

2024 SECTION 11 ANNUAL REPORT

HOCKLEY
DRINKING WATER
SYSTEM



For the period of
January 1st, 2024 to December 31st, 2024

Prepared for the Corporation of the Township of Adjala-Tosorontio by the Ontario Clean Water Agency

This report was prepared in accordance with the requirements of [O.Reg 170/03, Section 11, Annual reports](#) for the following system and reporting period:

Drinking Water System Number:	220005036
Drinking Water System Name:	Hockley Drinking Water System
Drinking Water System Owner:	The Corporation of the Township of Adjala-Tosorontio
Drinking Water System Category:	Small Municipal Residential
Reporting Period:	January 1, 2024 to December 31, 2024

Does the Drinking Water System serve more than 10,000 people?

No

Is the Annual Report available to the public at no charge on a website on the Internet?

Yes

Note: If a large municipal residential system serves more than 10,000 people, the owner of the system shall ensure that a copy of every report prepared under this section is available to the public at no charge on a website on the Internet. O. Reg. 170/03, Section 11. (10)

Location where Summary Report required under O. Reg 170/03, Schedule 22 will be available for inspection. (O. Reg 170/03, Section 11.(6)(f)):

- Township of Adjala-Tosorontio Municipal Office, 7855 Side Road 30, Alliston, ON
- <https://www.adjtos.ca/en/living-in-our-community/water-and-sewer.aspx>

Note: This is required for large municipal residential systems or small municipal residential systems.

List all Drinking Water Systems (if any), which receive all of their drinking water from the system:

Drinking Water System Name	Drinking Water System Number
N/A	N/A

Is a copy of the annual report provided to all Drinking Water System owners that are connected to this system and to whom this system provides all of its drinking water?

N/A

How system users are notified that the annual report is available, and is free of charge. (O.Reg 170/03, Section 11.(7))

- Public access/notice via the web
- Public access/notice via Government Office

- | | |
|-------------------------------------|----------------------------------------------|
| <input type="checkbox"/> | Public access/notice via a newspaper |
| <input checked="" type="checkbox"/> | Public access/notice via Public Request |
| <input type="checkbox"/> | Public access/notice via a Public Library |
| <input type="checkbox"/> | Public access/notice via other method: _____ |

Note: The owner of a drinking water system shall ensure that a copy of an annual report for the system is given, without charge, to every person who requests a copy. ((O.Reg 170/03, Section 11.(7)):

Description of Drinking Water System (O.Reg 170/03, Section 11.(6)(a)):

The Hockley Drinking Water (DWS) system is classified as a Limited Groundwater Subsystem and categorized as a Small Municipal Residential Drinking Water System under O.Reg 170/03, servicing an approximate population of 42 persons through 14 service connections, within the Hamlet of Hockley, Township of Adjala-Tosorontio. Water is supplied via one (1) municipal well and one (1) pumphouse.

The raw water for the Hockley pumphouse is supplied from one (1) drilled groundwater well, Well1 (PW1) The water pumped from the well is treated with sodium hypochlorite (for primary and secondary disinfection). Online equipment continuously monitors and records free chlorine residual and raw water flowrates. The pumphouse is also equipped with standby power in the event of a power failure.

List of water treatment chemicals used by the system during the reporting period (O.Reg 170/03, Section 11.(6)(a)):

- Sodium Hypochlorite 12% Solution

Significant expenses were incurred to:

- | | |
|-------------------------------------|---------------------------------------|
| <input checked="" type="checkbox"/> | Install required equipment |
| <input checked="" type="checkbox"/> | Repair required equipment |
| <input checked="" type="checkbox"/> | Replace required equipment |
| <input type="checkbox"/> | No significant expenses were incurred |

Description of major expenses during the reporting period to install, repair or replace required equipment (O.Reg 170/03, Section 11.(6)(e)):

- UPS replacement
- Probes and Caps for Chlorine analyzers
- Chemical Pump Rebuild Kits
- Generator Repairs
- Distribution System Repairs
- Redlion System updates and upgrades
- Asset Validation
- Distribution system swabbing

Summary of any reports/notices submitted to the Ministry and/or Spills Action Centre in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg 170/03 during the reporting period, including a description of any corrective actions taken under Schedule 17 or 18 (O. Reg 170/03, Section 11.(6)(b),(d):

Incident Date (yyyy/mm/dd)	Parameter/ Notice of	Result & Unit	Summary of Reporting, Corrective Actions & Resolution
2024/08/21	Distribution Water: Microbiological; Total Coliform and <i>E.Coli</i>	NDOGT (No Data: Overgrown with non-target)	<ul style="list-style-type: none"> • AWQI #166060 – Adverse distribution microbiological sampling results • On August 21, 2024, Aquatic & Environmental Laboratory notified OCWA of adverse distribution microbiological sampling results from the Hockley sampling station. Results from routine sampling were no data overgrown with target bacteria (NDOGT) for Total Coliforms and <i>E.Coli</i> • Verbal and written notification of incident provided on August 21, 2024 and August 22, 2024 to SAC, MoH, and local Ministry office. • As per O.Reg 170/03, Schedule 18-5 corrective actions include (if a report is made in respect to <i>E.Coli</i>) a Boil Water Advisory (BWA) must be issued- BWA was issued and notices were hand delivered to residents on August 22, 2024. • Further corrective actions include: resampling and testing- samples were collected on August 21, August 22, 2024, sample tap was flushed, disinfected and chlorine residual(s) were taken- Free Chlorine 1.36 mg/L, Total Chlorine 1.58 mg/L • Resample results were received August 23 and August 24, 2024 and were within regulatory requirements- 0 mg/L for TC and <i>E.Coli</i>. • Boil Water Advisory was lifted and written notice of resolution was sent on August 26, 2024. No further actions required.

Table 1. Microbiological testing done under the Schedule 10, 11 or 12 (as applicable) of O.Reg 170/03 during this reporting period (O.Reg 170/03, Section 11.(6)(c)).

Location	Number of Samples	Range of E. Coli or Fecal Results		Range of Total Coliform Results		Number of HPC Samples	Range of HPC Samples	
		Min.	Max.	Min.	Max.		Min.	Max.
RW, PW1 ^{1A}	12	0	0	0	0	N/A	N/A	N/A
Distribution ^{1B}	29	0	NDOG ^{1C}	0	NDOG ^{1C}	29	<10	400

Note: HPC = Heterotrophic Plate Count

Note: Units for E.Coli or Fecal Results are cfu/100 mL, units for Total Coliform Results are cfu/100 mL, units for HPC results are cfu/1mL

^{1A}RW = Raw Water. O.Reg 170/03, Schedule 11-3. (1)(3) requires for a small municipal residential system that a water sample is taken at least once every month from the drinking water system’s raw water, before any treatment is applied to the water and tested for E.Coli and total coliforms.

^{1B}O.Reg 170/03 Schedule 11-2.(1)(2) requires at least one distribution sample be taken every two weeks and be tested for E.Coli, Total Coliforms and HPC

^{1C}August 21 and 22, 2024- AWQI #166060 was reported and a Boil Water Advisory was issued for a distribution sample taken in August, 2024. Results from routine sampling were no data overgrown with target bacteria (NDOGT) for Total Coliforms and E.Coli. See section “Summary of any reports/notices submitted to the Ministry and/or Spills Action Centre” for more details.

Table 2. Operational testing done under Schedule 7, 8 or 9 (as applicable) O. Reg 170/03 during the period covered by this Annual Report (O. Reg 170/03, Section 11.(6)(c)).

Parameter & Location	Number of Samples	Range of Results	
		Min.	Max.
Turbidity, In-House (NTU) – RW, PW1 ^{2A}	12	0.19	0.85
Free Chlorine Residual, Continuous (mg/L) – TW ^{2B}	8760	0.39	4.98 ^{2D}
Free Chlorine Residual, Distribution (mg/L) – DW ^{2C}	105	0.72	2.70

Note: The number of samples used for continuous monitoring units is 8760.

^{2A}O.Reg 170/03 Schedule 7-3.(1)(1.1) requires a raw water sample be taken at least once every month if the drinking water system obtains water from a raw water supply that is ground water, and tested for turbidity.

^{2B}O.Reg 170/03 Schedule 7-2.(1) requires a drinking water system that provides chlorination for primary disinfection to sample and test for free chlorine residual with continuous monitoring equipment in the treatment process at or near a location where the intended contact time has just been completed

^{2C}O.Reg 170/03 Schedule 7-2.(5) requires a small municipal residential system that provides secondary disinfection to take at least two distribution samples each week and immediately tested for free chlorine residual, if the system provides chlorination and does not provide chloramination

^{2D}February 17, July 30 and July 31, 2024- High free chlorine incidents occurred. Operations staff responded to high chlorine alarms and back flushed the system and high chlorinated water was flushed to waste.

Table 3. Summary of additional testing and sampling results carried out in accordance with the requirement of an approval, municipal drinking water licence or order (including OWRA) or other legal instrument during the reporting period and 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 (O. Reg 170/03, Section 11.(6)(c)):

Legal Instrument & Issue Date (yyyy/mm/dd)	Sample Location & Parameter	Sampling Frequency	Allowable Result	Actual Result
N/A	N/A	N/A	N/A	N/A

Table 4. Summary of Inorganic parameters tested during this reporting period or the most recent sample results (O.Reg 170/03, Section 11.(6)(c))

Parameter & Location	Sample Date ^{4A} (yyyy/mm/dd)	Sample Result	Maximum Allowable Concentration (MAC)	Exceedance of MAC
Antimony: Sb (µg/L) - TW	2021/01/25	<MDL 0.9	6.0	No
Arsenic: As (µg/L) - TW	2021/01/25	2.5	25.0	No
Barium: Ba (µg/L) - TW	2021/01/25	139.0	1000.0	No
Boron: B (µg/L) - TW	2021/01/25	30.0	5000.0	No
Cadmium: Cd (µg/L) - TW	2021/01/25	0.009	5.0	No
Chromium: Cr (µg/L) - TW	2021/01/25	0.21	50.0	No
Mercury: Hg (µg/L) - TW	2021/01/25	<MDL 0.01	1.0	No
Selenium: Se (µg/L) - TW	2021/01/25	<MDL 0.04	50.0	No
Uranium: U (µg/L) - TW	2021/01/25	0.244	20.0	No
Fluoride (mg/L) - TW	2022/01/18 ^{4B}	<MDL 0.06	1.5	No
Nitrite (mg/L) – TW	2024/01/15	<MDL 0.003	1.0	No
Nitrite (mg/L) – TW	2024/04/15	<MDL 0.003	1.0	No
Nitrite (mg/L) – TW	2024/07/22	<MDL 0.003	1.0	No
Nitrite (mg/L) – TW	2024/10/21	<MDL 0.003	1.0	No
Nitrate (mg/L) – TW	2024/01/15	<MDL 0.006	10.0	No
Nitrate (mg/L) – TW	2024/04/15	<MDL 0.006	10.0	No
Nitrate (mg/L) – TW	2024/07/22	<MDL 0.006	10.0	No
Nitrate (mg/L) - TW	2024/10/21	<MDL 0.006	10.0	No

Parameter & Location	Sample Date (yyyy/mm/dd)	Sample Result	Aesthetic Objective (AO)	Exceedance	
				AO	> 20 mg/L
Sodium: Na (mg/L) - TW	2022/01/18 ^{4A}	11.5	200	No	No

Note: MDL = Minimum Detection Limit, TW = Treated Water

^{4A}*Inorganic Parameters (Schedule 23) are required to be tested every 60 months for a small municipal residential system or non-municipal year-round residential system (O. Reg 170/03 Schedule 13-2.(3)). The last set of samples was collected and tested in 2021, the next set of samples is scheduled to be collected and tested in 2026.*

^{4B}*Fluoride is reportable every 60 months. The most recent Fluoride samples were tested in 2022, the next set of samples is scheduled to be tested in 2027.*

Note: There is no regulatory Maximum Allowable Concentration (MAC) Sodium. The aesthetic objective (AO) for sodium in drinking water is 200 mg/L. The local Medical Officer of Health should be notified when the sodium concentration exceeds 20 mg/L so that this information may be communicated to local physicians for their use with patients on sodium restricted diets.

^{4C}*Sodium is reportable every 60 months. The most recent Sodium samples were tested in 2022 the next set of samples is scheduled to be tested in 2027.*

Table 5: Summary of lead testing under Schedule 15.1 during this reporting period (O.Reg 170/03, Section 11.(6)(g))

Location/Type & Parameter	Number of Samples ^{5A}	Range of Results		Number of Lead Exceedances
		Min.	Max.	MAC = 10 µ/L
Period: January 1 to April 15				
Plumbing – Lead (µg/L) ^{5B}	N/A	N/A	N/A	N/A
Distribution – Lead (µg/L) ^{5C}	1	0.14	0.14	0
Distribution – Alkalinity (mg/L as CaCO ₃)	1	215	215	N/A
Distribution – pH	1	8.22	8.22	N/A
Period: June 15 to October 15				
Plumbing – Lead (µg/L) ^{5B}	N/A	N/A	N/A	N/A
Distribution – Lead (µg/L) ^{5C}	1	1.19	1.19	0
Distribution – Alkalinity (mg/L as CaCO ₃)	1	225	225	N/A
Distribution – pH	1	7.0	7.0	N/A
Period: December 15 to 31				
Plumbing – Lead (µg/L) ^{5B}	N/A	N/A	N/A	N/A
Distribution – Lead (µg/L) ^{5C}	N/A	N/A	N/A	N/A
Distribution – Alkalinity (mg/L as CaCO ₃)	N/A	N/A	N/A	N/A
Distribution - pH	N/A	N/A	N/A	N/A

Note: this is required for large municipal residential systems, small municipal residential systems or non-municipal year-round residential system. (O.Reg 170/03, Section 11.(6)(g))

^{5A}*The number of sampling points for the system is based on the population served by the system. In 2024 the number of people served by the system was 42 persons (as confirmed with the Owner on December 4, 2023) and therefore requires one (1) distribution sampling points per sampling period*

^{5B}*Plumbing samples are not applicable as this system qualifies for the plumbing exemption per O. Reg 170/03 Schedule 15.1-5 (9) (10).*

^{5c}This system follows a reduced sampling schedule (O.Reg 170/03, Section 15.1.5). Distribution lead samples are collected every 36 months. The most recent set of distribution lead samples were collected within the winter period of December 15, 2023 to April 15, 2024 and summer period of June 15, 2024 to October 15, 2024. The next set of distribution lead samples is scheduled to be collected within the winter period of December 15, 2026 to April 15, 2027 and summer period of June 15, 2027 to October 15, 2027.

Table 6: Summary of Organic parameters sampled during this reporting period or the most recent sample results (O.Reg 170/03, Section 11.(6)(c)).

Parameter & Location	Sample Date (yyyy/mm/dd)	Sample Result	Maximum Allowable Concentration (MAC)	Exceedance of MAC
Alachlor (µg/L) - TW	2021/01/25	<MDL 0.02	5.0	No
Atrazine + N-dealkylated metabolites (µg/L) - TW	2021/01/25	<MDL 0.01	5.0	No
Azinphos-methyl (µg/L) - TW	2021/01/25	<MDL 0.05	20.0	No
Benzene (µg/L) - TW	2021/01/25	<MDL 0.32	1.0	No
Benzo(a)pyrene (µg/L) - TW	2021/01/25	<MDL 0.004	0.01	No
Bromoxynil (µg/L) - TW	2021/01/25	<MDL 0.33	5.0	No
Carbaryl (µg/L) - TW	2021/01/25	<MDL 0.05	90.0	No
Carbofuran (µg/L) - TW	2021/01/25	<MDL 0.01	90.0	No
Carbon Tetrachloride (µg/L) - TW	2021/01/25	<MDL 0.17	2.0	No
Chlorpyrifos (µg/L) - TW	2021/01/25	<MDL 0.02	90.0	No
Diazinon (µg/L) - TW	2021/01/25	<MDL 0.02	20.0	No
Dicamba (µg/L) - TW	2021/01/25	<MDL 0.2	120.0	No
1,2-Dichlorobenzene (µg/L) - TW	2021/01/25	<MDL 0.41	200.0	No
1,4-Dichlorobenzene (µg/L) - TW	2021/01/25	<MDL 0.36	5.0	No
1,2-Dichloroethane (µg/L) - TW	2021/01/25	<MDL 0.35	5.0	No
1,1-Dichloroethylene (µg/L) - TW	2021/01/25	<MDL 0.33	14.0	No
Dichloromethane (Methylene Chloride) (µg/L) - TW	2021/01/25	<MDL 0.35	50.0	No
2,4-Dichlorophenol (µg/L) - TW	2021/01/25	<MDL 0.15	900.0	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (µg/L) - TW	2021/01/25	<MDL 0.19	100.0	No
Diclofop-methyl (µg/L) - TW	2021/01/25	<MDL 0.4	9.0	No
Dimethoate (µg/L) - TW	2021/01/25	<MDL 0.06	20.0	No
Diquat (µg/L) - TW	2021/01/25	<MDL 1.0	70.0	No
Diuron (µg/L) - TW	2021/01/25	<MDL 0.03	150.0	No
Glyphosate (µg/L) - TW	2021/01/25	<MDL 1.0	280.0	No
Malathion (µg/L) - TW	2021/01/25	<MDL 0.02	190.0	No
Metolachlor (µg/L) - TW	2021/01/25	<MDL 0.01	50.0	No
Metribuzin (µg/L) - TW	2021/01/25	<MDL 0.02	80.0	No
Monochlorobenzene (Chlorobenzene) (µg/L) - TW	2021/01/25	<MDL 0.3	80.0	No
Paraquat (µg/L) - TW	2021/01/25	<MDL 1.0	10.0	No

Parameter & Location	Sample Date (yyyy/mm/dd)	Sample Result	Maximum Allowable Concentration (MAC)	Exceedance of MAC
PCB (µg/L) - TW	2021/01/25	<MDL 0.04	3.0	No
Pentachlorophenol (µg/L) - TW	2021/01/25	<MDL 0.15	60.0	No
Phorate (µg/L) - TW	2021/01/25	<MDL 0.01	2.0	No
Picloram (µg/L) - TW	2021/01/25	<MDL 1.0	190.0	No
Prometryne (µg/L) - TW	2021/01/25	<MDL 0.03	1.0	No
Simazine (µg/L) - TW	2021/01/25	<MDL 0.01	10.0	No
Terbufos (µg/L) - TW	2021/01/25	<MDL 0.01	1.0	No
Tetrachloroethylene (µg/L) - TW	2021/01/25	<MDL 0.35	10.0	No
2,3,4,6-Tetrachlorophenol (µg/L) - TW	2021/01/25	<MDL 0.2	100.0	No
Triallate (µg/L) - TW	2021/01/25	<MDL 0.01	230.0	No
Trichloroethylene (µg/L) - TW	2021/01/25	<MDL 0.44	5.0	No
2,4,6-Trichlorophenol (µg/L) - TW	2021/01/25	<MDL 0.25	5.0	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (µg/L) - TW	2021/01/25	<MDL 0.12	100.0	No
Trifluralin (µg/L) - TW	2021/01/25	<MDL 0.02	45.0	No
Vinyl Chloride (µg/L) - TW	2021/01/25	<MDL 0.17	1.0	No
Trihalomethane: Total Annual Average (µg/L) - DW	2024 (Quarterly)	13.50	100.0	No
Haloacetic Acid: Total Annual Average (µg/L) - DW	2024 (Quarterly)	8.775	80.0	No

Note: TW = Treated Water, DW = Distribution Water, MDL = Minimum Detection Limit, MAC = Maximum Allowable Concentration, HAA = Haloacetic Acids

^{6A}Organic Parameters (Schedule 24) are required to be tested every 60 months for a small municipal residential system or non-municipal year-round residential system (O. Reg 170/03 Schedule 13-4.(3)). The last set of samples was collected and tested in 2021, the next set of samples is scheduled to be collected and tested in 2026.

Table 7: List of Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards for the reporting period.

Parameter & Location	Sample Date (yyyy/mm/dd)	Sample Result
N/A	N/A	N/A