

Drinking Water Systems Regulation O.Reg. 170/03

MADOC TOWNSHIP PUBLIC SCHOOL ANNUAL REPORT

Drinking water system number:	260014001
Drinking water system name:	Madoc Township 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:	1
Copies provided of annual report to all designated facilities served:	YES
Number of interested authorities you report to:	1
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:	Madoc Township Public School
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 Madoc Township Public School drinking water system consists of one drilled well, located at the entrance of the school, equipped with a submersible pump that supplies raw water to a mechanical room in the school. An Engineer was retained in 2020 to design and build a new treatment system in the fall of 2021, as the existing system was aged. The system has been constructed with filtration, UV disinfection, and chlorine disinfection. The water is passed through two cartridge filters, a pre-treatment pressure tank, 2 disinfection units complete with a solenoid shut-off, and a chlorine tank prior to going to the distribution system, designed in accordance with O Reg 170 as specified by the Engineer. Chlorine residual is measured each day the school is open.

A service contract is in place with Culligan 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. The engineer also certified that the minimum treatment laid out in Schedule 2 of the regulations is being complied with and that all equipment required by Schedule 6 and Schedule 9 of the regulations is provided.

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Water treatment chemicals used over this reporting period:

12% Sodium hypochlorite solution

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.

\$30,907.00

Routine system maintenance (Including service contracts):

Regular maintenance includes monthly checks of the water treatment system by Culligan and the minor repair/replacement of necessary parts/equipment. The costs for regular maintenance on water treatment equipment was :

\$3,912.40

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	67.8mg/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	0.08-0.22
Chlorine	196	0.13-1.74

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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	0.0002	mg/L	No
Barium	31-May-21	0.221	mg/L	No
Boron	31-May-21	0.015	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	16-Oct-21	0.00383	mg/L	No
Lead- FLUSHING		0.00149	mg/L	No
Mercury	31-May-21	<0.00002	mg/L	No
Nitrite	16-Mar-22	<0.1	mg/L	No
Nitrate		3.2	mg/L	No
Selenium	31-May-21	<0.001	mg/L	No
Sodium	31-May-21	67.8	mg/L	Yes
Uranium	31-May-21	0.00038	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
Trihalomethanes (THM)	5-Oct-21	< 0.006	mg/L	No
Vinyl Chloride	31-May-21	< 0.0002	mg/L	No