

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 1, 2020 - March 31, 2021

Number of Designated Facilities Served:	2
Copies provided of annual report to all designated facilities served:	YES
Number of interested authorities you report to:	3
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.

Water treatment chemicals used over this reporting period:

Hydrogen Peroxide, 12% Sodium hypochlorite solution

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

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

Description and breakdown of monetary expenses incurred: April 1, 2020 - March 31, 2021

Water system upgrades and replacements:

Replacement - Ballast and parts replacement for UVMMax D4, E4plus **\$9,729.60**

Routine system maintenance (Including service contracts):

Regular maintenance includes monthly checks of the water treatment system. Where components are replaced as regular maintenance (ie filters), that cost is noted under upgrades/replacements/part repair. The costs for regular maintenance on water treatment equipment was : **\$3,609.29**

Water sampling and analysis:

The cost for microbiological and chemical water sampling by Greer Galloway and analytical fees was: **\$2,793.66**

Staff Training:

Costs for required training of staff under Ontario Regulation 170/03 was: **\$84.62**

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 1, 2020 - March 31, 2021

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective action date
No incidents.					

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

April 1, 2020 - March 31, 2021

	Number of samples	Range of E.Coli or Fecal Results (min-max)	Range of TC Results (min-max)
Raw	10	0-0	0-0
Treated- Staff Kitchen	17	0-0	0-0
Distribution	17	0-0	0-0

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

April 1, 2020 - March 31, 2021

	Number of Grab Samples	Range of Results (min-max)
Turbidity	17	0.22 - 2.48
Chlorine	180	0.07 ->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		16-Jan-18	<0.0001	mg/L	No
Arsenic		16-Jan-18	<0.0001	mg/L	No
Barium		16-Jan-18	0.004	mg/L	No
Boron		16-Jan-18	0.047	mg/L	No
Cadmium		16-Jan-18	<0.00002	mg/L	No
Chromium		16-Jan-18	<0.002	mg/L	No
*Lead	STANDING	5-Oct-20	0.00345	mg/L	No
	FLUSHED	5-Oct-20	0.00164	mg/L	No
Mercury		16-Jan-18	<0.00002	mg/L	No
Selenium		16-Jan-18	<0.001	mg/L	No
Sodium		16-Jan-18	14.7	mg/L	No
Uranium		16-Jan-18	0.00007	mg/L	No
Fluoride		16-Jan-18	<0.1	mg/L	No
Heterotrophic Plate Count		16-Jan-18	<10	cfu/mL	No
Nitrite - 4th quarter result		Mar-21	<0.1	mg/L	No
Nitrate - 4th quarter result		Mar-21	0.2	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		17-Jan-18	<0.0003	mg/L	No
Atrazine + N-dealkylated metabolites		17-Jan-18	<0.0005	mg/L	No
Azinphos-methyl		17-Jan-18	<0.001	mg/L	No
Benzene		17-Jan-18	<0.0005	mg/L	No
Benzo(a)pyrene		17-Jan-18	<0.000005	mg/L	No
Bromoxynil		17-Jan-18	<0.00003	mg/L	No
Carbaryl		17-Jan-18	<0.003	mg/L	No
Carbofuran		17-Jan-18	<0.001	mg/L	No
Carbon Tetrachloride		17-Jan-18	<0.0002	mg/L	No
Chlorpyrifos		17-Jan-18	<0.0005	mg/L	No
Diazinon		17-Jan-18	<0.001	mg/L	No
Dicamba		17-Jan-18	<0.005	mg/L	No
1,2-Dichlorobenzene		17-Jan-18	<0.0001	mg/L	No
1,4-Dichlorobenzene		17-Jan-18	<0.0001	mg/L	No
1,2-Dichloroethane		17-Jan-18	<0.0001	mg/L	No
1,1-Dichloroethene (vinylidene chloride)		17-Jan-18	<0.0001	mg/L	No
Dichlormethane		17-Jan-18	<0.0003	mg/L	No
2,4-Dichlorophenol		17-Jan-18	<0.0001	mg/L	No
2,4-Dichlorophenoxyacetic acid (2,4-D)		17-Jan-18	<0.005	mg/L	No
Diclofop-methyl		17-Jan-18	<0.0005	mg/L	No

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Dimethoate	17-Jan-18	<0.001	mg/L	No
Diquat	17-Jan-18	<0.005	mg/L	No
Diuron	17-Jan-18	<0.005	mg/L	No
Glyphosate	17-Jan-18	<0.025	mg/L	No
MCPA 2-Methyl-4-chlorophenoxyacetic Acid	17-Jan-18	<0.01	mg/L	No
Malathion	17-Jan-18	<0.005	mg/L	No
Metolachlor	17-Jan-18	<0.003	mg/L	No
Metribuzin	17-Jan-18	<0.003	mg/L	No
Monochlorobenzene	17-Jan-18	<0.0002	mg/L	No
Paraquat	17-Jan-18	<0.001	mg/L	No
Pentachlorophenol	17-Jan-18	<0.0001	mg/L	No
Phorate	17-Jan-18	<0.0003	mg/L	No
Picloram	17-Jan-18	<0.005	mg/L	No
PolyChlorinated Biphenyls (PCB)	17-Jan-18	<0.00005	mg/L	No
Prometryne	17-Jan-18	<0.0001	mg/L	No
Simazine	17-Jan-18	<0.0005	mg/L	No
THM	1-Sep-20	0.041	mg/L	No
Terbufos	17-Jan-18	<0.0004	mg/L	No
Tetrachloroethylene	17-Jan-18	<0.0002	mg/L	No
2,3,4,6-Tetrachlorophenol	17-Jan-18	<0.0001	mg/L	No
Triallate	17-Jan-18	<0.01	mg/L	No
Trichloroethylene	17-Jan-18	<0.0001	mg/L	No
2,4,6-Trichlorophenol	17-Jan-18	<0.0001	mg/L	No
Trifluarlin	17-Jan-18	<0.0005	mg/L	No
Vinyl Chloride	17-Jan-18	<0.0002	mg/L	No

Inorganic or Organic Parameter(s) that exceed half the standard prescribed in Schedule 2 of ODWQS:

Parameter	Result Value	Unit of Measure	Date of Sample	Notes:
None.				