



Chatham-Kent

Public Utilities Commission

2025 Annual Drinking Water Summary Report

Wallaceburg Drinking Water System

Reporting Period of January 1st – December 31st, 2025



This Annual Drinking Water Summary Report is prepared in accordance with the following requirements:

Ontario Regulation 170/03 – Drinking Water Systems	
Section 11	Annual Reports
Schedule 22	Summary Reports for Municipalities

1. INTRODUCTION AND BACKGROUND

1.1. System Description

Drinking-Water System Number:	260003341
Drinking-Water System Name:	Wallaceburg Drinking Water System
Drinking-Water System Owner:	PUC for the Municipality of Chatham-Kent
Drinking-Water System Category:	Large Municipal Residential
Municipal Drinking Water Licence:	027-102
Drinking Water Works Permit:	027-202
Period being reported:	January 1 – December 31, 2025

Source Water:

The Wallaceburg Water Treatment Plant's Low Lift Pumping Station is located at 6399 Seys Line, Wallaceburg. Raw water is pumped 1,982 metres to the water treatment plant.

Surface Water	Chenal Ecarte
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Treatment:

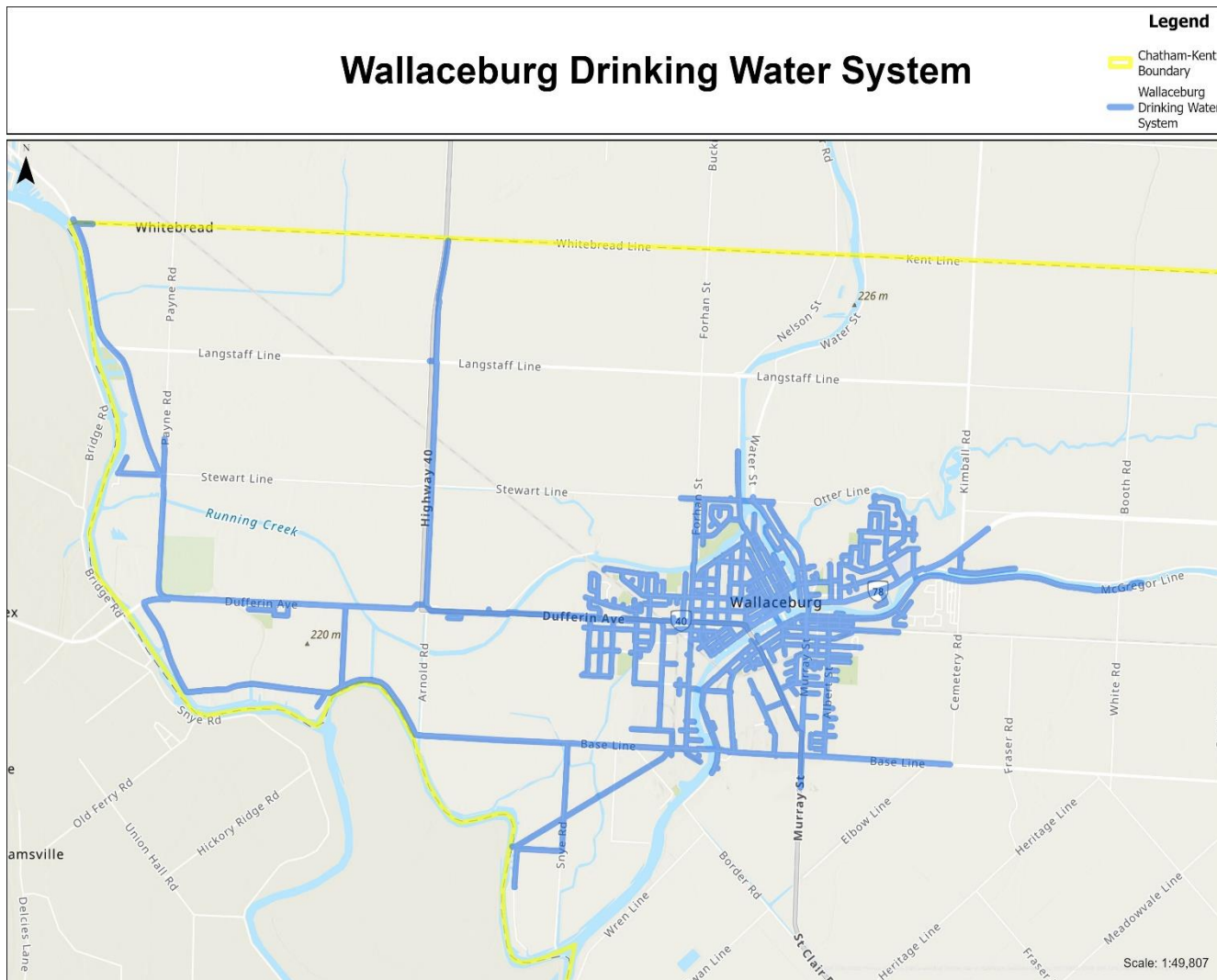
The Wallaceburg Water Treatment Plant is located at 6750 Baseline Road, Wallaceburg.

Coagulation	Aluminum Sulfate / Poly Aluminum Chlorite
Clarification	Pretreatment Tank
Flocculation	Flocculation Tanks
Sedimentation	Sedimentation Basins
Filtration	Conventional Sand Filtration
Primary Disinfection	Chlorination – Chlorine Gas
Taste & Odour	Anthracite
Tooth Decay Prevention	Fluoridation - Hydrofluosilicic Acid

Distribution:

The Wallaceburg Water Distribution System consists of approximately 100 kms of watermains which services the community and surrounding area. Population served is approximately 12,000.

Secondary Disinfection	Chlorination
Storage	Wallaceburg Elevated Tank



1.2. List all Drinking-Water Systems (if any), which receive all their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
None	

1.3. Description and breakdown of monetary expenses incurred

Expense	Cost (\$)
External Laboratory Analysis	26,980
Chlorine disinfection system equipment	12,497
On-line analyzer probe	2,386

2. WATER QUANTITY

2.1. System Performance

According to the Municipal Drinking Water License, rated capacity is determined by the maximum daily treated volume from the treatment subsystem to the distribution system.

Rated Capacity: Maximum Daily Treated Volume m ³ /day	Maximum Daily Treated Volume m ³ /day	Maximum Daily Treated Volume vs Rated Capacity %
13,600	6,493	48

2.2. Total Treated Water flows from the treatment subsystem to the distribution system:

The following table outlines total monthly flow, average daily flow, and maximum daily flow supplied to the distribution system from the Wallaceburg Water Treatment Plant. Additionally, the average daily flows and maximum daily flows are compared to the rated capacity outlined in the Municipal Drinking Water License.

Month	Total Monthly Flow m ³ /day	Average Daily Flow m ³ /day	% of Rated Capacity	Maximum Daily Flow m ³ /day	% of Rated Capacity
Limits			100	13,600	100
January	127,117	4,101	30	4,686	34
February	120,392	4,300	32	5,207	38
March	125,997	4,064	30	4,715	35
April	122,870	4,096	30	4,370	32
May	139,232	4,491	33	5,110	38
June	138,975	4,633	34	5,248	39
July	145,192	4,684	34	5,207	38
August	142,277	4,590	34	5,144	38
September	131,287	4,376	32	4,773	35
October	123,734	3,991	29	5,311	39
November	124,991	4,166	31	6,493	48
December	125,917	4,062	30	4,876	36
	Total Yearly Flow m³/day	Annual Average m³/day	Maximum %	Maximum m³/day	Maximum %
	1,567,981	4,296	34	6,493	48

2.3. Total Treated Water flows from the treatment subsystem to the distribution system (5 years):

The following table outlines historic total monthly flows from January 2021 until the end of the reporting period.

Month	2021 Total Monthly Flow m ³ /day	2022 Total Monthly Flow m ³ /day	2023 Total Monthly Flow m ³ /day	2024 Total Monthly Flow m ³ /day	2025 Total Monthly Flow m ³ /day
January	125,191	135,089	127,206	127,376	127,117
February	129,476	127,772	118,790	113,737	120,392
March	136,321	140,594	133,963	118,123	125,997
April	136,928	128,143	134,372	120,304	122,870
May	161,232	157,372	166,974	139,585	139,232
June	152,318	155,309	153,994	130,565	138,975
July	160,378	167,818	152,369	139,502	145,192
August	162,632	160,396	155,067	142,883	142,277
September	148,834	141,456	138,532	130,589	131,287
October	145,899	140,243	133,419	121,880	123,734
November	136,147	126,255	118,939	125,409	124,991
December	133,768	134,988	114,903	121,119	125,917
	Total Yearly Flow m³/day	Total Yearly Flow m³/day	Total Yearly Flow m³/day	Total Yearly Flow m³/day	Total Yearly Flow m³/day
	1,729,124	1,715,435	1,648,528	1,531,072	1,567,981

3. OPERATIONAL TESTING

3.1. Operational testing done under Schedule 7 of Regulation 170/03 during the period covered by this Annual Report:

As per Schedule 7 of Regulation 170/03, the Wallaceburg Water Treatment Plant must ensure that sampling and testing for turbidity is carried out by continuous monitoring equipment on each filter effluent line. Sampling and testing for free chlorine residuals must be carried out by continuous monitoring equipment where the intended contact time had been completed. Additionally, since the Wallaceburg Water Treatment Plant provides fluoridation, one water sample must be taken at the end of the fluoridation process at least once per day to be tested for fluoride.

Parameter	Number of Grab Samples	Range of Results (min #) - (max #)
Turbidity (Filter Discharge)	8760	0.000 - 1.000 NTU
Chlorine (Large Reservoir Discharge)	8760	1.47 – 2.57 mg/L
Fluoride (Point of Entry)	730	0.18 - 0.94 mg/L

NOTE: For continuous monitors use 8760 as the number of samples.

4. WATER QUALITY MONITORING

4.1. Microbiological Testing done under the Schedule 10 of Regulation 170/03, during this reporting period:

As per Schedule 10 of Regulation 170/03, the Wallaceburg Drinking Water System is required to take the following samples:

Raw Water:

A minimum of one raw water sample per week to be tested for Escherichia coli (E.coli) and total coliforms (TC).

Treated Water:

A minimum of one treated water sample is required per week to be tested for E. coli, TC, and heterotrophic plate count (HPC).

Distribution Water:

At least eight distribution samples, plus one additional distribution sample for every 1,000 people served by the system, are taken every month, with at least one of the samples being taken in each week. Each distribution sample is tested for E.coli and TC and 25% of distribution samples are tested for HPC.

	Number of Samples	Range of E. coli Results (min #) - (max #)	Range of Total Coliform Results (min #) - (max #)	Number of HPC Samples	Range of HPC Results (min #) - (max #)
Raw	52	< 20 – 1000	< 20 – 32,000	0	
Treated	52	0 – 0	0 – 0	52	< 10 – 10
Distribution	458	0 – 0	0 – 0	446	< 10 – 270

4.2. Summary of Inorganic parameters tested during this reporting period or the most recent sample results:

As per Schedule 13 of Regulation 170/03, the Wallaceburg Drinking Water System is required to take a minimum of one treated water sample to be tested for the parameters outlined in Schedule 13 and 23 as reported in the table below.

Any results displayed as less than (<) are below the detection limit of the accredited third-party laboratory.

Parameter	Sample Date	Result Value	MAC* Limit	Unit of Measure	Exceedance
Antimony	Jan 13	< 0.50	6	ug/L	No
Arsenic	Jan 13	<1.0	10	ug/L	No
Barium	Jan 13	14	1,000	ug/L	No
Boron	Jan 13	13	5,000	ug/L	No
Cadmium	Jan 13	< 0.090	5	ug/L	No
Chromium	Jan 13	< 5.0	50	ug/L	No
Mercury	Jan 13	< 0.0001	0.001	mg/L	No
Selenium	Jan 13	< 2.0	50	ug/L	No
Sodium	Oct 06	5,200	20,000	ug/L	No
Uranium	Jan 13	< 0.10	20	ug/L	No
Fluoride	Continuous Monitoring: See Operational Section				
Nitrite	Oct 06	< 0.010	1	mg/L	No
Nitrate	Oct 06	0.22	10	mg/L	No
Nitrite + Nitrate	Oct 06	0.22	-	mg/L	No

* MAC: Maximum Acceptable Concentration

4.3. Summary of Organic parameters sampled during this reporting period or the most recent sample results:

As per Schedule 13 of Regulation 170/03, the Wallaceburg Drinking Water System is required to take a minimum of one treated water sample to be tested for the parameters outlined in Schedule 24 as reported in the table below.

Any results displayed as less than (<) are below the detection limit of the accredited third-party laboratory.

Parameter	Sample Date	Result Value	MAC* Limit	Unit of Measure	Exceedance
Alachlor	Jan 13	< 0.50	5	ug/L	No
Atrazine + N-dealkylated metabolites	Jan 13	< 1.0	5	ug/L	No
Azinphos-methyl	Jan 13	< 2.0	20	ug/L	No
Benzene	Jan 13	< 0.10	1	ug/L	No
Benzo(a)pyrene	Jan 13	< 0.0050	0.01	ug/L	No
Bromoxynil	Jan 13	< 0.50	5	ug/L	No
Carbaryl	Jan 13	< 5.0	90	ug/L	No
Carbofuran	Jan 13	< 5.0	90	ug/L	No
Carbon Tetrachloride	Jan 13	< 0.10	2	ug/L	No
Chlorpyrifos (Dursban)	Jan 13	< 1.0	90	ug/L	No
Diazinon	Jan 13	< 1.0	20	ug/L	No
Dicamba	Jan 13	< 1.0	120	ug/L	No
1,2-Dichlorobenzene	Jan 13	< 0.20	200	ug/L	No
1,4-Dichlorobenzene	Jan 13	< 0.20	5	ug/L	No
1,2-Dichloroethane	Jan 13	< 0.20	5	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	Jan 13	< 0.10	14	ug/L	No
Dichloromethane	Jan 13	< 0.50	50	ug/L	No
2,4-Dichlorophenol	Jan 13	< 0.25	900	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Jan 13	< 1.0	100	ug/L	No
Diclofop-methyl	Jan 13	< 0.90	9	ug/L	No
Dimethoate	Jan 13	< 2.5	20	ug/L	No
Diquat	Jan 13	< 7.0	70	ug/L	No
Diuron	Jan 13	< 10	150	ug/L	No
Ethylbenzene	Jan 13	< 0.10	140	ug/L	No
Glyphosate	Jan 13	< 10	280	ug/L	No
Malathion	Jan 13	< 5.0	190	ug/L	No
2 Methyl-4-chlorophenoxyacetic acid (MCPA)	Jan 13	< 10	100	ug/L	No
Metolachlor	Jan 13	< 0.50	50	ug/L	No
Metribuzin (Sencor)	Jan 13	< 5.0	80	ug/L	No
Monochlorobenzene	Jan 13	< 0.10	80	ug/L	No

Paraquat	Jan 13	< 1.0	10	ug/L	No
Pentachlorophenol	Jan 13	< 0.50	60	ug/L	No
Phorate	Jan 13	< 0.50	2	ug/L	No
Picloram	Jan 13	< 5.0	190	ug/L	No
Polychlorinated Biphenyls (PCB)	Jan 13	< 0.05	3	ug/L	No
Prometryne	Jan 13	< 0.25	1	ug/L	No
Simazine	Jan 13	< 1.0	10	ug/L	No
Terbufos	Jan 13	< 0.50	1	ug/L	No
Tetrachloroethylene	Jan 13	< 0.10	10	ug/L	No
2,3,4,6-Tetrachlorophenol	Jan 13	< 0.50	100	ug/L	No
Toluene	Jan 13	< 0.20	60	ug/L	No
Triallate	Jan 13	< 1.0	230	ug/L	No
Trichloroethylene	Jan 13	< 0.10	5	ug/L	No
2,4,6-Trichlorophenol	Jan 13	< 0.50	5	ug/L	No
Trifluralin	Jan 13	< 1.0	45	ug/L	No
Vinyl Chloride	Jan 13	< 0.20	1	ug/L	No
Xylenes	Jan 13	< 0.10	90	ug/L	No

* MAC: Maximum Acceptable Concentration

As per Schedule 13 of Regulation 170/03, the Wallaceburg Drinking Water System is required to ensure that at least one distribution sample is taken in each calendar quarter, from a point in the drinking water system's distribution system, or plumbing that is connected to the drinking water system, that is likely to have an elevated potential for the formation of Trihalomethanes (THMs). The results of THM sampling shall be monitored and expressed as a running annual average of quarterly results.

Parameter	Sample Date	Result Value	RAA Value	MAC* Limit	Unit of Measure	Exceedance
THMs	Jan 13	12.5	26.1	100	ug/L	No
	Apr 14	20.5	23.5			No
	Jul 14	29.8	22.6			No
	Oct 06	28.1	22.7			No

* MAC: Maximum Acceptable Concentration

As per Schedule 13 of Regulation 170/03, the Wallaceburg Drinking Water System is required to ensure that at least one distribution sample is taken in each calendar quarter, from a point in the drinking water system's distribution system or plumbing that is connected to the drinking water system, that is likely to have an elevated potential for the formation of haloacetic acids (HAAs). The results of HAA sampling shall be monitored and expressed as a running annual average of the quarterly results.

Parameter	Sample Date	Result Value	RAA Value	MAC* Limit	Unit of Measure	Exceedance
HAAs	Jan 13	27.0	25.0	80	ug/L	No
	Apr 14	14.0	22.5			No
	Jul 14	30.0	22.8			No
	Oct 06	20.0	22.8			No

* MAC: Maximum Acceptable Concentration

4.4. Summary of Lead analysis during this reporting period:

As per Schedule 15.1 of Regulation 170/03, the Wallaceburg Drinking Water System qualifies for reduced lead sampling. A minimum of 4 distribution samples must be taken and tested for lead during each of the following periods in the relevant 12-month period:

1. The period from December 15 to April 15.
2. The period from June 15 to October 15.

Any results displayed as less than (<) are below the detection limit of the accredited third-party laboratory.

Location Type	Number of Samples	Range of Lead Results (min #) - (max #)	MAC* Limit	Unit of Measure	Number of Exceedances / Adverses
Residential	0		10	ug/L	
Non-Residential	0				
Distribution	8	< 0.50 – < 0.50			0

* MAC: Maximum Acceptable Concentration

4.5. List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

As per Schedule 13-5 of Regulation 170/03, if a test result for any of the inorganic or organic parameters listed in Schedule 23/24 exceeds half of the standard prescribed for the parameter in Schedule 2 to the Ontario Drinking Water Quality Standards, the frequency of sampling and testing for that parameter under that section shall be increased so that at least one water sample is taken and tested every three months.

Parameter	Sample Date	Result Value	Half MAC* Limit	Unit of Measure	Exceedance
<i>None during the reporting period</i>					

* MAC: Maximum Acceptable Concentration

4.6. Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

In accordance with Schedule C of the Municipal Drinking Water License, the requirements set out in the Ministry document titled “Harmful Algal Bloom Guide for Owners and Operators of Municipal Residential Drinking Water Systems” must be met. This includes proactive weekly sampling when visual observation alone is not sufficient to identify a bloom or when Harmful Algal Blooms have historically occurred in the source water for the system.

Any results displayed as less than (<) are below the detection limit of the accredited third-party laboratory.

Parameter	Sample Date	Result Value – Raw Water	Result Value – Treated Water	MAC* Limit	Unit of Measure	Exceedance
Microcystin (ELISA analysis)	May 26	< 0.150	< 0.150	1.5	ug/L	No
	Jun 02	< 0.150	< 0.150			No
	Jun 09	< 0.150	< 0.150			No
	Jun 16	< 0.150	< 0.150			No
	Jun 23	< 0.150	< 0.150			No
	Jul 02	< 0.150	< 0.150			No
	Jul 07	< 0.150	< 0.150			No
	Jul 14	< 0.150	< 0.150			No
	Jul 21	< 0.150	< 0.150			No
	Jul 28	< 0.150	< 0.150			No
	Aug 05	< 0.150	< 0.150			No
	Aug 11	< 0.150	< 0.150			No
	Aug 18	< 0.150	< 0.150			No
	Aug 25	< 0.150	< 0.150			No
	Sep 02	< 0.150	< 0.150			No
	Sep 08	< 0.150	< 0.150			No
	Sep 15	< 0.150	< 0.150			No
	Sep 22	< 0.150	< 0.150			No
	Sep 29	0.179	< 0.150			No
	Oct 06	< 0.150	< 0.150			No
	Oct 14	< 0.150	< 0.150			No
	Oct 20	< 0.150	< 0.150			No
	Oct 27	< 0.150	< 0.150			No

* MAC: Maximum Acceptable Concentration

4.7. Summary of additional voluntary sampling and testing during the reporting period or the most recent sample results.

Any results displayed as less than (<) are below the detection limit of the accredited third-party laboratory.

Parameter	Sample Date	Result Value	MAC* Limit	Unit of Measure	Exceedance
Alkalinity	Oct 06	78	-	mg/L	-
Aluminum	Oct 06	110	-	ug/L	-
Calcium	Oct 06	27,000	-	ug/L	-
Colour	Oct 06	< 2	-	TCU	-
Hardness	Oct 06	98	-	mg/L	-
Magnesium	Oct 06	7,400	-	ug/L	-
Perfluoroalkyl Substances (PFAS)	Aug 11	All results below the Summary of Guidelines for Canadian Drinking Water Quality (SGCDWQ), Health Canada	-	ng/L	-

* MAC: Maximum Acceptable Concentration

5. ADVERSE WATER QUALITY INCIDENTS

An adverse drinking water condition is identified by a test result or an observed event that that water may not be safe for consumption and/or detrimental to public health.

Adverse water quality indicators may be as a result of adverse test results that exceed the Ontario Drinking Water Quality Standards. Additional indicators of adverse water quality may be, but not limited to, inadequate filtration or disinfection, low distribution system pressure, evident or suspected contamination of the water system.

Depending on the severity of the adverse water quality indicator, the local Medical Officer of Health / Public Health Unit may issue a water advisory, such as a Boil Water Advisory or Do Not Drink Advisory.

Adverse water quality incidents require timely reporting to the local Medical Officer of Health / Public Health Unit and the Spills Action Centre (SAC) of the Ministry of the Environment, Conservation and Parks (MECP).

Adverse Water Quality Incidents	
<i>None during the reporting period</i>	
AWQI #:	Type:
Parameter:	
Result(s):	Limit:
Date Issued:	Date Resolved:
Details of Adverse:	
Actions Taken & Results Achieved:	

Boil Water Advisories	
<i>None during the reporting period</i>	
AWQI #:	Type:
Parameter:	
Result(s):	Limit:
Date Issued:	Date Rescinded:
Details of Boil Water Advisory:	
Affected Area:	
Actions Taken & Results Achieved:	

6. NON-COMPLIANCES

Failure to meet the standards outlined in provincial regulations, such as those set by the Safe Drinking Water Act, 2002, may result in non-compliance of such regulatory requirements. Additionally, failure to meet the requirements and conditions of the Municipal Drinking Water Licence and Drinking Water Works Permit may also result in a non-compliance.

Depending on the severity of the non-compliance, a non-compliance may affect the drinking water systems inspection rating, investigated with potential for charges/fines and provincial officers' orders issued all at the discretion of the Ministry of the Environment, Conservation and Parks (MECP).

Non-Compliances
<i>None during the reporting period</i>
Type:
Parameter:
Date(s) / Period:
Finding(s):
Criteria / Limit:
Details:
Action(s) Taken:

7. NON-CONFORMANCES

Not undertaking or consideration of drinking water system best management practices may result in a non-conformance of such practices. Best management practices are not mandatory or a regulatory requirement for implementation, but rather a recommendation by the Ministry of the Environment, Conservation and Parks (MECP), to improve the drinking water system or quality management system.

Non-Conformances
<i>None during the reporting period</i>
Type:
Parameter:
Date(s) / Period:
Finding(s):
Recommendation / Objective:
Action(s) Taken:

8. SPILL OF A POLLUTANT / DISCHARGE OF A CONTAMINANT

Spills of a pollutant or discharges of a contaminant to the natural environment which has or may have an adverse effect on or impairment of the natural environment. The requirements monitoring, reporting, remediation of spills and containment discharges are set out in the Environmental Protection Act, R.S.O. 1990 and the Municipal Drinking Water Licence.

Spills of a pollutant or discharges of a contaminant require timely reporting to the local Medical Officer of Health / Public Health Unit and the Spills Action Centre (SAC) of the Ministry of the Environment, Conservation and Parks (MECP).

Spills of a Pollutant / Discharge or a Contaminant	
Incident #:	Spill / Contaminant Material:
Beginning Date:	Beginning Time:
End Date:	End Time:
Duration:	Volume:
Source of Spill:	
Location of Spill:	
Cause of Spill:	
Action(s) Taken:	