

**Part III Form 2  
Section 11. ANNUAL REPORT.**

<b>Drinking-Water System Number:</b>	220000442
<b>Drinking-Water System Name:</b>	Sturgeon Falls Water Treatment Plant
<b>Drinking-Water System Owner:</b>	The Corporation of the Municipality of West Nipissing
<b>Drinking-Water System Category:</b>	Large Municipal Residential
<b>Period being reported:</b>	January 1, 2017 to December 31, 2017

<p><b><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></b></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 Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">                 Sturgeon Falls Water Treatment Plant                  11 Nipissing Street, Sturgeon Falls, ON             </div>	<p><b><u>Complete for all other Categories.</u></b></p> <p>Number of Designated Facilities served:  <div style="border: 1px solid black; width: 100px; text-align: center; margin: 5px;">0</div> </p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve?                  Yes [ ] No [ ] Not Applicable [x]</p> <p>Number of Interested Authorities you report to:  <div style="border: 1px solid black; width: 100px; text-align: center; margin: 5px;">0</div> </p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?                  Yes [ ] No [ ] Not Applicable [x]</p>
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List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
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 [ ] Not Applicable [x]

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

- Public access/notice via the web**  
 **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 Sturgeon Falls WTP commissioned in 1991, consists of a full surface water treatment facility, with a design capacity of 14 200 m<sup>3</sup>/day, drawing water from the Sturgeon River.

The process consists of:

- Intake from the Sturgeon River, equipped with manually removable screens
- Four vertical turbine raw water pumps
- Two up-flow pre-treatment tanks for flash mixing for chemical assisted flocculation and sedimentation
- Four sets of three-cells-in-series flocculation tanks
- Two rectangular settling tanks, each with an inclined plate settling system
- Three dual media (anthracite/sand) gravity filters
- Continuous filtered turbidity monitoring for each filter
- Filtered water is directed through a chlorine contact tank, with filter-to-waste capability returning unchlorinated water to the Sturgeon River
- Chlorine gas addition points for primary disinfection located before filters (not used) and after filter-to-waste valve (normal addition point)
- One chlorine contact tank equipped with baffle walls, and discharge line to the underground reservoir
- Continuous Giardia log removal calculations to monitor adequacy of disinfection
- Hydrated lime (calcium hydroxide) addition after the chlorine contact chamber for pH and alkalinity control
- Two cell in-ground treated water storage reservoir, equipped with valves to enhance flow through circulation
- A two-chamber high lift pump well located below the high lift pumping station
- Five vertical turbine type high lift pumps
- Post-chlorine gas addition to Distribution with continuous feed-back monitoring
- Hydrofluosilicic acid (fluoride) addition to Distribution with continuous feed-back monitoring
- Filter backwash system consisting of two filter backwash pumps, serving all filters
- Backwash wastewater discharge to the backwash settling tanks
- Three backwash settling tanks; supernatant return to Sturgeon River; settled sludge to sludge thickening tanks
- Two square sludge thickening tanks; sludge discharge to municipal sewage collection system; supernatant return to the Sturgeon River
- Back-up diesel powered generator capable of servicing essential plant operations

**List all water treatment chemicals used over this reporting period**

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| <ul style="list-style-type: none"> <li>• Polyaluminum chloride</li> <li>• Specialty polymer</li> <li>• Limestone</li> <li>• Chlorine (gas)</li> <li>• Hydrated lime (calcium hydroxide)</li> <li>• Hydrofluosilicic acid (fluoride)</li> <li>• ENV 24P10 – distribution pipe corrosion control</li> <li>• ENV PYRO 50 - manganese dispersive sequestrant</li> </ul> |
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**Were any significant expenses incurred to?**

- Install required equipment
- Repair required equipment
- Replace required equipment
- Not Applicable

**Please provide a brief description and a breakdown of monetary expenses incurred**

Water Plant Material/Supplies/Rentals/Maintenance	\$55,946
Water Plant Process Chemicals	\$126,576
Water Quality Lab Testing	\$16,395
Consulting/Operator Training	\$10,649
Water Plant Utilities	\$194,093
Insurance	\$30,485
Labour	\$236,298
Electrical/Instrumentation	\$10,163

**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	Units	Corrective Action	Corrective Action Date
	Nil				

**Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.**

	Number of Samples	Range of E.Coli Results CFU/100mL (min #)-(max #)	Range of Total Coliform Results CFU/100mL (min #)-(max #)
Raw	52	<5 – 30	100 – >1000
Treated	52	0 – 0	0 – 0
Distribution	260	0 – 0	0 – 0

## Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

	Number of Grab Samples	Range of Results (min #)-(max #)
<b>Turbidity</b>	8760	Daily Average: 0.05 - 0.25 NTU
<b>Chlorine</b>	8760	Daily Average: 0.96 - 1.78 mg/L
<b>Fluoride</b>	8760	Daily Average: 0.05 - 0.74 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, order or other legal instrument.

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure
7618-6QXP8Z (July 7/06)	Backwash SS	53 samples	6.0	mg/L (annual average)

## Summary of Inorganic and Organic parameters tested during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Fluoride	2017-10-16	0.5	mg/L	No
Nitrite (N)	2017-02-21	< 0.1	mg/L	No
	2017-05-15	< 0.1		No
	2017-08-08	< 0.1		No
	2017-10-16	< 0.1		No
Nitrate (N)	2017-02-21	<0.1	mg/L	No
	2017-05-15	<0.1		No
	2017-08-08	<0.1		No
	2017-10-16	0.1		No
Nitrate + Nitrite (N)	2017-02-21	<0.1	mg/L	No
	2017-05-15	<0.1		No
	2017-08-08	<0.1		No
	2017-10-16	0.1		No
Antimony	2017-10-16	< 0.0001	mg/L	No
Arsenic	2017-10-16	0.0003	mg/L	No
Barium	2017-10-16	0.015	mg/L	No
Boron	2017-10-16	0.006	mg/L	No
Cadmium	2017-10-16	< 0.000014	mg/L	No
Chromium	2017-10-16	< 0.002	mg/L	No
Lead	2017-10-16	0.00030	mg/L	No
Mercury	2017-10-16	< 0.00002	mg/L	No
Selenium	2017-10-16	< 0.001	mg/L	No
Sodium	2017-10-16	1.5	mg/L	No
Uranium	2017-10-16	< 0.00005	mg/L	No
Benzene	2017-10-16	< 0.5	µg/L	No
Carbon Tetrachloride	2017-10-16	< 0.2	µg/L	No
Dichlorobenzene, 1,2-	2017-10-16	< 0.1	µg/L	No

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Dichlorobenzene, 1,4-	2017-10-16	< 0.2	µg/L	No
Dichloroethane, 1,2-	2017-10-16	< 0.1	µg/L	No
Dichloroethene, 1,1-	2017-10-16	< 0.1	µg/L	No
Dichloromethane (Methylene Chloride)	2017-10-16	< 0.3	µg/L	No
Monochlorobenzene (Chlorobenzene)	2017-10-16	< 0.2	µg/L	No
Tetrachloroethylene	2017-10-16	< 0.2	µg/L	No
Trichloroethylene	2017-10-16	< 0.1	µg/L	No
Vinyl Chloride	2017-10-16	< 0.2	µg/L	No
Chloroform	2017-02-21	23.9	µg/L	No
	2017-05-15	58.8		No
	2017-08-08	72.8		No
	2017-10-16	35.8		No
Bromodichloromethane	2017-02-21	0.8	µg/L	No
	2017-05-15	2.4		No
	2017-08-08	3.1		No
	2017-10-16	1.7		No
Dibromochloromethane	2017-02-21	< 0.1	µg/L	No
	2017-05-15	< 0.1		No
	2017-08-08	< 0.1		No
	2017-10-16	< 0.1		No
Bromoform	2017-02-21	< 0.1	µg/L	No
	2017-05-15	< 0.1		No
	2017-08-08	< 0.1		No
	2017-10-16	< 0.1		No
Total Trihalomethanes	2017-02-21	24.7	µg/L	No
	2017-05-15	61.2		No
	2017-08-08	75.9		No
	2017-10-16	37.6		No
Alachlor	2017-10-16	< 0.3	µg/L	No
Atrazine + Metabolites	2017-10-16	< 0.5	µg/L	No
Azinphos-methyl	2017-10-16	< 1	µg/L	No
Benzo(a)pyrene	2017-10-16	< 0.005	µg/L	No
Bromoxynil	2017-10-16	< 0.3	µg/L	No
Carbaryl	2017-10-16	< 3	µg/L	No
Carbofuran	2017-10-16	< 1	µg/L	No
Chlorpyrifos	2017-10-16	< 0.5	µg/L	No
Diazinon	2017-10-16	< 1	µg/L	No
Dicamba	2017-10-16	< 5	µg/L	No
Dichlorophenol, 2,4-	2017-10-16	< 0.1	µg/L	No
Dichlorophenoxy acetic acid, 2,4- (2,4-D)	2017-10-16	< 5	µg/L	No
Diclofop-methyl	2017-10-16	< 0.5	µg/L	No
Dimethoate	2017-10-16	< 1	µg/L	No
Diquat	2017-10-16	< 5	µg/L	No
Diuron	2017-10-16	< 5	µg/L	No
Glyphosate	2017-10-16	< 25	µg/L	No
Malathion	2017-10-16	< 5	µg/L	No
2 methyl-4-chlorophenoxyacetic acid (MCPA)	2017-10-16	< 0.00012	mg/L	No
Metolachlor	2017-10-16	< 3	µg/L	No
Metribuzin	2017-10-16	< 3	µg/L	No
Paraquat	2017-10-16	< 1	µg/L	No
Pentachlorophenol	2017-10-16	< 0.1	µg/L	No
Phorate	2017-10-16	< 0.3	µg/L	No

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Picloram	2017-10-16	< 5	µg/L	No
Poly-Chlorinated Biphenyls (PCB's)	2017-10-16	< 0.05	µg/L	No
Prometryne	2017-10-16	< 0.1	µg/L	No
Simazine	2017-10-16	< 0.5	µg/L	No
Terbufos	2017-10-16	< 0.3	µg/L	No
Tetrachlorophenol, 2,3,4,6-	2017-10-16	< 0.1	µg/L	No
Triallate	2017-10-16	< 10	µg/L	No
Trichlorophenol 2,4,6-	2017-10-16	0.28	µg/L	No
Trifluralin	2017-10-16	< 0.5	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
Nil			

(Only if DWS category is large municipal residential, small municipal residential, large municipal non residential, non municipal year round residential, large non municipal non residential)