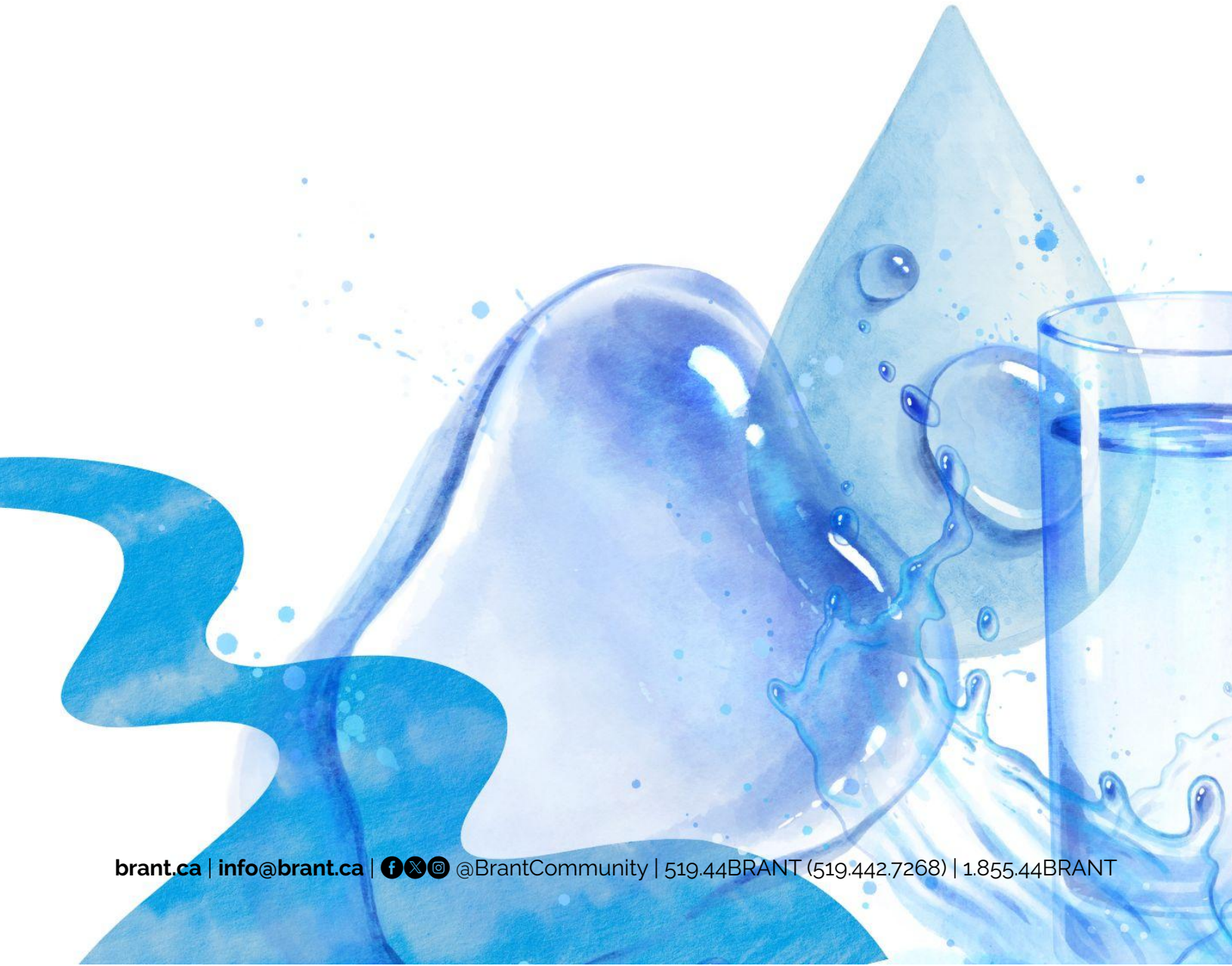
2025 Annual Summary Report

Oakland Community Centre Drinking Water System



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1. General Information

The County of Brant (the County) prepares a report summarizing system operation and water quality for every municipal drinking water system annually. The reports detail the latest water quality testing results, water quantity statistics and any adverse conditions that may have occurred for the previous year, January 1 through December 31. They are available on March 31 on the County website at www.brant.ca/en/water-services/water-services.aspx or by contacting the County of Brant Operations Department.

All efforts have been made to ensure the information presented in this report is accurate. If you have any questions or comments concerning the report, please contact the County at the address and phone number listed below or by email at operations@brant.ca.

Drinking Water System:	**Oakland Community Centre**
Drinking Water System Number:	**260099125**
Reporting Period:	**September 10, 2025 – December 31, 2025**

Drinking Water System Owner & Contact Information:
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1.1 System Description

Located at 3 King Street North, Oakland, Ontario, the Oakland Community Centre is a Small Municipal Non-Residential System as defined by Ontario Regulation (O.Reg) 170/03. This drinking water system serves one (1) designated facility, a child and youth care day nursery called Oakland Child Care Centre. The facility has one (1) interested authority, the Ministry of Education. This facility was registered as an O.reg 170 drinking water system with the Ministry on September 10, 2025. This report will cover data from the date of registration to December 31, 2025.

The Oakland Community Centre Drinking Water System consists of one (1) drilled well that extends into the overburden aquifer to a depth of 17.1 metres below ground level. The well is equipped with a submersible pump capable of 0.63 L/s. The water treatment system consists of two (2) treatment trains, both with 25-to-1-micron nominal dual gradient pre-filter, and an NSF 55A rated U.V. irradiation disinfection unit that supplies non-potable water for facility operation and maintenance including water for toilet use and cleaning activities. An additional water treatment system consisting of two (2) NSF 58 rated reverse osmosis filtration units with an NSF 55A rated U.V. irradiation disinfection unit supplies potable water to the dedicated drinking water system.

1.2 Major Expenses

In 2025, the Oakland Community Centre had maintenance and upgrade expenditures of over $35,000 to upgrade the water treatment system to meet the requirements of O. Reg 170. These system upgrades included the installation of an additional UV irradiation disinfection unit, reverse osmosis filtration units and dedicated drinking water taps.

2. Microbiological Testing

2.1 E. coli, Total Coliform, Background (BKG)

Bacteriological tests for E. coli and total coliforms are required monthly from the raw and treated water at the facility. Extra samples are taken after major repairs or maintenance work. Any E. coli or total coliform results above zero in treated water samples must be reported to the Ministry of Environment, Conservation and Parks (MECP) and Medical Officer of Health (MOH). Resamples and any other required actions are taken as quickly as possible.

Bacteriological tests for BKG bacteria are not regulatory but are done as a due diligence action. Background tests are an indicator of the general bacteria population in a water sample. Background bacteria should be less than 200 colonies per 1 mL. Results over 200 colonies per 1 mL may indicate a change in water quality but it is not considered an indicator of unsafe water.

From September through December 2025, prior to the Daycare opening and during the installation of the enhanced treatment system, the system experienced a series of adverse bacteriological results (NDOGN). An increased number of samples were taken during this time to troubleshoot the problem. This issue was resolved by replacing all plumbing post reverse osmosis filtration and installing an additional UV disinfection unit. The results from the 2025 sampling program are summarized in the table below.

Sample Location	# of Samples	Range of E. coli Results (cfu/100ml)	Range of Total Coliform Results (cfu/100ml)	Range of BKG Results (cfu/100ml)
Raw Well #1	5	0-0	0	0-166
Plumbing	10	0-NDOGN	0-NDOGN	0-NDOGN

*NDOGN = No Data: Overgrown with non-target bacteria

3. Chemical Testing

The *Safe Drinking Water Act* requires periodic testing of the water for approximately 60 different chemical parameters. The latest results for all parameters are provided in Appendix A. The sampling frequency varies for different types and sizes of water systems and chemical parameters. If the concentration of a parameter is above half of the Maximum Allowable Concentration (MAC) under the Ontario Drinking Water Quality Standards, an increased testing frequency of once every three (3) months is required by the Regulation. Where concerns regarding a parameter exist, the MECP can also require additional sampling be undertaken.

Information on the health effects and allowable limits of components in drinking water may be found on the MECP web page through the link provided in Appendix A. Additional information on common chemical parameters specific to the Oakland Community Centre Drinking Water System is provided below.

3.1 Sodium

Sodium levels in drinking water are tested once every five (5) years. The aesthetic objective is 200 mg/L meaning at levels less than this the sodium will not impair the taste of the water. When sodium levels are above 20 mg/L the MECP and MOH are notified.

The last sodium sample taken in the Oakland Community Centre Drinking Water System was in 2025 and had a result of 18 mg/L.

3.2 Nitrates

Prior to registration of the Oakland Community Centre as a Small Municipal, Non-Residential - Designated Facility under O. Reg 170/03, nitrates were sampled annually as outlined in the Grand Erie Public Health Directive. The corrective action for nitrate exceedances as an O. Reg 319/08, Small Drinking Water System, was to placard notices at all faucets to advise users of the health risk of elevated nitrates.

As an O. Reg 170 Designated Facility, nitrate levels in the drinking water are tested four (4) times a year. With the drinking water system upgrades in September, additional nitrate samples were taken during the installation and commissioning process to verify the effectiveness of the treatment system. The Maximum Acceptable Concentration (MAC) for nitrates is 10 mg/L. When nitrate levels are above 10 mg/L the MECP and MOH are notified.

The last nitrate sample taken in the Oakland Community Centre Drinking Water System was on December 11, 2025, and had a result of 6.12 mg/L.

3.3 Additional Testing Required by MECP

No additional testing is required by the MECP for this system.

4. Operational Monitoring

4.1 Turbidity

Turbidity of treated water is continuously monitored at the treatment facilities as a change in turbidity can indicate an operational problem. As a minimum, turbidity for each well is required to be tested monthly. Turbidity is measured in nephelometric turbidity units (NTU). Under O.Reg. 170/03 turbidity in groundwater from a secure well or a well with effective in-situ filtration is not reportable however turbidity should be < 1 NTU at the treatment plant and < 5 NTU in the distribution system. A summary of the monitoring results for 2025 is provided in the table below.

Sample Location	Number of Samples	Range of Results (NTU)
Raw Well #1	3	0.13-0.17
Plumbing	3	0.10-0.17

5. Non-Compliance Findings and Adverse Results

This section documents any known incidents of non-compliance or adverse results, and the associated corrective actions taken to resolve the issue. Non-compliance issues are typically identified by either the Operating Authority or the MECP Drinking Water Inspectors. The issues and associated required actions are documented by the Inspectors in the system's Annual Inspection Report. All non-compliance issues are investigated, corrective actions taken and documented using the County's Drinking Water Quality Management System (DWQMS) procedures.

5.1 Non-Compliance Findings

An MECP drinking water system inspection has not yet been conducted at this facility since it was registered as an O. Reg 170/03 site on September 10, 2025.

5.2 Adverse Results

Any adverse results from bacteriological, chemical samples or observations of operational conditions that indicate adverse water quality are reported as required and corrective actions are taken.

On September 17, 2025, the County received notice of an Adverse Water Quality Incident (AWQI) in the drinking water system. The result from the sample location was 15.3 mg/L of nitrates. County procedures were followed immediately, the County notified Grand Erie Public Health, the MECP Spills Action Centre, the Ministry of Education Interested Authority, and the Oakland Childcare Centre Main Contact. In consultation with Grand Erie Public Health, and the MECP, the County of Brant began the installation of an enhanced water treatment system including reverse osmosis filtration with dedicated drinking water taps. The enhanced treatment system effectively brought the nitrate concentration below the maximum acceptable concentration of 10 mg/L.

During the commissioning of the enhanced treatment system and associated distribution system plumbing, the County received notice of an AWQI on September 19, 2025, for bacteria. Following the initial AWQI there were a series of additional AWQIs between September 19, 2025, through November 26, 2025. For all events County procedures were followed immediately including notification of Grand Erie Public Health, the MECP Spills Action Center, the Ministry of Education Interested Authority, and the Oakland Childcare Centre Main Contact. A Boil Water Advisory was issued on November 13, 2025, by Grand Erie Public Health. After numerous system changes and trouble shooting an additional UV irradiation disinfection unit was installed downstream of the reverse osmosis filtration units and all dedicated drinking water system plumbing was replaced and disinfected. Resamples were collected upstream and downstream. All sample results were reported to have 0 CFU Total Coliform, E. coli, and Total Coliform Background and the issue was resolved. The Boil Water Advisory was lifted on November 26, 2025, and the AWQI closed. During the time of these adverse results, the Daycare was not yet occupied, notices were placed at the facility, and any users were notified and provided with bottled water for drinking.

Appendix A: Summary of Chemical Results

1.2 Understanding Chemical Test Results

The following tables summarize the laboratory results of the chemical testing the County is required to complete. Parameters are required to be tested at frequencies as noted below. Explanations on the health impacts of these parameters can be found in the MECP document PSIB 4449e01 titled "Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines" available at https://cvc.ca/wp-content/uploads/2011/03/std01_079707.pdf.

Results are shown as concentrations with units of either milligrams per litre (mg/L) or micrograms per litre (µg/L). 1 mg/L is equal to 1000 µg/L. The Maximum Acceptable Concentration (MAC) is the highest amount of a parameter that is acceptable in drinking water and can be found in the Ontario Drinking Water Quality Standards. The aesthetic objective (A/O) is established for parameters that may impair the taste, odour or colour of water or which may interfere with good quality control practices. For parameters that the Technical Support Document for Ontario Drinking Water Quality Standards, Objectives and Guidelines have not established either a MAC or an A/O, a "-" will indicate this. A result of "ND" stands for "Not Detected" and means that the concentration of the chemical is lower than level that the laboratory equipment is capable of measuring.

Table 1 – Nitrite and Nitrate

Nitrate and nitrite samples are required every three (3) months from the treatment system in normal operation. The sample results after September represent the enhanced drinking water system for compliance with O. Reg 170/03.

Parameter	Sample Date (mm/dd/yy)	Result (mg/L)	MAC (mg/L)	Exceedance
Nitrite (as N)	03/25/2025	<0.010	1.0	No
	05/07/2025	<0.010	1.0	No
	08/18/2025	<0.010	1.0	No
	12/11/2025	<0.010	1.0	No
Nitrate (as N)	03/25/2025	16.7	10.0	Yes
	05/07/2025	15.9	10.0	Yes
	08/18/2025	15.9	10.0	Yes
	12/11/2025	6.12	10.0	No

Table 2 – Sodium and Fluoride

Testing of fluoride and sodium is required every five (5) years from the treatment system.

Parameter	Sample Date (mm/dd/yy)	Result (mg/L)	MAC (mg/L)	A/O (mg/L)	Exceedance
Fluoride	09/15/25	<0.10	1.5	-	No
Sodium	09/15/25	16	20	200	No

**Sodium levels between 20 – 200 mg/L must be reported every five (5) years.*

***Natural levels of fluoride between 1.5 – 2.4 mg/L must be reported every five (5) years.*

Table 3 – Lead

The following Table summarizes the most recent results for the Lead Testing Program, having been conducted in 2025. Lead samples are taken every year from the plumbing system.

Parameter	Number of Samples	Result Range (Min – Max)	MAC	A/O	Exceedance
Plumbing (mg /L)	1	<0.00050	0.01	-	No

Table 4 – Schedule 23 Inorganic Parameters

The following Table summarizes the most recent test results for Schedule 23. Testing is required every five (5) years for the secure, non-GUDI well in the Oakland Community Centre Drinking Water System.

Parameter	Sample Date (mm/dd/yy)	Result	Unit of Measure	MAC	A/O	Exceedance
Antimony	09/15/25	<0.00050	mg/L	0.006	-	No
Arsenic	09/15/25	<0.0010	mg/L	0.01	-	No
Barium	09/15/25	0.34	mg/L	1.0	-	No
Boron	09/15/25	0.034	mg/L	5.0	-	No
Cadmium	09/15/25	<0.000090	mg/L	0.005	-	No
Chromium	09/15/25	<0.0050	mg/L	0.05	-	No
Iron	04/01/25	0.10	mg/L	-	0.30	No
Mercury	09/15/25	<0.00010	mg/L	0.001	-	No
Selenium	09/15/25	<0.0020	mg/L	0.05	-	No
Uranium	09/15/25	0.00047	mg/L	0.02	-	No

Table 5 – Schedule 24 Organic Parameters

The following Table summarizes the Organic parameters in Schedule 24 sampled during this reporting period or the most recent sample results. Testing is required every five (5) years for the secure, non-GUDI well in the Oakland Community Centre Drinking Water System.

Parameter	Sample Date (mm/dd/yy)	Result Value	Unit of Measure	MAC	A/O	Exceedance
1,1-Dichloroethylene	09/15/25	<0.10	ug/L	14	-	No
1,2-Dichlorobenzene	09/15/25	<0.20	ug/L	200	-	No
1,2-Dichloroethane	09/15/25	<0.20	ug/L	5	-	No
1,4-Dichlorobenzene	09/15/25	<0.20	ug/L	5	-	No
2,3,4,6-Tetrachlorophenol	09/15/25	<0.50	ug/L	100	-	No
2,4,6-Trichlorophenol	09/15/25	<0.50	ug/L	5	-	No

Parameter	Sample Date (mm/dd/yy)	Result Value	Unit of Measure	MAC	A/O	Exceedance
2,4-Dichlorophenoxy acetic acid (2,4-D)	09/15/25	<1.0	µg/L	100	-	No
2-4 Dichlorophenol	09/15/25	<0.25	µg/L	900	-	No
Alachlor	09/15/25	<0.50	µg/L	5	-	No
Aroclor 1016	09/15/25	<0.05	µg/L	-	-	No
Aroclor 1221	09/15/25	<0.05	µg/L	-	-	No
Aroclor 1232	09/15/25	<0.05	µg/L	-	-	No
Aroclor 1242	09/15/25	<0.05	µg/L	-	-	No
Aroclor 1248	09/15/25	<0.05	µg/L	-	-	No
Aroclor 1254	09/15/25	<0.05	µg/L	-	-	No
Aroclor 1260	09/15/25	<0.05	µg/L	-	-	No
Atrazine	09/15/25	<0.50	µg/L	-	-	No
(Atrazine+Desethyl-atrazine)	09/15/25	<1.0	µg/L	5	-	No
Benzene	09/15/25	<0.10	µg/L	1	-	No
Benzo(a)pyrene	09/15/25	<0.0050	µg/L	0.01	-	No
Bromoxynil	09/15/25	<0.50	µg/L	5	-	No
Carbaryl	09/15/25	<5.0	µg/L	90	-	No
Carbofuran	09/15/25	<5.0	µg/L	90	-	No
Carbon Tetrachloride	09/15/25	<0.10	µg/L	2	-	No
Chlorobenzene	09/15/25	<0.10	µg/L	80	-	No
Chlorpyrifos (Dursban)	09/15/25	<1.0	µg/L	90	-	No
Desethyl-atrazine	09/15/25	<0.50	µg/L	-	-	No
Diazinon	09/15/25	<1.0	µg/L	20	-	No
Dicamba	09/15/25	<1.0	µg/L	120	-	No
Diclofop-methyl	09/15/25	<0.90	µg/L	9	-	No
Dimethoate	09/15/25	<2.5	µg/L	20	-	No

Parameter	Sample Date (mm/dd/yy)	Result Value	Unit of Measure	MAC	A/O	Exceedance
Diquat	09/15/25	<7.0	µg/L	70	-	No
Diuron	09/15/25	<10	µg/L	150	-	No
Glyphosate	09/15/25	<10	µg/L	280	-	No
Guthion	09/15/25	<2.0	µg/L	20	-	No
Malathion	09/15/25	<5.0	µg/L	190	-	No
MCPA	09/15/25	<10	µg/L	100	-	No
Methylene Chloride	09/15/25	<0.50	µg/L	50	-	No
Metolachlor	09/15/25	<0.50	µg/L	50	-	No
Metribuzin	09/15/25	<5.0	µg/L	80	-	No
Paraquat	09/15/25	<1.0	µg/L	10	-	No
Pentachlorophenol	09/15/25	<0.50	µg/L	60	-	No
Phorate	09/15/25	<0.50	µg/L	2	-	No
Picloram	09/15/25	<5.0	µg/L	190	-	No
Total PCB	09/15/25	<0.05	µg/L	3	-	No
Prometryne	09/15/25	<0.25	µg/L	1	-	No
Simazine	09/15/25	<1.0	µg/L	10	-	No
Terbufos	09/15/25	<0.50	µg/L	1	-	No
Tetrachloroethylene	09/15/25	<0.10	µg/L	10	-	No
Toluene	09/15/25	<0.20	µg/L	60	24	No
Triallate	09/15/25	<1.0	µg/L	230	-	No
Trichloroethylene	09/15/25	<0.10	µg/L	5	-	No
Trifluralin	09/15/25	<1.0	µg/L	45	-	No
Vinyl Chloride	09/15/25	<0.20	µg/L	1	-	No