

Drinking Water Systems Regulation O.Reg. 170/03

TYENDINAGA PUBLIC SCHOOL ANNUAL REPORT

Drinking water system number:	260014066
Drinking water system name:	Tyendinaga Public School
Drinking water system owner:	Hastings and Prince Edward District School Board
Drinking water system category:	Small Non-Municipal Non-Residential
Period Being Reported:	April 1st 2021 - March 31st, 2022

Number of Designated Facilities Served:	2
Copies provided of annual report to all designated facilities served:	YES
Number of interested authorities you report to:	2
Copies provided of annual report to all interested authorities for each designated facility served:	YES
List all drinking water systems (if any) which receive all of their drinking water from your system:	Tyendinaga Public School and YMCA Kids Club - Tyendinaga site (DWIS#500225954)
Copies provided of annual report to all drinking water system owners to whom you provide all of its drinking water:	YES
Indicate method of notifying system users of annual report availability free of charge:	Website and Public Request

Description of Drinking Water System:

The Tyendinaga Public School drinking water system consists of one well, located in front of the school, equipped with a submersible pump that supplies raw water to a mechanical room inside the school. The pressure system and other miscellaneous pipes and fittings are located in the mechanical room. The water is treated with hydrogen peroxide for organics removal and then passes through two pressure tanks, to 3 contact tanks in series. Two granular activated carbon filters in parallel lead to two water softeners in parallel, two 5 micron cartridge filters, two 1 micron cartridge filters in parallel, then to two UV disinfection units with automatic shut-offs. A chlorine injection point is added post treatment to ensure supplemental chlorination is attained. Chlorine residual is measured each day the school is open.

A service contract is in place with MacLellan Water Technologies to maintain the treatment systems.

To satisfy treatment requirements as described in Ontario Regulation 170/03, Ultraviolet disinfection equipment is used as primary disinfection. In addition to meeting the minimum treatment requirement we add chlorination as a means of secondary disinfection, though it is not required in this system. The free chlorine residual is sampled and recorded on a daily basis and the UV solenoid is tested for proper functioning on a weekly basis.

A professional engineer hired by the Board certified that the water supply and works do meet the minimum standards set out in the Ontario Regulation 170/03. They also certified that the minimum treatment laid out in Schedule 2 of the regulation is being complied with and that all equipment required by Schedule 6 and Schedule 9 of the regulations is provided. An updated Engineers report was completed in 2018.

Water treatment chemicals used over this reporting period:

12% Sodium hypochlorite solution

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Significant Expenses incurred included (0=N/A, X=APPLICABLE):

0	Install Required Equipment
0	Repair Required Equipment
X	Replace Required Equipment

Description and breakdown of monetary expenses incurred: April 1st 2021 - March 31st, 2022

Water system upgrades and replacements:

No upgrades or replacements of equipment were completed during this year.

\$0.00

Routine system maintenance (Including service contracts):

Regular maintenance includes monthly checks of the water treatment system by MacLellan Water Technologies and the minor repair/replacement of necessary parts/equipment(including cistern maintenance). The costs for regular maintenance on water treatment equipment was :

\$8,165.80

Water sampling and analysis:

The cost for microbiological and chemical water sampling by Greer Galloway and analytical fees was:

\$4,227.19

Staff Training:

Costs for required training of staff under Ontario Regulation 170/03 was:

\$220.00

Details on notices submitted in accordance with subsection 18(1) of the SDWA or section 16-4 of Schedule 16 of O.Reg. 170/03 and reported to SAC:

April 1st 2021 - March 31st, 2022

Incident Date	Parameter	Result	Corrective Action	Corrective action date
31-May-21	Sodium	27.4mg/L	Resampled. Signs posted. Bottled water supplied as alternative.	Immediate

Microbiological testing done under the Schedule 10, 11 or 12 of O.Reg 170/03:

April 1st 2021 - March 31st, 2022

	Number of samples	Range of E.Coli or Fecal Results (min-max)	Range of TC Results (min-max)
Raw	12	0-0	0-0
Treated- Staff Kitchen	20	0-0	0-0
Distribution	20	0-0	0-0

Operational testing done under Schedule 7, 8 or 9 of O.Reg. 170/03:

April 1st 2021 - March 31st, 2022

	Number of Grab Samples	Range of Results (min-max)
Turbidity	20	0.16-4.74
Chlorine	196	0.05->2.20

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Inorganic testing done during this reporting period or most recent sample results:				
Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	31-May-21	<0.0001	mg/L	No
Arsenic	31-May-21	<0.0001	mg/L	No
Barium	31-May-21	0.008	mg/L	No
Boron	31-May-21	0.078	mg/L	No
Cadmium	31-May-21	<0.000015	mg/L	No
Chromium	31-May-21	<0.002	mg/L	No
Fluoride	31-May-21	<0.1	mg/L	No
Lead- STANDING	14-Oct-21	0.00286	mg/L	No
Lead- FLUSHED		0.00143	mg/L	No
Mercury	31-May-21	<0.00002	mg/L	No
Nitrite	16-Mar-21	<0.1	mg/L	No
Nitrate		<0.1	mg/L	No
Selenium	31-May-21	<0.001	mg/L	No
Sodium	31-May-21	27.4	mg/L	Yes
Uranium	31-May-21	<0.00005	mg/L	No

Organic testing done during this reporting period or most recent sample results:				
Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	31-May-21	< 0.0003	mg/L	No
Atrazine + N-dealkylated metabolites	31-May-21	< 0.0005	mg/L	No
Azinphos-methyl	31-May-21	< 0.001	mg/L	No
Benzene	31-May-21	< 0.0005	mg/L	No
Benzo(a)pyrene	31-May-21	< 0.000006	mg/L	No
Bromoxynil	31-May-21	< 0.0005	mg/L	No
Carbaryl	31-May-21	< 0.003	mg/L	No
Carbofuran	31-May-21	< 0.001	mg/L	No
Carbon Tetrachloride	31-May-21	< 0.0002	mg/L	No
Chlorpyrifos	31-May-21	< 0.0005	mg/L	No
Diazinon	31-May-21	< 0.001	mg/L	No
Dicamba	31-May-21	< 0.01	mg/L	No
1,2-Dichlorobenzene	31-May-21	< 0.0005	mg/L	No
1,4-Dichlorobenzene	31-May-21	< 0.0005	mg/L	No
1,2-Dichloroethane	31-May-21	< 0.0005	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	31-May-21	< 0.0005	mg/L	No
Dichlormethane	31-May-21	< 0.005	mg/L	No
2,4-Dichlorophenol	31-May-21	< 0.0002	mg/L	No
2,4-Dichlorophenoxyacetic acid (2,4-D)	31-May-21	< 0.01	mg/L	No
Diclofop-methyl	31-May-21	< 0.0009	mg/L	No
Dimethoate	31-May-21	< 0.001	mg/L	No
Diquat	31-May-21	< 0.005	mg/L	No
Diuron	31-May-21	< 0.005	mg/L	No
Glyphosate	31-May-21	< 0.025	mg/L	No
Malathion	31-May-21	< 0.005	mg/L	No

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2-Methyl-4-chlorophenoxyacetic acid (MCPA)	31-May-21	< 0.01	mg/L	No
Metolachlor	31-May-21	< 0.003	mg/L	No
Metribuzin	31-May-21	< 0.003	mg/L	No
Monochlorobenzene	31-May-21	< 0.0005	mg/L	No
Paraquat	31-May-21	< 0.001	mg/L	No
Pentachlorophenol	31-May-21	< 0.0002	mg/L	No
Phorate	31-May-21	< 0.0003	mg/L	No
Picloram	31-May-21	< 0.015	mg/L	No
PolyChlorinated Biphenyls (PCB)	31-May-21	< 0.00005	mg/L	No
Prometryne	31-May-21	< 0.0001	mg/L	No
Simazine	31-May-21	< 0.0005	mg/L	No
Terbufos	31-May-21	< 0.0005	mg/L	No
Tetrachloroethylene	31-May-21	< 0.0005	mg/L	No
2,3,4,6-Tetrachlorophenol	31-May-21	< 0.0002	mg/L	No
Triallate	31-May-21	< 0.01	mg/L	No
Trichloroethylene	31-May-21	< 0.0005	mg/L	No
2,4,6-Trichlorophenol	31-May-21	< 0.0002	mg/L	No
Trifluarlin	31-May-21	< 0.0005	mg/L	No
THM	5-Oct-21	0.026	mg/L	No
Vinyl Chloride	31-May-21	< 0.0002	mg/L	No