daily capacities range from 6.55 ML/day for smaller sources to 65 ML/day for the SWTP. During the reporting period, the highest volume supplied in a single day ranged from 1.11 ML at Well 11 to 31.36 ML at the SWTP, as shown in the Flow Summary graph in Appendix B.

All operating sources were run within their approved capacities throughout the reporting period. Wells 3A, 4A and 19 were not operated in 2025.

Appendix A

MECP Drinking Water System Inspection Summary



Ministry of Environment, Conservation & Parks Drinking Water System Inspection Summary

Item No	Applicable Requirement	MECP Non-Compliance With Regulatory Requirements	Actions Taken	MECP Recommendations and Best Practice Issues	Actions Taken	Status
2025						
		Not Applicable		Not Applicable		Complete
2024						
		Not Applicable		Not Applicable		Complete
2023						
1	Subsection 13-6.1 of Schedule 13 and Subsection 6-1.1 of Schedule 6 of O. Reg. 170/03	The latest HAA sample obtained on October 17, 2023, exceeded the required sampling window of 120 days from the previous sample.	The Branch immediately conducted the required haloacetic acid sampling.		Adjust the sampling window of opportunity during each quarter to ensure adequate time to observe, review, check that sampling is upcoming, has been conducted and is complete and accurate.	Complete

Item No	Applicable Requirement	MECP Non-Compliance With Regulatory Requirements	Actions Taken	MECP Recommendations and Best Practice Issues	Actions Taken	Status
2	Subsection 13-6.1 of Schedule 13 and Subsection 6-1.1 of Schedule 6 of O. Reg. 170/03	The latest THM sample obtained on October 17, 2023, exceeded the required sampling window of 120 days from the previous sample.	The Branch immediately conducted the required trihalomethane sampling.		Adjust the sampling window of opportunity during each quarter to ensure adequate time to observe, review, check that sampling is upcoming, has been conducted and is complete and accurate.	Complete
3				Adverse Water Quality Incident #163918 was submitted on an older version of the form 4444E (2020/04)	A link to the MECP form was added to the QMS Home Page for Operational Staff to always access the most current version of the form	Complete

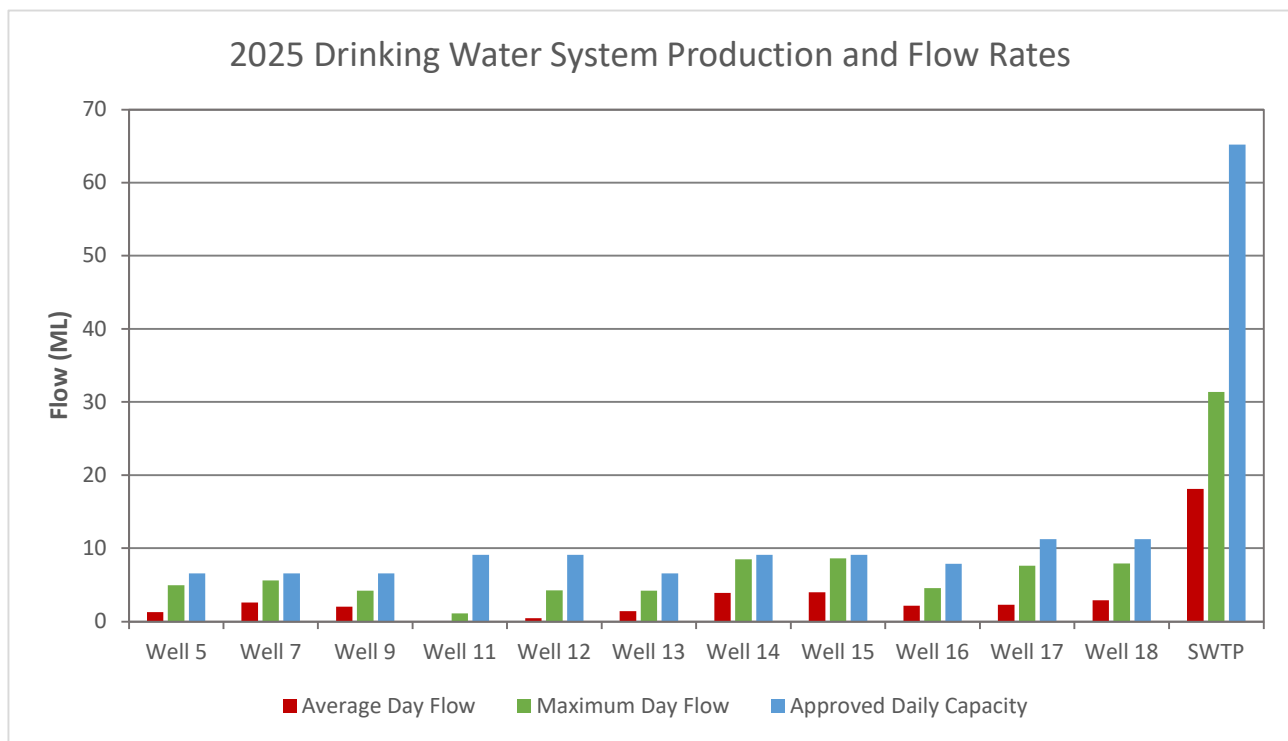
Ministry of Environment, Conservation & Parks Drinking Water System Inspection Summary

Item No	Applicable Requirement	MECP Non-Compliance With Regulatory Requirements	Actions Taken	MECP Recommendations and Best Practice Issues	Actions Taken	Status
4				<p>The following items were noted during the physical inspection:</p> <ul style="list-style-type: none"> - WPS07 access hatches were unsecured without a lock. - WPS07 & WPS09 had antifreeze/coolant/mineral oil being stored near a floor drain without proper containment. - WPS09 spill containment dike for sodium silicate had a spilled volume of material on the floor 	<p>Locks were added to access hatches at WPS07.</p> <p>Chemicals stored near floor drains were placed in proper chemical storage or removed from the property at WPS07 & WPS09.</p> <p>WPS09 spill containment dike was cleared of spilled sodium silicate.</p>	Complete
2022						
		Not Applicable		Not Applicable		Complete
2021						
		Not Applicable		Not Applicable		Complete

Appendix B
Tables and Figures

Drinking Water System Usage

Source	Approved Daily Capacity (ML/day)	Maximum Day Flow (ML/day)	Average Day Flow (ML/day)	Monthly Average Flow (ML/month)	Annual Total Volume (ML)
Well 5	6.55	4.94	1.25	37.88	454.57
Well 7	6.55	5.61	2.58	78.35	940.23
Well 9	6.55	4.21	2.00	60.87	730.41
Well 11	9.10	1.11	0.00	0.15	1.77
Well 12	9.10	4.24	0.46	13.90	166.75
Well 13	6.55	4.19	1.40	42.46	509.49
Well 14	9.10	8.47	3.88	118.13	1,417.55
Well 15	9.10	8.64	3.98	120.93	1,451.18
Well 16	7.86	4.55	2.14	65.18	782.11
Well 17	11.23	7.63	2.29	69.75	837.02
Well 18	11.23	7.93	2.88	87.49	1,049.85
SWTP	65.20	31.36	18.10	550.44	6,605.26
System	158.12	92.88	40.96	1,245.53	14,946.19



Schedule D

Ministry of Environment, Conservation and Parks
Standard of Care

TAKING CARE OF YOUR DRINKING WATER

A Quick Guide For Members Of Municipal Councils

If you are a municipal councillor, this quick guide is intended to help you better understand the Safe Drinking Water Act, 2002 (SDWA) and provide information about your statutory standard of care responsibilities. You are encouraged to also read *Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils*. It provides more details about these responsibilities as well as information about how Ontario's drinking water is protected.

Ontarians expect safe, high quality drinking water. It is a matter vital to public health. As a member of a municipal council, you have an important role to play to ensure that your community has access to safe, high quality drinking water — and you are legally obliged to do so.

THREE THINGS TO REMEMBER AS A MUNICIPAL COUNCILLOR:

It's Your Duty. The Safe Drinking Water Act, 2002 includes a statutory standard of care for individuals who have decision-making authority over municipal drinking water systems or who oversee the operating authority of the system. This can extend to municipal councillors. There are legal consequences for not acting as required by the standard of care, including possible fines or imprisonment.

Be Informed. Ask questions. Get answers. You don't have to be an expert in drinking water operations, but you do need to be informed about them. Your decisions can have an impact on public health. Seek advice from those with expertise and act prudently on that advice.

Be Vigilant. Complacency can pose one of the greatest risks to drinking water systems. It is critical that you never take drinking water safety for granted or assume all is well with the drinking water systems under your care and direction. The health of your community depends on your diligent and prudent oversight of its drinking water.

“Water is unique as a local service. It is, of course, essential to human life and to the functioning of communities, (and) the consequences of a failure in the water system (are) most seriously felt by those who depend on it locally. Municipal ownership, and the ensuing responsibilities, should provide a high degree of public accountability in relation to the local water system.”

— Justice Dennis O'Connor,
2002 Report of the Walkerton Inquiry

Legal Disclaimer – This quick guide should not be viewed as legal or other expert advice. For specific questions regarding the legal application of the Safe Drinking Water Act, 2002 and its regulations, please consult a lawyer and/or consult the text of the Act at www.e-laws.gov.on.ca.

Key Sections of the SDWA for Municipal Councillors

Section 11: Duties of Owners and Operating Authorities

Section 11 of the SDWA describes the legal responsibilities of owners and operating authorities of regulated drinking water systems. It is important for you to understand the scope of your municipality or operating authority's day-to-day responsibilities.

Owners and operators are responsible for ensuring their drinking water systems:

- provide water that meets all prescribed drinking water quality standards
- operate in accordance with the act and its regulations, and are kept in a fit state of repair
- are appropriately staffed and supervised by qualified persons
- comply with all sampling, testing and monitoring requirements
- meet all reporting requirements

Examples of actions required of owners and operators under Section 11:

- Sampling and testing of drinking water with a frequency appropriate to the type, size and users of the system in accordance with the act and corresponding regulations
- Using an accredited and licensed laboratory for drinking water testing services
- Reporting of adverse test results that exceed any of the standards in the Ontario Drinking Water Quality Standards Regulation, both verbally and in writing, to the local medical officer of health and the Ministry of the Environment and Climate Change (MOECC)
- Obtaining a drinking water licence for a municipal residential drinking water system from the MOECC, which includes a financial plan
- Ensuring the drinking water system is operated by an accredited operating authority
- Hiring certified operators or trained persons appropriate to the class of the system

- Preparing an annual report to inform the public on the state of the municipality's drinking water and the system providing it, and an annual summary report for the owners of the drinking water system

Section 19: Your Duty and Liability – Statutory Standard of Care

Section 19 of the SDWA expressly extends legal responsibility to people with decision-making authority over municipal drinking water systems and those that oversee the accredited operating authority for the system. It requires that they exercise the level of care, diligence and skill with regard to a municipal drinking water system that a reasonably prudent person would be expected to exercise in a similar situation and that they exercise this due diligence honestly, competently and with integrity.

Meeting your statutory standard of care responsibilities

Meeting the statutory standard of care is the responsibility of:

- the owner of the municipal drinking water system
- if the system is owned by a municipality, every person who oversees the accredited operating authority or exercises decision-making authority over the system – **potentially including but not limited to members of municipal councils**
- if the municipal drinking water system is owned by a corporation other than a municipality, every officer and director of the corporation

Maintaining an Appropriate Level of Care

Standard of care is a well-known concept within Ontario legislation.

For example, the Business Corporations Act requires that every director and officer of a corporation act honestly and in good faith with a view to the best interests of the corporation and exercise the care, diligence and skill that a reasonably prudent person would in comparable circumstances.

Statutory standards of care address the need to provide diligent oversight. What is considered to be an appropriate level of care will vary from one situation to another. As a municipal councillor, it is important to educate yourself on this statutory requirement and to gain an understanding of the operation of drinking water systems in your community to help you meet the standard of care requirements.

You are not expected to be an expert in the areas of drinking water treatment and distribution.

Section 19 allows for a person to rely in good faith on a report of an engineer, lawyer, accountant or other person whose professional qualifications lend credibility to the report.

Enforcing the Statutory Standard of Care

As a municipal councillor, you need to be aware that not meeting your statutory standard of care responsibilities comes with serious consequences. Section 19 provides the province with an enforcement option when needed.

☑ Actions You Can Take – to be better informed about your drinking water oversight responsibilities.

General

- Read *Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils*, which provides more details about your responsibilities as well as information about how Ontario's drinking water is protected and reference material on drinking water.
- Consider taking the Standard of Care training with the Walkerton Clean Water Centre. Get course details and session offerings at www.wcwc.ca or by phoning toll free 1-866-515-0550.
- Learn about drinking water safety and its link to public health. Speak to water system and public health staff to learn more.
- Become familiar with your municipal drinking water system. Ask your water manager to give a presentation to council and/or arrange a tour of your drinking water facilities.

A provincial officer has the authority to lay a provincial offence charge against a person to whom the standard applies. The range of penalties includes maximum fines of up to \$4 million for a first offence and provision for imprisonment for up to five years. No minimum penalties are established. Actual penalties would be decided by the courts depending on the severity and consequences of the offence.

It is important to note the difference between the provision of the Municipal Act, 2001, that limits the personal liability of members of municipal councils and officials, and the standard of care imposed under the SDWA. Under sections 448-450 of the Municipal Act, 2001, municipal council members and officials have relief from personal civil liability when they have acted in good faith. However, despite that protection, municipal councillors and officials that are subject to the duty imposed by Section 19 of the SDWA could be penalized if a prosecution is commenced and a court determines they have failed to carry out the duty imposed under that section.

- Review the reports of the Walkerton Inquiry, specifically sections related to municipal government (Chapter 7 in Report I, Chapters 10 and 11 in Report II). The reports are available online at www.attorneygeneral.jus.gov.on.ca/english/about/pubs/walkerton.
- Become further acquainted with drinking water legislation and regulations, available on the Ontario Government e-Laws website at www.e-laws.gov.on.ca.

Drinking Water Operational Plan

- Ask your operating authority to speak to your municipal council about your operational plan.
- Consider and act on any advice (including identified deficiencies and action items) identified during the annual management review process.
- Review the Quality Management System policy in your operational plan and its commitments.
- Ask your operating authority to show how it is meeting these commitments.

Drinking Water Reports and Inspections

- Obtain and thoroughly review copies of the most recent annual and summary reports.
- Ask for explanations of any information you don't understand.
- Consider, act on and correct any deficiencies noted in the reports.
- Review your annual inspection results and ask questions if there is any indication of declining quality.
- Clarify any technical terms.
- Ask how deficiencies are being addressed.
- Review your system's standing in the ratings reported in the Chief Drinking Water Inspector's Annual Report. If your rating is less than 100 per cent, ask why.
- Consider, act on and correct any deficiencies highlighted in the inspection.

Infrastructure Planning

- Find out what maintenance, rehabilitation and renewal plans are in place for your drinking water system.
- Ask your operating authority to present the findings of its annual infrastructure review.

Communicating with Your Operating Authority

- Determine when and how your operating authority will communicate to you as an owner.
- Find out what information is made available to the public and how.

Emergency Planning for Drinking Water

- Ask your operating authority to review the drinking water emergency plan with council and to explain what responsibilities have been assigned to the owner.
- Know who will be the spokesperson during a drinking water emergency.
- Ensure critical staff have taken necessary training on emergency procedures and have participated in testing.

Drinking Water System Operators

- Ensure there are sufficient resources for appropriate levels of training for municipal staff involved in operating a drinking water system.
- Confirm that an overall responsible operator (ORO) has been designated and that procedures are in place to ensure all required staff and contractors are certified.
- Check to see if drinking water operator succession planning is being done and that measures are taken to address any current or anticipated challenges to recruiting skilled employees.
- Ensure your municipality or operating authority has contingency plans in place for situations where your certified operators may not be available (e.g. labour disputes, illnesses, vacancies, etc.) and, if activated, confirm that these contingency plans have been, where required, approved by the Ministry of the Environment and Climate Change and are working.

Source Protection Planning

- Review the source protection plan for your area and find out what actions are being taken to protect vulnerable areas around your drinking water sources.
- Find out if your municipality has appointed risk management officials and inspectors to support source protection planning and whether you are sharing these duties with other municipalities or delegating to a local source protection authority.

For more information, call the Ministry of the Environment and Climate Change at **1-800-565-4923**
Email: **drinking.water@ontario.ca**

PIBS 9810e

Schedule E

Quality Management System Management Review Meeting Minutes

Meeting Minutes

Meeting Details

Date
2025-02-21
Start Time
8:00:00 AM
End Time
11:00:00 AM
Type
Management Review

Attendance

Attendee Role	Initials	Name
Facilitator	SB	Bradt, Sarah
Recorder	GG	Gilbank, Gwen
Attendee	DM	Moreau, Diane
Attendee	MV	Vandergeest, Mark
Attendee	JG	Giffen, Jason
Attendee	LH	Hywarren, Lenita
Attendee	JV	Van Leusen, Jeremy
Attendee	KAC	Cornwall, Kari-Anne
Attendee	BAF	Astop-Ford, Brittany
Attendee	JD	Dumais, Jeanette
Attendee	DS	Smith, Diana
Regrets	SS	Steele, Shane
Attendee	BM	Miller, Brenden
Attendee	MF	Foster, Mike

Meeting Minutes

Agenda Item	Action Item No	Description
01) Review Q3 Management Review Meeting Minutes		The Q3 Management Review meeting minutes were previously reviewed and accepted.
02) Management Review Action Item Follow Up	720	<p>Update a Computerized Maintenance Management System (CMMS) Lead Hand and Operator Manuals to include how to update the work order category and include the category definitions (Preventative, Corrective, Emergency and Urgent) in the manuals.</p> <p>The only section left to complete is Water Customer Services (WCS).</p> <p>- The QMS Action Log was revised to reflect the following:</p> <p style="text-align: right;">Lead: DS Support:</p> <p style="text-align: right;">Due Date: 2025-05-01 Completion Date:</p>
	903	<p>In response to the custom fields applied to water quality service requests, and no system flushing being conducted in Zone 2N in 2024 - measure the number of complaints received from Zone 2N compared to previous years where flushing was conducted annually.</p> <p>In querying the data, JD found that "Zone" is not in the asset detail. To do this query right now would be a manual effort, so the Operations Program Administrators (OPAs) have reached out to the GIS group for a solution. Esri will be contacted if necessary. JD to report back on the data either way (manually or with zone detail attached) in Q1 2025 Management Review Meeting.</p> <p>- The QMS Action Log was revised to reflect the following:</p> <p style="text-align: right;">Lead: JD Support: BM</p> <p style="text-align: right;">Due Date: 2025-05-01 Completion Date:</p>
	927	<p>WOB Branch Management Team (BMT) to clarify and work through how to address WOB infrastructure and associated maintenance in unassumed areas.</p> <p>BMT has met a couple times to discuss; DM is working on summarizing this.</p> <p>- The QMS Action Log was revised to reflect the following:</p> <p style="text-align: right;">Lead: DM Support: SB</p> <p style="text-align: right;">Due Date: 2025-05-01 Completion Date:</p>
	932	<p>Develop the appropriate on the job forms for WCS and WDS to document the competencies and hourly requirements to become an Operator in Charge (OIC).</p> <p>This is part of the OTJ matrix DS is working on.</p> <p>- The QMS Action Log was revised to reflect the following:</p> <p style="text-align: right;">Lead: DS Support:</p> <p style="text-align: right;">Due Date: 2025-11-01 Completion Date:</p>

1004	<p>BM to investigate if an autoflusher is feasible at H733. The autoflusher is expected to be delivered next week. - The QMS Action Log was revised to reflect the following:</p>	<p>Lead: BM Support: SB</p>	<p>Due Date: 2025-05-01 Completion Date:</p>
1095	<p>Would like to keep better track of which memos have been approved. Consider including a Status column moving forward on the Results of Infrastructure slide. Include project number to follow these memos. This action item is complete. - The QMS Action Log was revised to reflect the following:</p>	<p>Lead: GG Support:</p>	<p>Due Date: 2025-01-01 Completion Date: 2025-02-21</p>
1096	<p>WCS cATP sampling: In 2024, sample from all zones for the year to establish a baseline, and then in 2025, conduct cATP field testing while flushing and compare results with the 2024 baseline results. Group WCS cATP sample locations by zone to see if there are any patterns. Investigate cATP field testing equipment to see cost and feasibility of equipment (e.g., how quick do we get a result when testing in field?) All 2024 results have been collected and compiled for 2024. The baseline will be used in 2025 during flushing. - The QMS Action Log was revised to reflect the following:</p>	<p>Lead: GG Support:</p>	<p>Due Date: 2025-05-01 Completion Date:</p>
1146	<p>Split the GWS Microbiological Distribution Sampling into three areas: North, Central, and South. Currently, having the sampling split into two sections (North and South) is proving to be difficult for Operators to collect all required samples and bring them back in time for the Laboratory pickup. This action item is in progress. Three new sampling locations have been selected to add to the weekly sampling schedule. GG will now proceed with splitting the Chain of Custody forms into North, Central, and South. - The QMS Action Log was revised to reflect the following:</p>	<p>Lead: GG Support: MV</p>	<p>Due Date: 2025-05-01 Completion Date:</p>
03) Incidents of Adverse Drinking Water Tests	<p>There were zero AWQIs in Q4 2024. In total for the year 2024, there were 2 AWQIs reported for the City. There were also 8 rescinded AWQIs for an event that was a result of external laboratory equipment contamination.</p>		
04) Deviations from Critical Control Point Limits and Response Actions - SWS	<p>The Critical Control Point (CCP) Deviation Label was not used in the SW eLogbook in Q4 2024.</p>		
05) Deviations from Critical Control Point Limits and Response Actions - GWS	<p>The Critical Control Point (CCP) Deviation Label was not used in the GW eLogbook in Q4 2024.</p>		
06) Deviations from Critical Control Point Limits and Response Actions - WCS/WDS	<p>The Critical Control Point (CCP) Deviation Label was not used in the WD eLogbook in Q4 2024.</p>		
07) Flushing Summary - 2024 Q4 Flushing Activities (>100m3)	<p>103 out of 275 Work Orders (37.5%) were recorded with deviations.</p>		
08) Flushing Summary - 2024 Q4 Flushing Activities (>3NTU Turbidity at start up)	<p>46 out of 275 Work Orders (16.7%) were recorded with deviations.</p>		
09) Flushing Summary - 2024 Q4 Flushing Activities (<0.2 Cl (F) at start up)	<p>1 out of 275 Work Orders (0.4%) were recorded with deviations.</p>		

10) Flushing Summary - 2024 Flushing Activities (>100m3)	In 2024, 898 out of 2255 Work Orders (39.8%) were recorded with deviations.
11) Flushing Summary - 2024 Flushing Activities (>3NTU Turbidity at start up)	In 2024, 277 out of 2255 Work Orders (12.3%) were recorded with deviations.
12) Flushing Summary - 2024 Flushing Activities (<0.2 Cl (F) at start up)	<p>In 2024, 8 out of 2255 Work Orders (0.4%) were recorded with deviations.</p> <p>The Following new Action Item was created:</p>
1193	<p>From slide 23 in the Q4 Management Review presentation, forward list of 8 hydrants with low chlorine to Brenden Miller.</p> <p>- The QMS Action Log was revised to reflect the following: Lead: SB Due Date: 2025-05-01</p> <p>Support: Completion Date:</p>
13) Flushing Activity Summary by Zone	<p>Zone 2S had the highest volume of water flushed in 2024.</p> <p>Zone 1: 65% of flushing activities were without deviations.</p> <p>Zone 2N: The zone experienced zero chlorine deviations.</p> <p>Zone 3N: A large volume of water was used during these flushing activities (44% experienced volume greater than 100m3). There is a new autoflusher going into this zone.</p> <p>Zone 2S: 2024 was the only year we had data for this zone. There was also a high volume of water used in this zone (47% of activities with volume greater than 100m3).</p> <p>Zone 3S: 89% of flushing activities were without deviations.</p> <p>Cyclical Flushing Activity Summary: Discussion about why WOB is using 100m3 as the metric and whether this number should be increased.</p> <p>The following new Action Items were created:</p>
1194	<p>Use historical data to compare volumes flushed for 2NTU vs 3NTU to see what the difference in volume is.</p> <p>- The QMS Action Log was revised to reflect the following: Lead: SB Due Date: 2025-05-01</p> <p>Support: Completion Date:</p>
1195	<p>Investigate which staff are completing each work order to try to determine if there is a correlation to the high volume of water used during flushing.</p> <p>- The QMS Action Log was revised to reflect the following: Lead: SB Due Date: 2025-05-01</p> <p>Support: Completion Date:</p>
14) Preventative vs. Corrective Flushing Work Orders	In 2024, there were a total of 2276 flushing work orders completed. Of this, 8.4% were Corrective, while 91.6% were Preventative work orders.
15) Operational Performance - System-wide Production	For every month in 2024, the monthly water production (ML) was consistently higher than the 5-year average. Temperature and precipitation data appears to have no relationship with water production other than in the summer when temperatures are higher, water usage increases. However, other factors may be contributing to the increase.
16) Operational Performance - SWS vs GWS Production	In 2024, GWS consistently produced more water than SWS each month. Usage in the north remains high even when flushing takes place in the south.

17) Operational Performance - Closed Pressure Zones in Q4	Pressure Zone 3N became a Closed Pressure Zone on July 30, 2024 as Ferndale Tower was taken offline for exterior painting to be completed. The tower returned to normal operations on October 21, 2024.												
18) Operational Performance - Average Monthly Efficiency of the SWTP	In Q4 2024, the Surface Water Treatment Plant was operating at an efficiency rating of 96.86%. In November 2024, there was a decrease due to the controls upgrade. For the year 2024, the rated efficiency was 97.07%. WOB anticipates the efficiency to increase towards end of March 2025.												
19) Sectional Work Order Summary	<p>Groundwater: There was one outstanding sampling Work Order which has been sent for cancellation.</p> <p>Surface Water: There were 0 outstanding sampling work orders.</p> <p>Water Distribution: There were 0 outstanding sampling work orders. All outstanding work orders sent for cancellation.</p> <p>Water Customer Service: There were 0 outstanding sampling work orders.</p> <p>Discussion about removing Work Orders connected to a project as this can skew the results. Going forward anything tied to certain staff will be assumed to be tied to a project and should be excluded.</p> <p>Created vs. Completed: Discussion to add health and safety work orders to this graph.</p> <p>The following new Action Items were created:</p> <table border="0" data-bbox="699 977 2533 1411"> <tr> <td data-bbox="699 977 823 1108">1196</td> <td data-bbox="823 977 1693 1108">On slide 44 on the Q4 Management Review presentation, add health and safety work orders to this graph for created vs. completed. - The QMS Action Log was revised to reflect the following:</td> <td data-bbox="1693 977 2253 1108">Lead: SB Support:</td> <td data-bbox="2253 977 2533 1108">Due Date: 2025-05-01 Completion Date:</td> </tr> <tr> <td data-bbox="699 1108 823 1239">1197</td> <td data-bbox="823 1108 1693 1239">Update slide for WDS to make the "Created" sampling and "Completed" sampling both 28 and 28, since the 16 are being cancelled in the "created" column. - The QMS Action Log was revised to reflect the following:</td> <td data-bbox="1693 1108 2253 1239">Lead: SB Support:</td> <td data-bbox="2253 1108 2533 1239">Due Date: 2025-05-01 Completion Date:</td> </tr> <tr> <td data-bbox="699 1239 823 1411">1198</td> <td data-bbox="823 1239 1693 1411">It is suspected that some project work orders are being created in advance and are ending up in the "Pending" abyss. Consider how to resolve this issue because Work Orders are being created and forgotten about. Review how project work orders are being created and determine if some improvement can be made to this process. - The QMS Action Log was revised to reflect the following:</td> <td data-bbox="1693 1239 2253 1411">Lead: JG Support: SB</td> <td data-bbox="2253 1239 2533 1411">Due Date: 2025-05-01 Completion Date:</td> </tr> </table>	1196	On slide 44 on the Q4 Management Review presentation, add health and safety work orders to this graph for created vs. completed. - The QMS Action Log was revised to reflect the following:	Lead: SB Support:	Due Date: 2025-05-01 Completion Date:	1197	Update slide for WDS to make the "Created" sampling and "Completed" sampling both 28 and 28, since the 16 are being cancelled in the "created" column. - The QMS Action Log was revised to reflect the following:	Lead: SB Support:	Due Date: 2025-05-01 Completion Date:	1198	It is suspected that some project work orders are being created in advance and are ending up in the "Pending" abyss. Consider how to resolve this issue because Work Orders are being created and forgotten about. Review how project work orders are being created and determine if some improvement can be made to this process. - The QMS Action Log was revised to reflect the following:	Lead: JG Support: SB	Due Date: 2025-05-01 Completion Date:
1196	On slide 44 on the Q4 Management Review presentation, add health and safety work orders to this graph for created vs. completed. - The QMS Action Log was revised to reflect the following:	Lead: SB Support:	Due Date: 2025-05-01 Completion Date:										
1197	Update slide for WDS to make the "Created" sampling and "Completed" sampling both 28 and 28, since the 16 are being cancelled in the "created" column. - The QMS Action Log was revised to reflect the following:	Lead: SB Support:	Due Date: 2025-05-01 Completion Date:										
1198	It is suspected that some project work orders are being created in advance and are ending up in the "Pending" abyss. Consider how to resolve this issue because Work Orders are being created and forgotten about. Review how project work orders are being created and determine if some improvement can be made to this process. - The QMS Action Log was revised to reflect the following:	Lead: JG Support: SB	Due Date: 2025-05-01 Completion Date:										
20) Operational Performance - Locates	In Q4 2024, there was one month (October) where the number of locates performed was above the 5-year average. However, in November and December the number of locates performed was below the 5-year average. Overall, in 2024, there were 8922 locates performed.												
21) Operational Performance - Watermain Breaks	<p>In 2024, there were a total of 22 watermain breaks. This is the least amount of watermain breaks WOB has experienced since at least 2015.</p> <p>Discussion to add a slide for service breaks vs main breaks and include ICI service breaks.</p> <p>The following new Action Item was created:</p> <table border="0" data-bbox="699 1703 2533 1844"> <tr> <td data-bbox="699 1703 823 1844">1199</td> <td data-bbox="823 1703 1693 1844">Create a slide for Management Review (or add to the existing watermain break slide) that displays service breaks vs. main breaks and include ICI service breaks. - The QMS Action Log was revised to reflect the following:</td> <td data-bbox="1693 1703 2253 1844">Lead: SB Support:</td> <td data-bbox="2253 1703 2533 1844">Due Date: 2025-05-01 Completion Date:</td> </tr> </table>	1199	Create a slide for Management Review (or add to the existing watermain break slide) that displays service breaks vs. main breaks and include ICI service breaks. - The QMS Action Log was revised to reflect the following:	Lead: SB Support:	Due Date: 2025-05-01 Completion Date:								
1199	Create a slide for Management Review (or add to the existing watermain break slide) that displays service breaks vs. main breaks and include ICI service breaks. - The QMS Action Log was revised to reflect the following:	Lead: SB Support:	Due Date: 2025-05-01 Completion Date:										

22) Operational Performance - Water Loss	The 2024 total water loss is 2.56%. Improvements to how this information was collected were made throughout the year. A breakdown of water loss was presented.				
23) Operational Performance - CTS Action Item Summary	In 2024, 66% of action items were completed within 5 months, and 7.4% of action items are taking longer than 16+ months to complete. A review of action items older than 2 years was discussed. There were 5 in total.				
24) Raw Water Supply and Drinking Water Quality Trends - Sodium	A review of historical sodium trend data was conducted from 2012 to 2024. Wells 3A and 14 results appear to be relatively stable over the years, with only a slight increase overall. Wells 9, 13, 11, and 12 demonstrate a more dramatic increasing trend. In 2024, Well 13 in particular has experienced an increase in sodium. The 2024 results have been forwarded to the Waste Management & Environmental Sustainability department.				
25) Raw Water Supply and Drinking Water Quality Trends - THMs	In Q4 2024, the Running Annual Average (RAA) saw a slight decrease from 36.95 ug/L in Q3, to 33.63 ug/L. In 2024, the RAA results for Trihalomethanes (THMs) remained below the projected trendline. However, the trendline still shows a slight increase based on results from 2015 - present. All results remain well below the regulated limit.				
26) Raw Water Supply and Drinking Water Quality Trends - HAAs	In Q4 2024, the Running Annual Average (RAA) saw a slight increase from 23.75 ug/L in Q3, to 26.38 ug/L. In 2024, the Running Annual Average results for Haloacetic Acids (HAAs) fluctuated above and below the projected trendline. The trendline displays a slight increase based on results from 2017 - present. All results remain well below the regulated limit.				
27) Raw Water Supply and Drinking Water Quality Trends - Lead	As of the latest MDWL issuance (September 18, 2024), lead sampling at 5 ICI locations is no longer required, only the 10 hydrant locations. Hydrant lead sampling was conducted in Q1 2025, resulting in zero exceedances. No samples exceeded ½ MAC.				
28) Raw Water Supply and Drinking Water Quality Trends - VOCs	There were 0 exceedances above the established internal VOC limits in Q4.				
29) Q4 Sampling Review	During the Q4 Sampling Review, there were 0 non-compliances identified.				
30) Raw Water Supply and Drinking Water Quality Trends - In-house WCS cATP	The 2024 WCS cATP results were presented. The recommended limit for potable water systems is 10 pg/mL. All results were below 0.9 pg/mL, well below the recommended limit.				
31) Raw Water Supply and Drinking Water Quality Trends - In-house GWS cATP	The 2024 GWS cATP results were presented. The recommended limit for potable water systems is 10 pg/mL. All results were below 1 pg/mL, well below the recommended limit.				
32) Raw Water Supply and Drinking Water Quality Trends - In-house SWS cATP	<p>The 2024 SWS cATP results were presented. The recommended limit for potable water systems is 10 pg/mL. The highest result in 2024 was 2.1 pg/mL in November.</p> <p>The following new Action Item was created:</p>				
1200	<p>Going forward when presenting cATP results, include the LLPS ATP results in addition to the HLPS.</p> <p>- The QMS Action Log was revised to reflect the following:</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Lead: GG</td> <td style="width: 50%;">Due Date: 2025-05-01</td> </tr> <tr> <td>Support:</td> <td>Completion Date:</td> </tr> </table>	Lead: GG	Due Date: 2025-05-01	Support:	Completion Date:
Lead: GG	Due Date: 2025-05-01				
Support:	Completion Date:				
33) Health Canada Guideline Technical Document Review	<p>Consultation for Canadian drinking water quality – Trihalomethanes (THMs) opened on January 10, 2025 (will close April 4, 2025). This document proposes to retain a MAC of 0.1 mg/L (100 µg/L) for total THMs in drinking water.</p> <p>Objective for Canadian drinking water quality – Iron, was published on December 27, 2024. The established aesthetic objective (AO) for Iron decreased from ≤ 0.3 mg/L for total iron in</p>				

	drinking water to ≤ 0.1 mg/L.
34) Drinking Water Quality Trends - In-house General Chemistry	<p>The GWS in-house general chemistry results were presented, including alkalinity, hardness, and colour from 2020-2024.</p> <p>The 2024 colour results appear to have decreased in general since 2020 for all locations, with the most dramatic decrease seen at Well 3A.</p> <p>The SWS in-house general chemistry results were presented, including temperature, nitrogen, and pH. These parameters displayed the most anomalies.</p> <p>SWS Raw Water Temperature vs. UVA vs. Colour was also presented for 2024. There is a correlated displayed between colour and UVA, however it doesn't appear to be related to temperature. Similar results were displayed for the treated water samples.</p>
35) Summary of Consumer Feedback - Consumer Response Efficiency	In 2024, there were a total of 423 calls received. Of this, 82.74% were able to be resolved over the phone.
36) Summary of Consumer Feedback - After-hours Water Quality Complaints	In Q4 2024, 100% of after-hours water quality complaints received were registered in CMMS (34 complaints in total). There is an increasing trend seen over the year in the number of water quality complaints.
37) Review of Asset Maintenance, Verification & Calibration	The results of the Q4 chlorine analyzer, flow meter, and turbidity analyzer calibration review were presented. There were 3 instances where GWS calibrations (chlorine analyzers only) were completed <20 or >40 days between calibrations (all in October 2024). However, a CIP meeting for this issue took place in January 2025 and should be resolved moving forward.
38) Water Operations KPIs	<p>Water Distribution Services:</p> <ol style="list-style-type: none"> Percent of valves turned in the southwest quadrant: The valve turning app is experiencing technical difficulties. Percentage of system swabbing complete: 17.874 km of swabbing was completed, with a goal of 20 km. <p>Groundwater Supply:</p> <ol style="list-style-type: none"> Reducing the number of callouts annually to less than 300: In Q4, there were 76 callouts. Total number of callouts for 2024 is 297. Reduce the percentage of well downtime annually: <p>Well 5 – No Downtime Well 7 – No Downtime Well 9 – Down for 92 of 365 days = 25.2% Well 11 – Down for 92 out of 365 days = 25.2% Well 12 – Down for 294 out of 365 days = 97.8% Well 13 – No Downtime Well 14 – No Downtime Well 15 – No Downtime Well 16 – No Downtime Well 17 – Down for 90 out of 365 days = 24.6% Well 18 – No Downtime (Total = 365 days in Q1 – Q4)</p> <p>Surface Water Supply:</p> <ol style="list-style-type: none"> Achieve average monthly Surface Water Treatment Plant efficiency of 98% or greater: In 2024, the average efficiency was 97.07%. <p>Water Customer Services:</p> <ol style="list-style-type: none"> Achieve 1,400 meter replacements annually: Total progress for the year 2024 is 3,453 meter replacements. To be updated to 4000 in 2025.

	<p>2. Volume of water produced vs. accounted for with a target of 90%: Achieved 97% in 2024.</p> <p>Compliance and Technical Support:</p> <ol style="list-style-type: none"> 1. Decrease time to gather renewal application information: All renewals in Q4 were sent within the 6 weeks lead time. 2. Increase QMS engagement: In the last 90 days, there have been 8,671 page views. 				
39) Operational Plan, Currency and Updates	All Elements were reviewed in 2024 and are due for review for 2025.				
40) SOP Review	WCS section has reviewed 100% of their assigned SOPs. All other sections still have a few SOPs to review by the end of 2025.				
41) Work Order Instruction Review	Progress has been made towards the work order instruction review. Several instructions are still required to be reviewed before the end of 2025, particularly for the GWS and SWS sections.				
42) CIP Summary 2024	<p>There are currently 5 Continual Improvement Plans (CIPs) that remain open, however only 1 is greater than 1 year old.</p> <p>There were 12 CIPs opened in 2024, and 32 closed in 2024.</p> <p>The following 5 CIPs are open:</p> <p>CIP 144 - The last action item for this CIP was recently closed.</p> <p>CIP 188 - There are currently 3 action items that remain open for this CIP.</p> <p>CIP 189 - There is currently 1 action item that remains open for this CIP.</p> <p>CIP 191 - There is currently 1 action item that remains open for this CIP.</p> <p>CIP 194 - There is currently 1 action item that remains open for this CIP.</p>				
43) Results of Internal Audit	A summary of internal audits performed in 2024 resulted in 1 Non-Conformance Action and 2 OFI Actions accepted by Management to be addressed.				
44) Results of External Audit	An External Audit was completed December 2 & 3, 2024. No QMS non-conformances or Opportunities for Improvement (OFIs) were identified by our external auditor.				
45) Results of Infrastructure Review	<p>The table of current WOB infrastructure projects was presented. There were two projects completed in 2024.</p> <p>MV to provide additional projects that were created before the spreadsheet was created.</p> <p>Adam Kiley would perhaps be able to pull the pricing information for Water projects.</p>				
46) Summary of Staff Suggestions	<p>Several staff suggestions were reviewed such as:</p> <ul style="list-style-type: none"> - Moving the search bar on the QMS Access Page to make it easier for staff to find: This item is complete - Allowing staff to complete Bridge courses on a mobile device: This item is complete - Updating SOP titles to be more reflective of what is contained in them: CC's will update as necessary during review - It was suggested by GWS that the micro sampling be split into North, Central and South as it can be difficult to complete all the sampling on time: This item is in progress - Consider completing Lead sampling in March instead of January: Look into historical data to see if temperature makes any difference in results. Keeping current locations for 2025, but consider new locations for 2026. <p>The following new Action Item was created:</p>				
	<table border="0"> <tr> <td style="vertical-align: top;">1201</td> <td> <p>Consider completing Lead sampling in March instead of January. Look into historical data to see if temperature makes any difference in results. Keeping current locations for 2025, but consider new locations for 2026.</p> <ul style="list-style-type: none"> - The QMS Action Log was revised to reflect the following: </td> <td style="vertical-align: top;"> <p>Lead: GG</p> <p>Support:</p> </td> <td style="vertical-align: top;"> <p>Due Date: 2025-05-01</p> <p>Completion Date:</p> </td> </tr> </table>	1201	<p>Consider completing Lead sampling in March instead of January. Look into historical data to see if temperature makes any difference in results. Keeping current locations for 2025, but consider new locations for 2026.</p> <ul style="list-style-type: none"> - The QMS Action Log was revised to reflect the following: 	<p>Lead: GG</p> <p>Support:</p>	<p>Due Date: 2025-05-01</p> <p>Completion Date:</p>
1201	<p>Consider completing Lead sampling in March instead of January. Look into historical data to see if temperature makes any difference in results. Keeping current locations for 2025, but consider new locations for 2026.</p> <ul style="list-style-type: none"> - The QMS Action Log was revised to reflect the following: 	<p>Lead: GG</p> <p>Support:</p>	<p>Due Date: 2025-05-01</p> <p>Completion Date:</p>		
47) Changes Affecting QMS 2024	<p>Canada Post Strike – Renewal/Upgrade Certificates not being mailed out by OWWCO. Has since been resolved. OWWCO continues to send renewal letters by email and certificates by mail.</p> <p>Re-accreditation audit occurred December 2 and 3.</p> <p>Updated MDWL has resulted in several action items that will get our QMS/DWS to align with new requirements.</p>				

	Full compliment of Compliance Coordinators (CCs) in permanent position.
	Staffing Changes: - Ops2 and Water Meter Installer changes coming January 1, 2025 - Senior Utilities Technician position was created
48) Review List of OROs (T11-02)	The T11-02 was reviewed. No changes required.
49) New Business	No new business to discuss.

Note:
These meeting minutes have been reviewed and approved by the meeting attendees noted at the top of the document.

	<p>This action item is currently in progress.</p> <p>- The QMS Action Log was revised to reflect the following:</p>	<p>Lead: GG</p> <p>Support:</p>	<p>Due Date: 2025-08-01</p> <p>Completion Date:</p>
1146	<p>Split the GWS Microbiological Distribution Sampling into three areas: North, Central, and South. Currently, having the sampling split into two sections (North and South) is proving to be difficult for Operators to collect all required samples and bring them back in time for the Laboratory pickup.</p> <p>GG reports that the new sampling locations have been selected. GWS is reviewing the proposed division of the North/Central/South sampling locations.</p> <p>Send updated map to DM.</p> <p>- The QMS Action Log was revised to reflect the following:</p>	<p>Lead: GG</p> <p>Support: MV</p>	<p>Due Date: 2025-08-01</p> <p>Completion Date:</p>
1193	<p>From slide 23 in the Q4 Management Review presentation, forward list of 8 hydrants with low chlorine to Brenden Miller.</p> <p>This action item is complete and the list was forwarded to Brenden Miller.</p> <p>- The QMS Action Log was revised to reflect the following:</p>	<p>Lead: SB</p> <p>Support:</p>	<p>Due Date: 2025-05-01</p> <p>Completion Date: 2025-05-16</p>
1194	<p>Use historical data to compare volumes flushed for 2NTU vs 3NTU to see what the difference in volume is.</p> <p>This action item is complete and the data was forwarded to Brenden Miller.</p> <p>- The QMS Action Log was revised to reflect the following:</p>	<p>Lead: SB</p> <p>Support:</p>	<p>Due Date: 2025-05-01</p> <p>Completion Date: 2025-05-16</p>
1195	<p>Investigate which staff are completing each work order to try to determine if there is a correlation to the high volume of water used during flushing.</p> <p>A report has been created by the Operations Program Administrators (OPAs), and they are waiting on Annie Zhang to add it to CityWorks.</p> <p>- The QMS Action Log was revised to reflect the following:</p>	<p>Lead: SB</p> <p>Support:</p>	<p>Due Date: 2025-08-01</p> <p>Completion Date:</p>
1196	<p>On slide 44 on the Q4 Management Review presentation, add health and safety work orders to this graph for created vs. completed.</p> <p>This action item is complete. Health and Safety Work Orders have been added to the template for 2025.</p> <p>- The QMS Action Log was revised to reflect the following:</p>	<p>Lead: SB</p> <p>Support:</p>	<p>Due Date: 2025-05-01</p> <p>Completion Date: 2025-05-16</p>
1197	<p>Update slide for WDS to make the "Created" sampling and "Completed" sampling both 28 and 28, since the 16 are being cancelled in the "created" column.</p> <p>This action item is complete. The 16 work orders that are cancelled are noted as such; labelling them as completed would be inaccurate.</p> <p>- The QMS Action Log was revised to reflect the following:</p>	<p>Lead: SB</p> <p>Support:</p>	<p>Due Date: 2025-05-01</p> <p>Completion Date: 2025-05-16</p>
1198	<p>It is suspected that some project work orders are being created in advance and are ending up in the "Pending" abyss. Consider how to resolve this issue because Work Orders are being created and forgotten about. Review how project work orders are being created and determine if some improvement can be made to this process.</p> <p>This action item is complete. There has been a change to the process whereby Project Operators will not be creating Work Orders ahead of time.</p> <p>- The QMS Action Log was revised to reflect the following:</p>	<p>Lead: JG</p> <p>Support: SB</p>	<p>Due Date: 2025-05-01</p> <p>Completion Date: 2025-05-16</p>
1199	<p>Create a slide for Management Review (or add to the existing watermain break slide) that displays service breaks vs. main breaks and include ICI service breaks.</p> <p>A new slide has been created for Management Review. The Operations Program Administrators (OPAs) are working on a new report.</p> <p>- The QMS Action Log was revised to reflect the following:</p>	<p>Lead: SB</p> <p>Support:</p>	<p>Due Date: 2025-05-01</p> <p>Completion Date: 2025-05-16</p>
1200	<p>Going forward when presenting cATP results, include the LLPS ATP results in addition to the HLPS.</p> <p>This action item is complete and will be presented later in this Management Review meeting.</p>		

	- The QMS Action Log was revised to reflect the following:	Lead: GG Support:	Due Date: 2025-05-01 Completion Date: 2025-05-16
1201	Consider completing Lead sampling in March instead of January. Look into historical data to see if temperature makes any difference in results. Keeping current locations for 2025, but consider new locations for 2026. A review of historical results was completed and provided to Brenden Miller. The review concluded that temperature does impact results.		
	- The QMS Action Log was revised to reflect the following:	Lead: GG Support:	Due Date: 2025-05-01 Completion Date: 2025-05-16
03) Incidents of Adverse Drinking Water Tests	There was one Adverse Water Quality Incident (AWQI) in Q1 2025. Low chlorine was detected at Well 16. Appropriate corrective actions were taken.		
04) Deviations from Critical Control Point Limits and Response Actions - SWS	The "CCP Deviation" Label was not used in the Surface Water Logbook between January 1, 2025, and March 31, 2025.		
05) Deviations from Critical Control Point Limits and Response Actions - GWS	There was one deviation of a Primary Disinfection Critical Control Point related to the low chlorine AWQI at Well 16 previously mentioned.		
06) Deviations from Critical Control Point Limits and Response Actions - WCS/WDS	There were two deviations from Critical Control Limits in the Distribution system in Q1 2025. One incident occurred on March 12th, 2025, and the second on March 17, 2025, both related to chlorine residual at two different hydrants.		
07) Flushing Summary - 2025 Q1 Flushing Activities (>100m3)	69 out of 309 Work Orders (22.3%) were recorded with deviations.		
08) Flushing Summary - 2025 Q1 Flushing Activities (>3NTU Turbidity at start up)	46 out of 309 Work Orders (14.8%) were recorded with deviations.		
09) Flushing Summary - 2025 Q1 Flushing Activities (<0.2 Cl (F) at start up)	2 out of 309 Work Orders (0.65%) were recorded with deviations.		
10) Operational Performance - System-wide Production	In Q1 2025, the monthly water production (ML) for each month was above the 5-year average.		
11) Operational Performance - SWS vs. GWS Production	In Q1 2025, GWS consistently produced more water than SWS each month.		
12) Operational Performance - Closed Pressure Zones in Q1	There were no closed pressure zones in Q1 2025.		
13) Operational Performance - Average Monthly Efficiency of the SWTP	In Q1 2025, the Surface Water Treatment Plant efficiency decreased in February because of the upgrades project and WOB also had to drain the reservoirs for the condition assessments that took place.		
14) Operational Performance - Locates	In Q1 2025, the total number of locates performed each month was below the 5-year average. It is believed this trend will continue this year below the 5-year average due to current market circumstances.		

15) Operational Performance - Watermain Breaks (Monthly)	In Q1 2025, there were a total of 12 watermain breaks. This is higher than the 5-year average of 10 breaks in Q1.
16) Operational Performance - Service Breaks (Monthly)	A new graph was presented for monthly service breaks. There were a total of 10 service breaks in Q1 2025; above the 5-year average of 5.6 breaks for the quarter.
17) Operational Performance - ICI Service Breaks (Monthly)	A new graph was presented for monthly ICI service breaks. There were a total of 3 ICI service breaks in Q1 2025; above the 5-year average of 1 break for the quarter.
18) Operational Performance - Valve Exercising	The valve turning app is still experiencing issues which GIS is working to resolve.
19) CIP Summary	<p>There are a total of 7 open Continual Improvement Plans (CIPs). Of these 7, there are 6 Preventative CIPs and 1 Corrective. A summary of each CIP where a root cause meeting has already taken place is provided:</p> <p>CIP 188: There are two remaining open action items CIP 189: There is one action item that remains open CIP 194: There is one action item that remains open CIP 195: There are four remaining open action items CIP 196: There are two remaining open action items</p>
20) Raw Water Supply and Drinking Water Quality Trends - Sodium	Historical sodium data (2020 to present) was reviewed. Sodium results in Q1 2025 are on par with the sodium trending, although Wells 11 and 13 displayed a slight reduction in sodium with the latest sample results.
21) Raw Water Supply and Drinking Water Quality Trends - THMs/HAAs	<p>In Q1 2025, the Running Annual Average for Trihalomethanes (THMs) saw a slight decrease from the previous quarter, moving from 33.63 ug/L to 32.88 ug/L.</p> <p>In Q1 2025, the Running Annual Average for Haloacetic Acids (HAAs) saw a slight increase from the previous quarter, moving from 26.38 ug/L to 29.63 ug/L.</p> <p>All results remain well below the regulated limit.</p>
22) Raw Water Supply and Drinking Water Quality Trends - Lead	As of the latest MDWL issuance (2024-09-18), lead sampling at 5 ICI locations is no longer required, only the 10 hydrant locations. Hydrant lead sampling was conducted in Q1 2025, resulting in zero exceedances. No samples exceeded ½ MAC.
23) Raw Water Supply and Drinking Water Quality Trends - VOCs	There were 0 exceedances above the established internal VOC limits in Q1 2025.
24) Q1 2025 Sampling Review	During the Q1 2025 Sampling Review, there were 0 non-compliances identified. All samples were taken as required.
25) Health Canada Guideline Technical Documents	<p>The Consultation for Canadian Drinking Water Quality – Arsenic, opened on March 7, 2025 and closed on May 6, 2025. This document proposes to decrease the MAC of 0.01 mg/L (10 µg/L) to a MAC of 0.005 mg/L (5 µg/L). GG completed a historical review of arsenic results available in eRIS (2015 – current). No results reached 0.005 mg/L. The highest result was 0.003 mg/L at Well 12 on 2024-09-18, and 0.003mg/L at Well 14 on 2024-04-15.</p> <p>The Consultation for Canadian Drinking Water Quality – Trihalomethanes (THMs), closed on April 4, 2025. This guideline was previously discussed in the Q4 2024 Management Review.</p>
26) VOC Plume Monitoring Report Summary	The third-party consultant recommendations for the VOC plume monitoring were reviewed. Among the recommendations was to proceed with the planned development and adoption of a

	trigger concentration plan. It was discussed that there is still considerable work ahead before the trigger plan is ready to be implemented.
27) In-house Lab Results - cATP	<p>The average GWS cATP results were presented (Q1 2024 - Q1 2025). The recommended limit for potable water systems is 10 pg/mL. All results were below 1 pg/mL, well below the recommended limit.</p> <p>The average WCS cATP results were presented (Q2 2024 - Q1 2025). The recommended limit for potable water systems is 10 pg/mL. All results were below 1 pg/mL, well below the recommended limit.</p> <p>The average SWS cATP results were presented (Q1 2024 - Q1 2025) for both the Low Lift Pumping Station and High Lift Pumping Station. The recommended limit for potable water systems is 10 pg/mL. All drinking water results were below 1 pg/mL, well below the recommended limit.</p>
28) Summary of Consumer Feedback - Customer Response Efficiency	In Q1 2025, there were a total of 85 calls received. Of this, 85% were able to be resolved over the phone.
29) Summary of Consumer Feedback - After-hours Water Quality Complaints	In Q1 2025, there were a total of 17 after-hours water quality complaints. All of these were registered in CMMS.
30) Review of Asset Maintenance, Verification, and Calibration	The results of the Q1 chlorine analyzer, flow meter, and turbidity analyzer calibration review were presented. There were 4 instances where SWS calibrations (chlorine analyzers only) were completed with <20 or >40 days between calibrations, and 1 instance in GWS.
31) Water Operations Branch KPIs	<p>Water Distribution Services:</p> <ol style="list-style-type: none"> Percentage of valves turned in the NE quadrant in 2025: 60% complete Percentage of system swabbing complete: Goal is 15km, which is to be completed in Q2 or Q3. <p>Groundwater Supply:</p> <ol style="list-style-type: none"> Reducing the number of callouts annually to less than 300: Q1 progress was 68 Reduce the percentage of well downtime annually: <ul style="list-style-type: none"> Well 5 – No Downtime = 0% Well 7 – No downtime = 0% Well 9 – No downtime = 0% Well 11 – Down for 91 out of 91 days =100% Well 12 – Down for 91 out of 91 days =100% Well 13 – Down for 31 out of 91 days =34.1% Well 14 – No Downtime = 0% Well 15 – No Downtime = 0% Well 16 – Down for 6 out of 91 days =6.5% Well 17 –Down for 62 out of 91 days =68.1% Well 18 –No Downtime = 0% (Total = 91days in Q1) <p>Surface Water Supply:</p> <ol style="list-style-type: none"> Achieve average monthly Surface Water Treatment Plant efficiency of 98% or greater: Q1 96.28% Reducing the number of callouts annually to less than 300: Progress in Q1 was 119 callouts <p>Water Customer Services:</p> <ol style="list-style-type: none"> Achieve 4,000 meter replacements annually: Q1 18% of goal reached Volume of water produced vs. accounted for with a target of 90%: This is to be reported in Q4

	<p>Compliance and Technical Support:</p> <ol style="list-style-type: none"> 1. Decrease time to gather renewal application information: In Q1, 7 out of 7 were completed within 6 week target 2. Increase QMS engagement: Within the last 90 days, the view count on QMS was 9,082. There was also the highest mobile device usage recorded (15% mobile, 85% desktop).
32) Operational Plan, Currency and Updates	There are several Elements that still need to be reviewed throughout the year.
33) SOP Review	WCS section has reviewed 100% of their assigned SOPs. All other sections still have a few SOPs to review by the end of 2025.
34) Work Order Instruction Review	The WDS section has successfully completed a review of 100% of the sections work order instructions. Progress has been made towards the work order instruction review in other sections. Several instructions are still required to be reviewed before the end of 2025, particularly for the GWS and SWS sections.
35) Results of Infrastructure Review	The table of current WOB infrastructure projects was presented. The project numbering system requires some refinement. There are a couple of distribution projects going out for tender shortly.
36) Summary of Staff Suggestions	<ol style="list-style-type: none"> 1. A staff member suggested that hyperlinks be added to the Document Change Report that is communicated to staff. Management decided to not move forward with this item at this time. 2. A staff member suggested that the AWQI page on the Home Page be updated to include links to the AWQI SOPs. They were able to find one of them but not the second. Management decided to proceed with this item. There is already an action item related to improving this section of the Homepage. 3. Request to add upcoming training to the WaterOps Home Page so staff can view information. Management decided to proceed with this item, and it has already been implemented.
37) Changes Affecting QMS (Q1 2025)	DWQMS 3.0 has been uploaded to the ERO for comment (Comment Period: April 22, 2025 - June 6, 2025).
38) Review List of OROs (T11-02)	The T11-02 was reviewed. There was 1 removal and 1 addition.
39) New Business	No new business to discuss.

Note:
 These meeting minutes have been reviewed and approved by the meeting attendees noted at the top of the document.

	- The QMS Action Log was revised to reflect the following:	Lead: SB Support:	Due Date: 2025-08-01 Completion Date: 2025-09-08
03) Incidents of Adverse Drinking Water Tests	There were 4 AWQIs in Q2 2025; three low chlorine events at Well 16, and one low chlorine event at Well 5.		
04) Deviations from Critical Control Point Limits and Response Actions - SWS	The "CCP Deviation" Label was not used in the SWS eLogbook between April 1, 2025, and June 30, 2025.		
05) Deviations from Critical Control Point Limits and Response Actions - GWS	There were four instances where the Critical Control Limit label was used in the GWS eLogbook.		
06) Deviations from Critical Control Point Limits and Response Actions - WCS/WDS	There were three instances where the Critical Control Limit label was used in the WD eLogbook.		
07) Flushing Summary - 2025 Q2 Flushing Activities (>100m3)	55 out of 199 Work Orders (27.6%) were recorded with deviations.		
08) Flushing Summary - 2025 Q2 Flushing Activities (>3NTU Turbidity at start up)	45 out of 199 Work Orders (22.6%) were recorded with deviations.		
09) Flushing Summary - 2025 Q2 Flushing Activities (<0.2 Cl (F) at start up)	3 out of 199 Work Orders (1.5%) were recorded with deviations.		
10) Operational Performance - System-wide Production	In Q2 2025, the monthly water production (ML) for each month was above the 5-year average.		
11) Operational Performance - SWS vs. GWS Production	In Q2 2025, GWS consistently produced more water than SWS each month.		
12) Operational Performance - Closed Pressure Zones in Q2	Mapleview Tower (Z3S) was a Closed Pressure Zone from May 5, 2025 to May 16, 2025 for maintenance work.		
13) Operational Performance - Average Monthly Efficiency of the SWTP	In Q2 2025, the Surface Water Treatment Plant efficiency was 96.65%		
14) Operational Performance - Locates	In Q2, the number of locates performed each month was above the 5-year average in April and June, and on par with the 5-year average for May.		
15) Operational Performance - Watermain Breaks (Monthly)	In Q2 2025, there were a total of 5 watermain breaks. This is slightly higher than the 5-year average of 4.4 breaks in Q2.		
16) Operational Performance - Service Breaks (Monthly)	This report is under maintenance.		

17) Operational Performance - ICI Service Breaks (Monthly)	This report is under maintenance.				
18) Operational Performance - Valve Exercising	<p>For 2025, there is a KPI to exercise 100% of non-critical valves in the north-east quadrant. Current progress in Q2 2025 is 87%.</p> <p>The following new Action Item was created:</p>				
1302	<p>Consider revising what WOB defines as a "critical valve". Currently, this is just based on size, and not necessarily criticality (e.g. hospital).</p> <p>- The QMS Action Log was revised to reflect the following:</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Lead: GG</td> <td style="width: 50%;">Due Date: 2026-01-01</td> </tr> <tr> <td>Support: JG</td> <td>Completion Date:</td> </tr> </table>	Lead: GG	Due Date: 2026-01-01	Support: JG	Completion Date:
Lead: GG	Due Date: 2026-01-01				
Support: JG	Completion Date:				
19) CIP Summary	<p>There are a total of 12 open Continual Improvement Plans (CIPs). A summary of each CIP where a root cause meeting has already taken place is provided:</p> <p>CIP 188: here is one remaining open action item CIP 189: The final action item was recently closed CIP 195: There are four remaining open action items CIP 196: The final action item was recently closed CIP 197: There is one remaining open action item CIP 198: There are five remaining open action items CIP 199: There is one remaining open action item CIP 200: There are two remaining open action items CIP 201: There is one remaining open action item</p>				
20) Raw Water Supply and Drinking Water Quality Trends - Sodium	Sodium data from 2020 to Q2 2025 was reviewed. Well 14 saw a new record high within the last 5 years, with a result of 85 mg/L. Wells 11 and 12 were offline in Q2 2025, thus no samples were taken during this time. Wells 9 and 13 continue to display an increasing trend, while 3A is showing a slight decline.				
21) Raw Water Supply and Drinking Water Quality Trends - THMs/HAA	<p>In Q2 2025, the Running Annual Average for Trihalomethanes (THMs) saw a slight increase from the previous quarter, moving from 32.88 ug/L to 34.50 ug/L.</p> <p>In Q2 2025, the Running Annual Average for Haloacetic Acids (HAAs) saw a slight increase from the previous quarter, moving from 29.63 ug/L to 30.63 ug/L.</p>				
22) Raw Water Supply and Drinking Water Quality Trends - Lead	Lead sampling was not required for Q2 2025.				
23) Raw Water Supply and Drinking Water Quality Trends - VOCs	There were 0 exceedances above the established internal VOC limits in Q2 2025.				
24) Q2 2025 Sampling Review	During the Q2 2025 Sampling Review, there were 0 non-compliances identified. All samples were taken as required.				
25) Health Canada Guideline Technical Documents	The Consultation for Canadian Drinking Water Quality – Arsenic, closed on May 6, 2025, and was reviewed in the previous quarter.				
26) In-house Lab Results - cATP	<p>The average WCS cATP results were presented (Q1 2024 - Q2 2025). The recommended limit for potable water systems is 10 pg/mL. All results were below 1 pg/mL, well below the recommended limit.</p> <p>The average GWS cATP results were presented (Q1 2024 - Q2 2025). It was noted that the raw water ATP results are very low (with the exception of Well 13 and 16). The Lab Technician, Sharon Beljakova, investigated the low cATP results, and confirmed the accuracy of the results. LuminUltra (provider of the cATP kits/instruments utilized) stated "The values indicate a well-controlled system".</p>				

The average SWS cATP results were presented (Q1 2024 - Q2 2025) for both the Low Lift Pumping Station and High Lift Pumping Station. Of note, ATP results for the LLPS appear to be more stable than results shown in 2024, perhaps as we refine the sample collection and analysis process. The recommended limit for potable water systems is 10 pg/mL. All drinking water results were below 1 pg/mL, well below the recommended limit. Results may be reflective of lake turnover temperature fluctuations. Temperatures displayed in the graph are from SCADA and are representative of lake temperature at the low lift.

27) Summary of Consumer Feedback - Customer Response Efficiency

In Q2 2025, there were a total of 99 calls received. Of this, 83% were able to be resolved over the phone.

28) Summary of Consumer Feedback - After Hours Water Quality Calls

In Q2 2025, there were a total of 17 after-hours water quality complaints. All of these were registered in CMMS.

29) Summary of Consumer Feedback - Water Meter Installer After Hours Calls

In Q2 2025, there were a total of 33 after-hours Water Meter Installer calls. All of these but one were registered in CMMS.

30) Review of Asset Maintenance, Verification, and Calibration

The results of the Q2 chlorine analyzer, flow meter, and turbidity analyzer calibration review were presented. There were 2 instances where SWS calibrations (chlorine analyzers only) were completed with <20 or >40 days between calibrations, and 1 instance in GWS.

31) Water Operations Branch KPIs

Water Distribution Services:

1. Percentage of valves turned in the NE quadrant in 2025: 87% complete
2. Percentage of system swabbing complete: Goal is 15km

Groundwater Supply:

1. Reducing the number of callouts annually to less than 300: Q2 progress was 98
2. Reduce the percentage of well downtime annually:

Well 5 - No Downtime = 0%

Well 7 - No downtime = 0%

Well 9 - No downtime = 0%

Well 11 - Down for 182 out of 182 days = 100%

Well 12 - Down for 182 out of 182 days = 100%

Well 13 - Down for 31 out of 182 days = 17%

Well 14 - No Downtime = 0%

Well 15 - No Downtime = 0%

Well 16 - Down for 6 out of 182 days = 3.3%

Well 17 - Down for 62 out of 182 days = 34.1%

Well 18 - No Downtime = 0%

(Total = 182 days in Q2)

Surface Water Supply:

1. Achieve average monthly Surface Water Treatment Plant efficiency of 98% or greater: Q2 96.65%
2. Reducing the number of callouts annually to less than 300: Progress in Q2 was 76 callouts

Water Customer Services:

1. Achieve 4,000 meter replacements annuay Q2 38% of goal reached
2. Volume of water produced vs. accounted for with a target of 90%: This is to be reported in Q4

Compliance and Technical Support:

	<p>1. Decrease time to gather renewal application information: In Q2, 3 out of 4 were completed within 6-week target</p> <p>2. Increase QMS engagement: Within the last 90 days, the view count on QMS was 13,284.</p> <p>The following new Action Item was created:</p>
1303	<p>Assist staff with an "onboarding" on how to use your mobile device; including teams and QMS access.</p> <p>- The QMS Action Log was revised to reflect the following:</p> <p>Lead: DS Support: EAC</p> <p>Due Date: 2026-01-01 Completion Date:</p>
32) Operational Plan, Currency and Updates	There are still a few Elements that require review before the end of the year.
33) SOP Review	WCS section has reviewed 100% of their assigned SOPs. All other sections still have a few SOPs to review by the end of 2025, but are getting close.
34) Work Order Instruction Review	Progress is continuing to be made for the Work Order instruction review.
35) Summary of Risk Assessment	There were changes to the methodology and hazards made to the Risk Assessment. WOB has a goal of migrating to a Risk Assessment Database to better track historical decisions.
36) Summary from Emergency Event	The Ice Storm (March 29-31, 2025) was identified as an Emergency Event in Barrie. A CIP was completed for this event. A review of the event was discussed including positive actions, and opportunities for improvement.
37) Results of Internal Audit	An internal audit was completed for Elements 10/11. The Lead Auditor has identified one opportunity for improvement (OFI).
38) Results of Infrastructure Review	<p>The table of current WOB infrastructure projects was presented.</p> <p>The following new Action Item was created:</p>
1304	<p>Some infrastructure projects are getting bounced back to WOB and are not being included in the "Capital Projects" list. Consider a threshold for which "operational" projects to include, and identify which projects are capital vs. operational in the spreadsheet. Consider including what is currently captured in the annual report projects (i.e. projects over \$20,000).</p> <p>- The QMS Action Log was revised to reflect the following:</p> <p>Lead: GG Support:</p> <p>Due Date: 2026-01-01 Completion Date:</p>
39) Changes Affecting QMS (Q2 2025)	<p>A Document Change Button (Microsoft Form) has been added to the QMS to help make the Document Change Process more accessible for staff.</p> <p>One CC is taking a union leave, the CCs will be short staffed until recruitment is completed.</p>
40) Summary of Staff Suggestions	<p>Staff have asked if there is a possibility for a CityWorks update button like the new Document Change button.</p> <p>It was decided that WOB will not proceed with this at this time, but will create a space on the QMS Homepage for frequently used forms or documents and create quick links.</p> <p>The following new Action Item was created:</p>
1305	<p>Create a space on the QMS Homepage for frequently used forms or documents and create quick links.</p> <p>- The QMS Action Log was revised to reflect the following:</p> <p>Lead: SB Support:</p> <p>Due Date: 2026-01-01 Completion Date:</p>
41) Review List of OROs (T11-02)	The T11-02 was reviewed. There was 1 removal and 1 addition.
42) New Business	No new business.

Note:
These meeting minutes have been reviewed and approved by the meeting attendees noted at the top of the document.

The following new Action Item was created:

1343	Include autoflusher data as well on the Flushing Activities (<0.2 CL (F)) graph. The Check Auto Flusher template is currently not included. - The QMS Action Log was revised to reflect the following:	Lead: SB Support:	Due Date: 2026-01-01 Completion Date:
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10) Operational Performance - System-wide Production
 In Q3 2025, the monthly water production (ML) for each month was above the 5-year average.

11) Operational Performance - SWS vs. GWS Production
 In Q3 2025, GWS consistently produced more water than SWS each month.

12) Operational Performance - Closed Pressure Zones in Q3
 There were zero instances of Closed Pressure Zones in Q3 2025.

13) Operational Performance - Average Monthly Efficiency of the SWTP
 In Q3 2025, the average Surface Water Treatment Plant efficiency was 97.2%.

14) Operational Performance - Locates
 In Q3, the number of locates performed each month was above the 5-year average.

15) Operational Performance - Watermain Breaks (Monthly)
 In Q3 2025, there were a total of 10 watermain breaks. This is slightly higher than the 5-year average of 7.8 breaks in Q3.

16) Operational Performance - Service Breaks (Monthly)
 In Q3 there were a total of 3 residential service breaks, which is below the 5-year average of 9 breaks in Q3.
 The following Action Item was created:

1344	On the Service Breaks (Monthly) slide in Management Review, would like to include ICI and Res on the same graph. - The QMS Action Log was revised to reflect the following:	Lead: SB Support:	Due Date: 2026-01-01 Completion Date:
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17) Operational Performance - ICI Service Breaks (Monthly)
 In Q3 there were a total of 2 ICI service breaks, which is slightly higher than the 5-year average of 1.9 breaks in Q3.

18) Operational Performance - Valve Exercising
 The valve exercising app is currently being repaired by GIS. Staff are now also experiencing more issues with the app (e.g., suddenly have hundreds of work orders in their inbox). GIS will be continuing to work on this.
 Discussion about historical issues with valve turning app. It is necessary to set up a meeting with GIS to get everyone on the same page.
 The following new Action Item was created:

1345	Set up meeting with GIS to discuss and resolve ongoing valve turning app issues. - The QMS Action Log was revised to reflect the following:	Lead: DM Support: SB	Due Date: 2026-01-01 Completion Date:
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19) CIP Summary	<p>There are a total of 8 open Continual Improvement Plans (CIPs). A summary of each CIP where a root cause meeting has already taken place is provided:</p> <p>CIP 195: There are two remaining open action items CIP 198: There are two remaining open action items CIP 199: There is one remaining open action item CIP 202: There are three remaining open action items CIP 203: The last action item is complete and paperwork to be completed. CIP 204: There are two remaining open action items CIP 206: There are two remaining open action items CIP 207: There is one remaining open action item</p>
20) Raw Water Supply and Drinking Water Quality Trends - Sodium	<p>Sodium data from 2020 to Q3 2025 was reviewed. Well 14 continues to increase to a new record high within the last 5 years, with a result of 85.3 mg/L. Wells 11 and 12 were offline in Q3 2025, thus no samples were taken during this time. Wells 9 and 13 continue to display an increasing trend overall, while 3A is showing a slight decline.</p>
21) Raw Water Supply and Drinking Water Quality Trends - THMs/HAA5	<p>In Q3 2025, the Running Annual Average for Trihalomethanes (THMs) saw an increase from the previous quarter, moving from 34.50 ug/L to 40.35 ug/L. south end stagnant water we are not moving as much water in certain areas.</p> <p>In Q3 2025, the Running Annual Average for Haloacetic Acids (HAA5) saw an increase from the previous quarter, moving from 30.63 ug/L to 35.25 ug/L.</p>
22) Raw Water Supply and Drinking Water Quality Trends - Lead	<p>Lead sampling conducted in Q3 2025 indicated that zero results were above ½ MAC.</p>
23) Raw Water Supply and Drinking Water Quality Trends - VOCs	<p>There were 0 exceedances above the established internal VOC limits in Q3 2025.</p>
24) Q3 2025 Sampling Review	<p>During the Q3 2025 Sampling Review, there were 0 non-compliances identified. All samples were taken as required.</p>
25) Health Canada Guideline Technical Documents	<p>There were no new water-related Health Canada Guideline Technical Documents posted for consultation in Q3 2025.</p>
26) In-House Lab Results - cATP	<p>The average WCS cATP results were presented (Q2 2024 - Q3 2025). The recommended limit for potable water systems is 10 pg/mL. All results were below 1 pg/mL, well below the recommended limit.</p> <p>The average GWS cATP results were presented (Q1 2024 - Q3 2025). It was noted that the raw water ATP results are very low (with the exception of Well 13 and 16). MV suggested that high iron bacteria is likely to be the reason for the higher results at those locations.</p> <p>The average SWS cATP results were presented (Q1 2024 - Q3 2025) for both the Low Lift Pumping Station and High Lift Pumping Station.</p>
27) Summary of Consumer Feedback - Customer Response Efficiency	<p>In Q3 2025, there were a total of 212 calls received. Of this, 84.6% were able to be resolved over the phone.</p>
28) Summary of Consumer Feedback - Afterhours Complaints and WMI calls	<p>In Q3 2025, there were a total of 59 after-hours water quality complaints. Of these, there were 2 not registered in CMMS. This is an increase in complaints from Q2.</p> <p>In Q3 2025, there were a total of 29 after-hours Water Meter Installer calls. There were 3 found to be not registered in CMMS, but have since been added.</p>
29) Review of Asset Maintenance, Verification,	<p>The results of the Q3 chlorine analyzer, flow meter, and turbidity analyzer calibration review were presented. There were 0 instances where SWS calibrations (chlorine analyzers only) were</p>

and Calibration	<p>completed with <20 or >40 days between calibrations, and 7 instances in GWS. MV noted that the majority of these were for Harvie Road, and can expect these to be tightened up for Q4 2025.</p> <p>Summary of UV Reference Sensor Test: One correction was required on an inspection as an incorrect value was entered. All UV sensor calibration ratio values indicated a passing score (i.e., ≤ 1.2).</p>
30) Water Operations Branch KPIs	<p>Water Distribution Services:</p> <ol style="list-style-type: none"> 1. Percentage of valves turned in the NE quadrant in 2025: 100% complete 2. Target of 15 km of system swabbing complete: Surpassed goal of 15km, and completed 23km <p>Groundwater Supply:</p> <ol style="list-style-type: none"> 1. Reducing the number of callouts annually to less than 300: Q3 progress was 84, with a year-to-date total of 250. 2. Reduce the percentage of well downtime annually: <p>Well 5 - No Downtime = 0% Well 7 - No downtime = 0% Well 9 - No downtime = 0% Well 11 - Down for 274 out of 274 days = 100% Well 12 - Down for 274 out of 274 days = 100% Well 13 - Down for 31 out of 274 days = 11.3% Well 14 - No Downtime = 0% Well 15 - No Downtime = 0% Well 16 - Down for 6 out of 274 days = 2.1% Well 17 - Down for 62 out of 274 days = 22.6% Well 18 - No Downtime = 0%</p> <p>Surface Water Supply:</p> <ol style="list-style-type: none"> 1. Achieve average monthly Surface Water Treatment Plant efficiency of 98% or greater: Q3 97.17% 2. Reducing the number of callouts annually to less than 300: Progress in Q3 was 61 callouts <p>Water Customer Service</p> <ol style="list-style-type: none"> 1. Achieve 4,000 meter replacements annually: Q3 progress was 61% of goal reached 2. Volume of water produced vs. accounted for with a target of 90%: This is to be reported in Q4 2025. <p>Compliance and Technical Support:</p> <ol style="list-style-type: none"> 1. Decrease time to gather renewal application information: In Q3, all renewals were completed within 6-week target 2. Increase QMS engagement: Within the last 90 days, the view count on QMS was 17,198.
31) Operational Plan, Currency and Updates	All Elements have been reviewed for 2025.
32) SOP Review	The CTS, WDS, and WCS sections have reviewed 100% of their assigned SOPs. All other sections still have a few SOPs to review by the end of 2025.
33) Work Order Instruction Review	Progress is continuing to be made for the Work Order instruction review. The WDS and WCS sections have completed the review of their Work Order instructions.
34) Results of Internal Audit	An internal audit was completed for Elements 16/18. The Lead Auditor has identified two opportunities for improvement (OFI), which have both already been implemented since the audit.
35) MOE Inspection	An "announced, focused" MOE inspection took place in Q3. The documentation review started on July 18, 2025 and the physical inspection took place on September 11th, 2025 (GWS) and September 12th, 2025 (SWS). WOB achieved an inspection rating of 100%.
36) Results of Infrastructure Review	The table of current WOB infrastructure projects was presented. There were a couple of projects updates discussed. For example, the Valve Replacement Program should be added. Additionally, the Fox Run/Broadfoot Lining project is complete. There was also a request to group completed projects together. GG has updated the table accordingly.

<p>37) MECP Best Management Practices</p>	<p>A summary of the MECP Best Management Practices was presented.</p> <p>Security: Discussion that WOB should consider creating a program for security which outlines the data we received from Source Water Protection related to encampments.</p> <p>Valve exercise and inspection: Update table to note that WOB has the valve turning scheduled in CMMS, not just that "records are kept in CMMS".</p> <p>Hydrant operation and inspection: WOB currently does not have a fire flow testing program, just an annual hydrant inspection program. WOB also does not inspect blow offs, but does have an inspection component at sample stations while operators take samples.</p> <p>Hydrant access: In addition to what is stated in the table, there is also an "illegal use of tampering fee" in the Fees By-law.</p> <p>Pressure monitoring - It is believed that there is an opportunity to improve distribution pressure monitoring.</p> <p>Verifying accuracy of records - Some work activities have reports, but not all include a monthly report check.</p> <p>The Compliance Coordinators have scheduled a meeting for December 10, 2025 to action any outstanding items discussed.</p>
<p>38) Summary of Staff Suggestions</p>	<p>One staff suggestion was presented: Investigate opportunity to have a Chatbot (AI Agent) for our SharePoint (like barrie.ca). WOB is going to consider this as a future project.</p> <p>A staff member suggested adding links on document change forms to quickly access and review updated documents. BMT has decided to not proceed with this suggestion because staff are encouraged to learn how to navigate SharePoint to find the required documents as needed.</p>
<p>39) Changes Affecting QMS</p>	<p>The temporary Compliance Coordinator role has been filled.</p>
<p>40) Review List of OROs (T11-02)</p>	<p>In Q3, two staff were added to the T11-02.</p>
<p>41) New Business</p>	<p>There was a discussion about service request templates and resolution details (i.e., internal or external issue). WOB would like to only capture resolution details for the 6 water quality templates, however, currently the resolution is showing up on all service request templates. Further discussion is required; SB has set up a separate meeting to discuss with applicable staff.</p>

Note:
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