

Section 11. ANNUAL REPORT.

Drinking-Water System Number:	220001012
Drinking-Water System Name:	South Dundas Drinking Water System
Drinking-Water System Owner:	Municipality of South Dundas
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1 to December 31, 2016

<p><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [] No [x]</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [x] No []</p> <p>Location where Report required under O. Reg. 170/03 section 11 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> Available at the municipal office, located at 34 Ottawa Street, Morrisburg, Ontario and online: www.southdundas.com </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <input style="width: 100px; height: 20px;" type="text"/></p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [] No []</p> <p>Number of Interested Authorities you report to: <input style="width: 100px; height: 20px;" type="text"/></p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []</p>
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List Drinking-Water Systems, which receive all of their drinking water from your system:

n/a

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?

Yes [] No [] N/A [x]

Indicate how you notified system users that your annual report is available, and is free of charge.

[x] Public access/notice via the web

[x] Public access/notice via Government Office

[] Public access/notice via a newspaper

[] Public access/notice via Public Request

[] Public access/notice via a Public Library

[] Public access/notice via other method _____

Describe your Drinking-Water System

The South Dundas Drinking Water System provides water to approximately 3,900 residents in Morrisburg and Iroquois. Raw water is drawn from the St. Lawrence River to the low lift pumping station located at the base of Augusta Street. Sodium hypochlorite is applied at the intake for zebra mussel control. Three vertical turbine pumps convey water from the low lift building to the water treatment plant located at 99 Augusta Street, Morrisburg. The water is then filtered by membrane filtration and granular activated carbon contactors. Chlorination is provided following filtration and at the plant discharge. A two-compartment, baffled clear well provides chlorine contact time. Four high lift pumps discharge treated water into the distribution system. In Morrisburg, the distribution system consists of approximately 15 km of water main and an elevated storage tank. Water is transported through an 11.5 km transmission main from Morrisburg to Iroquois. The water is rechlorinated at a booster station in Iroquois. In Iroquois, the distribution system consists of approximately 12 km of water main and an elevated storage tank.

Were any significant expenses incurred to?

- Install required equipment
 Repair required equipment
 Replace required equipment

Describe

There were no significant expenses to report for 2016.

Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre?

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
Feb. 13/16	Distribution Free Chlorine Residual	4.0	mg/L	Overdosing of sodium hypochlorite in the WTP as a result of incorrect readings from the post-filtration analyzer caused highly chlorinated water to be pumped into the distribution system. The analyzer issue was corrected, and operators flushed the distribution system until chlorine residuals returned to normal.	Feb. 13/16

Microbiological testing done under section 8 (2) during this reporting period

	Number of Samples	Range of <i>E. coli</i> Results	Range of Total Coliform Results	Number of HPC Samples	Range of HPC Results
Raw	52	0-4	0-16	n/a	n/a
Treated	52	0-0	0-0	52	0-4
Distribution	158	0-0	0-0	52	0-6

Operational testing done under Schedule 7, 8 or 9 during the period covered by this Annual Report.

	Number of Grab Samples	Range of Results (min #)-(max #)
Raw Turbidity	8760	0.01-0.22 NTU
Train #1 Turbidity	8760	0.01-0.26 NTU
Train #2 Turbidity	8760	0.01-0.13 NTU
Train #3 Turbidity	8760	0.01-0.17 NTU
Treated Turbidity	8760	0.02-0.11 NTU
Chlorine	8760	0.30-3.65 mg/L

NOTE: For continuous monitors use 8760 as the number of samples.

Summary of additional testing and sampling carried out in accordance with the requirement of an approval or order.

Document	Parameter	Limit (mg/L)	Result (mg/L)
MDWL # 165-101	Filter Backwash Supernatant Suspended Solids	Annual Average < 25	4.8

Summary of Inorganic parameters tested during this reporting period or most recent

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	05/02/2016	0.0001	mg / L	No
Arsenic	05/02/2016	0.001	mg / L	No
Barium	05/02/2016	0.020	mg / L	No
Boron	05/02/2016	<0.005	mg / L	No
Cadmium	05/02/2016	<0.00002	mg / L	No
Chromium	05/02/2016	<0.002	mg / L	No
Fluoride	03/07/2016	0.3	mg / L	No
*Lead	n/a	n/a	mg / L	No
Mercury	05/02/2016	<0.00002	mg / L	No
Selenium	05/02/2016	<0.001	mg / L	No
Uranium	05/02/2016	0.00036	mg / L	No
Sodium	03/07/2016	15.5	mg / L	No
Nitrite	12/05/2016	<0.1	mg / L	No
Nitrate	12/05/2016	0.3	mg / L	No

*exempt Schedule 15.2

Summary of lead testing under Schedule 15.1 during this reporting period

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Number of Exceedances
Plumbing	n/a	n/a	n/a
Distribution	3	0.00144-0.00241 mg/L	0

Summary of Organic parameters sampled during this reporting period or most recent

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	05/02/2016	<0.3	µg / L	No
Atrazine + N-dealkylated metabolites	05/02/2016	<0.5	µg / L	No
Azinphos-methyl	05/02/2016	<1	µg / L	No
Benzene	05/02/2016	<0.5	µg / L	No
Benzo(a)pyrene	05/02/2016	<0.005	µg / L	No
Bromoxynil	05/02/2016	<0.3	µg / L	No
Carbaryl	05/02/2016	<3	µg / L	No
Carbofuran	05/02/2016	<1	µg / L	No
Carbon Tetrachloride	05/02/2016	<0.2	µg / L	No
Chlorpyrifos	05/02/2016	<0.5	µg / L	No
Diazinon	05/02/2016	<1	µg / L	No
Dicamba	05/02/2016	<5	µg / L	No
1,2-Dichlorobenzene	05/02/2016	<0.1	µg / L	No
1,4-Dichlorobenzene	05/02/2016	<0.2	µg / L	No
1,2-Dichloroethane	05/02/2016	<0.1	µg / L	No
1,1-Dichloroethylene (vinylidene chloride)	05/02/2016	<0.1	µg / L	No
Dichloromethane	05/02/2016	<0.3	µg / L	No
2,4-Dichlorophenol	05/02/2016	<0.1	µg / L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	05/02/2016	<5	µg / L	No
Diclofop-methyl	05/02/2016	<0.5	µg / L	No
Dimethoate	05/02/2016	<1	µg / L	No
Diquat	05/02/2016	<5	µg / L	No
Diuron	05/02/2016	<5	µg / L	No
Glyphosate	05/02/2016	<25	µg / L	No
Malathion	05/02/2016	<5	µg / L	No
2-Methyl-4-chlorophenoxy-acetic acid (MCPA)	09/19/2016	<1.2	µg / L	No
Metolachlor	05/02/2016	<3	µg / L	No
Metribuzin	05/02/2016	<3	µg / L	No
Monochlorobenzene	05/02/2016	<0.2	µg / L	No
Paraquat	05/02/2016	<1	µg / L	No
Pentachlorophenol	05/02/2016	<0.1	µg / L	No
Phorate	05/02/2016	<0.3	µg / L	No
Picloram	05/02/2016	<5	µg / L	No
Polychlorinated Biphenyls (PCB)	05/02/2016	<0.05	µg / L	No
Prometryne	05/02/2016	<0.1	µg / L	No
Simazine	05/02/2016	<0.5	µg / L	No
Terbufos	05/02/2016	<0.3	µg / L	No
Tetrachloroethylene (perchloroethylene)	05/02/2016	<0.2	µg / L	No
2,3,4,6-Tetrachlorophenol	05/02/2016	<0.1	µg / L	No
Triallate	05/02/2016	<10	µg / L	No
Trichloroethylene	05/02/2016	<0.1	µg / L	No
2,4,6-Trichlorophenol	05/02/2016	<0.1	µg / L	No
THM (NOTE: show latest annual average)	12/31/2016	36.6	mg/L	No
Trifluralin	05/02/2016	<0.5	µg / L	No
Vinyl Chloride	05/02/2016	<0.2	µg / L	No

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Parameter	Result Value	Unit of Measure	Date of Sample
n/a			