



**City of Orillia**

**2024 Annual Drinking Water System  
and Summary Report**

**March 2025, Revision 1  
Water and Wastewater  
Environment and Infrastructure Services Department**

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## 1.0 Introduction

This report has been prepared by the City of Orillia pursuant to Section 11 and Schedule 22 of Ontario Regulation (O. Reg.) 170/03. Section 11 of O.Reg 170/03 requires the preparation of an Annual Report on the drinking water system no later than February 28 of the following year. Schedule 22 of O.Reg 170/03 requires the preparation of a Summary Report no later than March 31 of the following year. The Annual Report is to discuss the overall drinking water system, water treatment chemicals used, testing results and sampling points, corrective actions taken and major expenses incurred. The Summary Report is to discuss the drinking water system's approval (permit and licence), any orders applicable to the system that were not met, and a discussion of the quantities and flow rates of the water supplied to understand the capability of the system to meet existing and planned uses of the system. This consolidated report discusses the requirements of both the Annual Report and the Summary Report.

### 1.1 Drinking Water System Information

- **Drinking Water System Name:** Orillia Drinking Water System
- **Drinking Water System Number:** 220001183
- **Drinking Water System Owner:** The Corporation of the City of Orillia
  
- **Drinking Water System Category:** Large Municipal Residential
- **Municipal Drinking Water Licence Number:** 125-101, Issue 6
  - **Issue Date:** May 23, 2021
  - **Expiry Date:** May 23, 2026
- **Drinking Water Works Permit Number:** 125-201, Issue 4
  - **Issue Date:** October 18, 2023
- **Groundwater Permit to Take Water:** P-300-5069408381  
*West Orillia Well, Well 1 and 2*
  - **Issue Date:** April 20, 2020
  - **Expiry Date:** March 31, 2030
- **Surface Water Permit to Take Water:** 2865-BVER7T  
*Lake Couchiching*
  - **Issue Date:** November 16, 2020
  - **Expiry Date:** November 16, 2030
- **Operational Plan Number:** 125-401
- **Reporting Period:** January 1, 2024 to December 31, 2024
  
- **Population:** 37,108

## 1.2 Report Availability

This annual report is available to the public at no charge on the City of Orillia's website, <https://www.orillia.ca/en/living-here/waterqualityreports.aspx> and upon request for printed copies. Accessible formats or communication supports are also available upon request. To access the report in person, or for assistance, please visit:

**City of Orillia  
City Centre, 1<sup>st</sup> Floor Reception  
50 Andrew St. S., Suite 300  
Orillia, ON L3V 7T5**

If you have any questions regarding the content of the report, please reach out to Chris Hoos, Manager of Water Treatment, at 705-325-5818 or [choos@orillia.ca](mailto:choos@orillia.ca).

## 1.3 Drinking Water Quality Management System

The City of Orillia has a Drinking Water Quality Management System (DWQMS) in place and is committed to maintaining the highest quality of service and water supply through this quality management system. Information relating to the Quality Management System can be found on the City of Orillia website at <https://www.orillia.ca/en/living-here/drinkingwaterqualitymanagementstandard.aspx>.

The City of Orillia is an accredited Operating Authority, as designated by the Ministry of Environment, Conservation and Parks.

## 2.0 Description of the Orillia Drinking Water System

### 2.1 Overview

The Orillia Water Filtration Plant (WFP) is designed to obtain raw water from a surface source (Lake Couchiching) and from two groundwater sources (Wells 1 and 2). An additional high quality groundwater source (West Orillia Well) is also used for supply to the system. All source water is disinfected and delivered through the distribution system to three pressure zones (Zone 1, Zone 2 and Zone 3). The Zone 1 supply is managed from the WFP and the Rosemary Road Reservoir. The Zone 2 supply is managed from the WFP, the West Orillia Well, and the Harvie Hill Reservoir. The Zone 3 is supplied directly from Zone 2.

### 2.2 Supply

Lake Couchiching is a relatively shallow lake with a maximum depth of 12 m and an average depth of 6 m. The intake for the plant is located approximately 374 m from shore and 3.3 m below the surface. The raw water intake pipe extends into Lake Couchiching and begins at a concrete filled wooden cribbed structure. There is also a standby raw water intake, located approximately 85 m from shore. The supply from Lake Couchiching has a rated capacity of 27,280 m<sup>3</sup>/day.

Well 1 and Well 2, with a combined capacity of 5,762 m<sup>3</sup>/day, are located within 160 m of Lake Couchiching shore and are approximately 170 m apart. The combined rated capacity of the WFP (lake based and wells) is 33,042 m<sup>3</sup>/day. West Orillia Well is rated at a maximum daily flow of 6,550 m<sup>3</sup>/day.

### **2.3 Treatment**

Using gravity, raw lake water travels through the intake to the WFP. As it enters the WFP, the water passes through a fixed screen and a travelling screen to remove any heavy debris. There are four vertical turbine low lift pumps used to move the water from the wet well to the remainder of the process in the WFP. The raw water is then mixed with a coagulant (polyaluminum chloride) and if required, a coagulant aid (polymer) prior to the three parallel concrete flocculation tanks. From the flocculation tanks, the water travels through the filtration system.

The filtration system is comprised of four dual media (sand with granular activated carbon) filters including a backwash system. The filter effluent then combines with the discharge effluent of the Well 1 and/or 2, if online, to be disinfected. The water passes through the contact chambers and clearwell where it is delivered to the distribution system, using high lift pumps. Three vertical turbine pumps are dedicated to delivering water to Zone 1, and three vertical turbine pumps are dedicated to delivering water to Zone 2.

Prior to the introduction at the WFP, the raw water from the Well 1 and Well 2 is treated using an air stripping process for the removal of trichloroethylene (TCE) and tetrachloroethylene (PCE).

### **2.4 Disinfection**

The gas chlorination system consists of five chlorinators dedicated for pre-chlorination, post-chlorination and post-post chlorination. Redundancy of the chlorinators is built into the design (duty/standby). Two 0.909 tonne cylinders of liquefied chlorine are kept online at all times with two vacuum regulators and an automatic cylinder switchover system.

The raw water from Lake Couchiching is pre-chlorinated at the intake in the summer months for zebra mussel control, and in-plant at all other times. The effluent from the filters, and additionally from the wells, is combined for chlorine disinfection (secondary) at the WFP. Further disinfection can be added prior to entering the distribution system if required.

The primary disinfection method of the drinking water is through three flow-through ultraviolet (UV) reactors (one duty for each zone, and one standby). The UVs are located after the high lift pumps and prior to discharge to the distribution system.

The West Orillia Well is disinfected using sodium hypochlorite.

### **2.5 Storage**

The WFP has storage of approximately 4,110 m<sup>3</sup> between the chlorine contact chambers and clearwell. This storage supplies both Zone 1 and Zone 2. Rosemary Road Reservoir

(two tanks) has a total storage capacity of 10,500 m<sup>3</sup> and supplies Zone 1. Harvie Hill Reservoir has a storage capacity of 7,800 m<sup>3</sup> and supplies Zone 2 and Zone 3.

## **2.6 Distribution System**

The distribution system is a network of approximately 205 kilometres of various sized piping servicing the approximately 37,108 people, businesses and facilities within Orillia throughout the three pressure zones.

The system also contains 1,227 hydrants (969 municipal and 258 private), 2,737 control valves, 48 air relief valves, 7 pressure reducing valves used to control flow between the pressure zones, 10 blow offs, 4 permanent auto-flushers, and 20 sampling stations (19 municipal and 1 private).

The Zone 3 Booster Pumping Station boosts the pressure from Zone 2 to deliver to the Zone 3 using three booster pumps and two high flow pumps.

## **2.7 Emergency Backup**

The WFP, West Orillia Well and the Zone 3 Booster Pumping Station are all protected with standby generators in the event of a power outage. The WFP and the Zone 3 Booster Pumping Station have an onsite generator dedicated for their use. The West Orillia Well is fed from the backup generator located at the nearby Champlain Sewage Pumping Station.

## **3.0 Significant Expenses**

The following is a list of significant expenses incurred for the maintenance and operation of treatment and supply equipment.

- High Lift Check Valve and Expansion Joint Replacements - \$80,000
- Filter 1 and 2 Sluice Gate Replacements- \$190,000
- Various Instrumentation Replacements - \$15,000
- UV Bulb Replacements - \$15,000
- Chlorine Room Upgrades - \$2,000,000
- Reservoir Hatch Replacements - \$30,000
- Low Lift Sump Rehabilitation - \$25,000
- Filter Media Replacement - \$400,000
- Radio System Upgrades - \$75,500
- Watermain Improvements - \$1,310,000
- Compliance 365 Software - \$31,000

## **4.0 Adverse Water Quality Incident (AWQI) Reports**

In 2024, six (6) AWQI reports were made. A summary of the notifications is provided below.

### **Operational Issues:**

Issue# 1

AWQI 164960

Issue: Loss of coagulant feed for more than 5 minutes.

Date: May 16, 2024

### **Microbiological Issues:**

Issue# 2

AWQI 165327

Results: 1 E. coli (EC), 4 Total Coliforms (TC) per 100mL

Free Chlorine: 1.20 mg/L

Location: 3150 Bass Lake Side Road WSS #3 Date: June 24, 2024

Issue#3

AWQI 165180

Results: 14 Total Coliforms (TC), 0 E. coli (EC) per 100mL

Free Chlorine: 0.90 mg/L

Location: 11 Cole Court WSS #1

Date: June 10, 2024

Issue# 4

AWQI 165069

Results: 1 Total Coliform (TC), 0 E. coli (EC) per 100mL

Free Chlorine: 1.17 mg/L

Location: 6-825 Memorial Avenue WSS #13

Date: May 27, 2024

### **Low Distribution Chlorine:**

Issue# 5

AWQI 164815

Chlorine Level: 0.04 mg/L

Location: 25 Fitton Heights

Date: April 1, 2024

Issue#6

AWQI 166028

Chlorine Level: 0.01 mg/L

Location: 154 Simcoe Street

Date: August 19, 2024

## **5.0 Non-Compliance and Corrective Actions**

During the reporting period, there were no non-compliance events.

No Provincial Orders were issued during the reporting period.

Corrective actions in response to the above AWQI Reports are described below:

Issue #1:

Service was performed on the unreliable valves and actuators (GV210 and LLP4 GV).

Issues #2, #3, and #4:

Flush the area, increase disinfection residual, and resample and test at the location of the adverse event, as well as upstream and downstream.

Issues #5 and #6:

Flush the area and increase monitoring efforts.

## 6.0 Treatment Chemicals

Various chemicals are used throughout the treatment process from source to tap. Please refer the system description for further information on the use of the chemicals throughout the treatment process. Table 1 provides a summary of the treatment chemicals used in 2024.

**Table 1: Summary of Chemicals Used in 2024**

Month	Water Filtration Plant		West Orillia Well
	Polyaluminum Chloride (L)	Liquefied Chlorine (kg)	Sodium Hypochlorite (L)
January	4,717	1,224	766
February	4,214	1,007	885
March	4,474	978	655
April	3,931	1,029	1055
May	3,731	1,185	1049
June	4,219	1,265	1020
July	4,669	1,651	972
August	4,696	1,463	822
September	4,334	1,268	777
October	3,947	1,424	906
November	3,443	1,138	663



Month	Water Filtration Plant		West Orillia Well
	Polyaluminum Chloride (L)	Liquefied Chlorine (kg)	Sodium Hypochlorite (L)
December	4,228	1,170	671
<b>Totals</b>	<b>50,603</b>	<b>14,802</b>	<b>10,241</b>

In the distribution system, sodium hypochlorite and sodium thiosulphate are used as needed for spot repairs or de-chlorination and quantities are not tracked.

## 7.0 Rated Capacity Assessment

Tables 2 to 4 on the following pages illustrate the water supplied and the capacity of the system and its components.

**Table 2: System Summary**

Item	2020	2021	2022	2023	2024	5 Yr. Avg.
System Average Day Flow (m <sup>3</sup> /day)*	10,959	11,401	11,071	10,714	10,569	10,943
System Maximum Day Flow (m <sup>3</sup> /day)*	12,548	15,860	15,395	15,677	16,567	15,209
Rated Capacity of System (m <sup>3</sup> /day)*	39,592					
Maximum Day/Rated Capacity (%)	38.4	40.1	38.9	39.6	41.8	39.8
Total Yearly WFP Flow (ML)	3,372	3,500	3,513	3,338	3,118	3,368
Total Yearly West Orillia Well Flow (ML)	639	661	528	568	750	629
Total Yearly System Flow (ML)	4,011	4,161	4,041	3,906	3,868	3,997

\*The System values include data from all sources – WFP, Wells 1 and 2 and WOW.

**Table 3: WFP Summary for 2024**

Month	Total Flow (m <sup>3</sup> )	Minimum (m <sup>3</sup> /day)	Maximum (m <sup>3</sup> /day)	Maximum Day/Rated Capacity (%)
January	237,210	4,999	10,506	31.8
February	217,030	5,131	10,165	30.8
March	231,851	5,451	11,345	34.3

Month	Total Flow (m <sup>3</sup> )	Minimum (m <sup>3</sup> /day)	Maximum (m <sup>3</sup> /day)	Maximum Day/ Rated Capacity (%)
April	216,452	4,600	9,716	29.4
May	265,716	6,673	11,003	33.3
June	263,021	6,183	12,318	37.3
July	315,061	6,991	13,555	41.0
August	313,980	5,953	13,534	41.0
September	278,413	6,378	12,049	36.5
October	261,803	5,498	10,411	31.5
November	248,407	5,873	10,231	31.0
December	268,850	6,654	10,475	31.7
<b>Total</b>	<b>3,117,796</b>	-	-	-

Note: Rated capacity for WFP is 33,042 m<sup>3</sup>/day

**Table 4: West Orillia Well Summary for 2024**

Month	Total Flow (m <sup>3</sup> )	Minimum (m <sup>3</sup> /day)	Maximum (m <sup>3</sup> /day)	Maximum Day/ Rated Capacity (%)
January	57,677	821	3,326	50.8
February	63,546	743	4,020	61.4
March	58,874	0	3,450	52.7
April	72,290	1,050	4,598	70.2
May	76,315	1,465	4,481	68.4
June	81,567	1,383	4,824	73.6
July	60,384	309	3,579	54.6
August	59,060	441	2,667	40.7
September	61,883	485	3,061	46.7
October	60,208	1,028	3,055	46.6
November	47,749	332	2,701	41.2
December	50,852	0	2,718	41.5
<b>Total</b>	<b>750,406</b>	-	-	-

Note: Rated capacity for the West Orillia Well is 6,550 m<sup>3</sup>/day

The total overall system flow including the WFP and West Orillia Well in 2024 was 3,868,202 m<sup>3</sup>.

## 8.0 Water Quality Analysis

Tables 5 to 9 illustrate the water quality analysis conducted on the drinking water system for various parameters.

No inorganic or organic parameters exceeded half the standard as prescribed in Schedule 2 of O. Reg. 169/03 for this reporting period.

### 8.1 Testing Required Under Schedules 10 and 7 of O. Reg. 170/03

**Table 5: Microbiological Sample Results Required under Schedule 10 of O. Reg. 170/03 for 2024**

Facility	Parameter	Source	Number of Samples	Number of Detections
Water Filtration Plant	E. Coli	Raw (Lake Couchiching)	52	25
		Raw (Well 1)	52	1
		Raw (Well 2)	51	2
		Treated	104	0
	Total Coliforms	Raw (Lake Couchiching)	52	45
		Raw (Well 1)	52	3
		Raw (Well 2)	51	2
		Treated	104	0
	HPC	Treated	104	0
	West Orillia Well	E. Coli	Raw	52
Treated			52	0
Total Coliforms		Raw	52	0
		Treated	52	0
HPC		Treated	52	0
Distribution System		E. Coli		630
	Total Coliforms		630	3
	HPC		234	7

Note: HPC – Heterotrophic Plate Count

**Table 6: Operational Testing Required Under Schedule 7 of O. Reg. 170/03 for 2024**

Facility	Parameter	Source	Type	Number of Samples	Range of Results (Minimum to Maximum)
Water Filtration Plant	Turbidity (NTU)	Raw (Lake Couchiching)	C	8,760	0.32 – 3.57
			G	243	0.35 – 2.87
		Raw (Well 1)	G	52	0.05 – 0.16
		Raw (Well 2)	G	50	0.05 – 0.25
		Filter Effluent(s)	C	35,040	0.00 – 0.28
			G	936	0.01 – 0.26
	Free Chlorine (mg/L)	Treated	C	8,760	0.00 – 2.87
			G	483	1.63 – 2.61
West Orillia Well	Turbidity (NTU)	Raw	G	53	0.05 – 0.15
	Free Chlorine (mg/L)	Treated	C	8,760	0.01 – 0.97
			G	157	0.92 – 1.60
Distribution System	Free Chlorine (mg/L)		G	1,000	0.01 – 2.09

Notes: C = Continuous Monitoring

G = Grab Sample

Continuous monitoring equipment is recorded as 8,760 samples.

## 8.2 Chemical Testing Required under Schedules 13 and 15.1 of O. Reg. 170/03

**Table 7: Water Filtration Plant – Treated Single Sample for 2024**

Parameter	Units	Result	Date of Sample
2,3,4,6-Tetrachlorophenol	ug/L	<0.3	June 3, 2024
2,4,6-Trichlorophenol	ug/L	<0.2	June 3, 2024
2,4-Dichlorophenol	ug/L	<0.2	June 3, 2024
Pentachlorophenol	ug/L	<0.3	June 3, 2024
Chloride	mg/L	69.1	June 3, 2024
Fluoride	mg/L	<0.05	June 3, 2024
Nitrate (as N)	mg/L	0.09	June 3, 2024
Nitrite (as N)	mg/L	<0.05	June 3, 2024
Carbaryl	ug/L	<2	June 3, 2024

<b>Parameter</b>	<b>Units</b>	<b>Result</b>	<b>Date of Sample</b>
Carbofuran	ug/L	<3	June 3, 2024
Diuron	ug/L	<9	June 3, 2024
Apparent Colour	TCU	4.2	June 3, 2024
Diquat	ug/L	<0.2	June 3, 2024
Paraquat	ug/L	<0.2	June 3, 2024
Free Residual Chlorine	mg/L	1.9	June 3, 2024
GEOSMIN	ng/L	<3	June 3, 2024
IPMP (Surr.)	%	99	June 3, 2024
MIB	ng/L	<3	June 3, 2024
Glyphosate	ug/L	<20	June 3, 2024
Glyphosate (Dup)	ug/L	<20	June 3, 2024
Antimony	ug/L	<0.5	June 3, 2024
Arsenic	ug/L	1	June 3, 2024
Barium	ug/L	37	June 3, 2024
Boron	ug/L	15	June 3, 2024
Cadmium	ug/L	<0.1	June 3, 2024
Chromium	ug/L	1	June 3, 2024
Iron	ug/L	77	June 3, 2024
Manganese	ug/L	2	June 3, 2024
Mercury	ug/L	<0.1	June 3, 2024
Selenium	ug/L	0.6	June 3, 2024
Sodium	ug/L	34700	June 3, 2024
Uranium	ug/L	<1	June 3, 2024
Alachlor	ug/L	<0.289	June 3, 2024
Atrazine	ug/L	<0.289	June 3, 2024
Azinphos-methyl (Guthion)	ug/L	<0.217	June 3, 2024
Chlorpyriphos (Dursban)	ug/L	<0.217	June 3, 2024
Desethyl atrazine	ug/L	<0.361	June 3, 2024
Diazinon	ug/L	<0.217	June 3, 2024
Dimethoate	ug/L	<0.217	June 3, 2024
Malathion	ug/L	<0.217	June 3, 2024
Metolachlor	ug/L	<0.145	June 3, 2024
Metribuzin (Sencor)	ug/L	<0.145	June 3, 2024
Phorate	ug/L	<0.145	June 3, 2024
Prometryne	ug/L	<0.0723	June 3, 2024

Parameter	Units	Result	Date of Sample
Simazine	ug/L	<0.217	June 3, 2024
Terbufos	ug/L	<0.145	June 3, 2024
Triallate	ug/L	<0.145	June 3, 2024
Trifluralin	ug/L	<0.145	June 3, 2024
Benzo(a)pyrene	ug/L	<0.01	June 3, 2024
Decachlorobiphenyl (Surr.)	% Rec	108	June 3, 2024
Total PCBs	ug/L	<0.06	June 3, 2024
2,4-D	ug/L	<0.353	June 3, 2024
Bromoxynil	ug/L	<0.094	June 3, 2024
Dicamba	ug/L	<0.0823	June 3, 2024
Dichlorophenyl acetic acid (Surr.)	% Rec	130	June 3, 2024
Diclofop-methyl	ug/L	<0.118	June 3, 2024
MCPA	ug/L	<5.88	June 3, 2024
Picloram	ug/L	<0.0823	June 3, 2024
Total Hardness (as CaCO3)	mg/L	145	June 3, 2024
Atrazine + N-dealkylated metabolites	ug/L	<0.5	June 3, 2024
1,1-Dichloroethylene	ug/L	<0.3	June 3, 2024
1,2-Dichlorobenzene	ug/L	<0.2	June 3, 2024
1,2-Dichloroethane	ug/L	<0.2	June 3, 2024
1,4-Dichlorobenzene	ug/L	<0.3	June 3, 2024
1-Bromo-4-fluorobenzene (Surr.)	% Rec	105	June 3, 2024
Benzene	ug/L	<0.1	June 3, 2024
Carbon tetrachloride	ug/L	<0.2	June 3, 2024
Chlorobenzene	ug/L	<0.5	June 3, 2024
Dichloromethane	ug/L	<1	June 3, 2024
Tetrachloroethylene	ug/L	<0.3	June 3, 2024
Toluene-d8 (Surr.)	% Rec	95.6	June 3, 2024
Trichloroethylene	ug/L	<0.2	June 3, 2024
Vinyl chloride	ug/L	<0.3	June 3, 2024

**Table 8: West Orillia Well – Treated Single Sample for 2024**

Parameter	Units	Result	Date of Sample
Sodium	ug/L	41,800	June 3, 2024
2,3,4,6-Tetrachlorophenol	ug/L	<0.3	April 29, 2024

Parameter	Units	Result	Date of Sample
2,4,6-Trichlorophenol	ug/L	<0.2	April 29, 2024
2,4-Dichlorophenol	ug/L	<0.2	April 29, 2024
Pentachlorophenol	ug/L	<0.3	April 29, 2024
Carbaryl	ug/L	<2	April 29, 2024
Carbofuran	ug/L	<4	April 29, 2024
Diuron	ug/L	<10	April 29, 2024
Diquat	ug/L	<0.2	April 29, 2024
Paraquat	ug/L	<0.2	April 29, 2024
Glyphosate	ug/L	<20	April 29, 2024
Antimony	ug/L	<0.5	April 29, 2024
Arsenic	ug/L	2	April 29, 2024
Barium	ug/L	241	April 29, 2024
Boron	ug/L	4	April 29, 2024
Cadmium	ug/L	<0.1	April 29, 2024
Chromium	ug/L	3	April 29, 2024
Mercury	ug/L	<0.1	April 29, 2024
Selenium	ug/L	0.6	April 29, 2024
Uranium	ug/L	<1	April 29, 2024
Alachlor	ug/L	<0.252	April 29, 2024
Atrazine	ug/L	<0.252	April 29, 2024
Azinphos-methyl (Guthion)	ug/L	<0.189	April 29, 2024
Chlorpyrifos (Dursban)	ug/L	<0.189	April 29, 2024
Desethyl atrazine	ug/L	<0.315	April 29, 2024
Diazinon	ug/L	<0.189	April 29, 2024
Dimethoate	ug/L	<0.189	April 29, 2024
Malathion	ug/L	<0.189	April 29, 2024
Metolachlor	ug/L	<0.126	April 29, 2024
Metribuzin (Sencor)	ug/L	<0.126	April 29, 2024
Phorate	ug/L	<0.126	April 29, 2024
Prometryne	ug/L	<0.0629	April 29, 2024
Simazine	ug/L	<0.189	April 29, 2024
Terbufos	ug/L	<0.126	April 29, 2024
Triallate	ug/L	<0.126	April 29, 2024
Trifluralin	ug/L	<0.126	April 29, 2024
Benzo(a)pyrene	ug/L	<0.01	April 29, 2024

Parameter	Units	Result	Date of Sample
Decachlorobiphenyl (Surr.)	% Rec	139	April 29, 2024
Total PCBs	ug/L	<0.06	April 29, 2024
2,4-D	ug/L	<0.349	April 29, 2024
Bromoxynil	ug/L	<0.0931	April 29, 2024
Dicamba	ug/L	<0.0815	April 29, 2024
Dichlorophenyl acetic acid (Surr.)	% Rec	105	April 29, 2024
Diclofop-methyl	ug/L	<0.116	April 29, 2024
MCPA	ug/L	<5.82	April 29, 2024
Picloram	ug/L	<0.116	April 29, 2024
Atrazine + N-dealkylated metabolites	ug/L	<0.5	April 29, 2024
1,1-Dichloroethylene	ug/L	<0.3	April 29, 2024
1,2-Dichlorobenzene	ug/L	<0.2	April 29, 2024
1,2-Dichloroethane	ug/L	<0.2	April 29, 2024
1,4-Dichlorobenzene	ug/L	<0.3	April 29, 2024
1-Bromo-4-fluorobenzene (Surr.)	% Rec	106	April 29, 2024
Benzene	ug/L	<0.1	April 29, 2024
Carbon tetrachloride	ug/L	<0.2	April 29, 2024
Chlorobenzene	ug/L	<0.5	April 29, 2024
Dichloromethane	ug/L	<1	April 29, 2024
Tetrachloroethylene	ug/L	<0.3	April 29, 2024
Toluene-d8 (Surr.)	% Rec	100	April 29, 2024
Trichloroethylene	ug/L	<0.2	April 29, 2024
Vinyl chloride	ug/L	<0.1	April 29, 2024

**Table 9: Multiple Samples through Reporting Period for 2024**

Parameter	Source	Unit	Average	Minimum	Maximum	Number of Samples
Nitrate	WFP	mg/L	0.318	0.090	0.740	4
	WOW		3.11	2.93	3.35	4
Nitrite	WFP	mg/L	0.050	0.050	0.050	4
	WOW		0.050	0.050	0.050	4
Alkalinity	Distribution	mg/L	137.5	114.0	201.0	4*
pH	Distribution		7.68	7.50	8.0	4*
Lead	Distribution	mg/L	0.0001	0.0001	0.0001	4*



Parameter	Source	Unit	Average	Minimum	Maximum	Number of Samples
THM	Distribution	µg/L	44.3	14.0	71.0	4
HAA	Distribution	µg/L	36.5	8.0	92.0	4

\*Eight samples are required. Four samples were missed in 2024, identified January 8, 2025 and reported January 9, 2025, to be included in the 2025 report.

## 9.0 List of Revisions

### 9.1 Table 4: West Orillia Well Summary for 2024

The data in the "Total Flow (m<sup>3</sup>)" column of Table 4: West Orillia Well Summary for 2024 has been updated to correct previously reported values. The Total Flow for the year remains unchanged.