

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

Drinking-Water System Number:	220000442
Drinking-Water System Name:	Sturgeon Falls Water Treatment Plant
Drinking-Water System Owner:	The Corporation of the Municipality of West Nipissing
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2012 to December 31, 2012

<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 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><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <input style="width: 50px; text-align: center;" type="text" value="0"/></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: <input style="width: 50px; text-align: center;" type="text" value="0"/></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: [notice mailed with quarterly invoice](#)

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 m³/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 effluent discharge to the post-filtration chlorine contact tank, with optional filter-to-waste capability return to the Sturgeon River (unchlorinated)
- Chlorine gas addition points located before filters (not used) and after filter-to-waste valve (normal addition point)
- One chlorine contact tank equipped with baffle walls, with an overflow pipe, 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 servicing entire plant

List all water treatment chemicals used over this reporting period

- Alum (aluminum sulphate)
- Polyaluminum chloride
- Specialty polymer
- Limestone
- Chlorine (gas)
- Hydrated lime (calcium hydroxide)
- Hydrofluosilicic acid (fluoride)
- ENV 24P10 – for corrosion control

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	\$ 15 000
Water Plant Equipment Maintenance/Repairs	\$ 51 000
Water Plant Process Chemicals	\$ 112 000
Water Quality Lab Testing	\$ 12 000
Consulting/Operator Training	\$ 10 000
Water Plant Utilities	\$ 162 000
Water Distribution Materials/Supplies/Repairs	\$ 138 000

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	0 - 175	6 – 1270
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 #)
Turbidity	8760	Daily Average: 0.023 - 0.303NTU
Chlorine	8760	Daily Average: 0.67 – 1.95 mg/L Instantaneous: 0.00 – 2.80 mg/L
Fluoride	8760	Daily Average: 0.00 - 0.83 mg/L Instantaneous: 0.00 – 1.04 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	35 samples	10.1	mg/L (annual average)

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	2012-04-17	< 0.0001	mg/L	No
Arsenic	2012-04-17	0.0011	mg/L	No
Barium	2012-04-17	0.013	mg/L	No
Boron	2012-04-17	0.01	mg/L	No
Cadmium	2012-04-17	< 0.00002	mg/L	No
Chromium	2012-04-17	< 0.002	mg/L	No
Lead	2012-04-17	0.00012	mg/L	No
Mercury	2012-04-17	< 0.00002	mg/L	No
Selenium	2012-04-17	< 0.001	mg/L	No
Sodium	2012-04-17	1	mg/L	No
Uranium	2012-04-17	0.00011	mg/L	No
Fluoride	2012-04-17	0.5	mg/L	No
Nitrite	2012-02-13 2012-04-17 2012-07-04 2012-10-10	< 0.1 < 0.1 < 0.1 < 0.1	mg/L	No
Nitrate	2012-02-13 2012-04-17 2012-07-04 2012-10-10	0.1 < 0.1 < 0.1 0.1	mg/L	No

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2011-05-11	< 0.3	µg/L	No
Aldicarb	2011-05-11	< 3	µg/L	No
Aldrin + Dieldrin	2011-05-11	< 0.02	µg/L	No
Atrazine + N-dealkylated metabolites	2011-05-11	< 0.5	µg/L	No
Azinphos-methyl	2011-05-11	< 1	µg/L	No
Bendiocarb	2011-05-11	< 3	µg/L	No
Benzene	2011-05-11	< 0.5	µg/L	No
Benzo(a)pyrene	2011-05-11	< 0.005	µg/L	No
Bromoxynil	2011-05-11	< 0.3	µg/L	No
Carbaryl	2011-05-11	< 3	µg/L	No
Carbofuran	2011-05-11	< 1	µg/L	No
Carbon Tetrachloride	2011-05-11	< 0.04	µg/L	No
Chlordane (Total)	2011-05-11	< 0.5	µg/L	No
Chlorpyrifos	2011-05-11	< 0.5	µg/L	No
Cyanazine	2011-05-11	< 0.01	µg/L	No
Diazinon	2011-05-11	< 1	µg/L	No
Dicamba	2011-05-11	< 5	µg/L	No
1,2-Dichlorobenzene	2011-05-11	< 0.1	µg/L	No
1,4-Dichlorobenzene	2011-05-11	< 5	µg/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	2011-05-11	< 0.5	µg/L	No
1,2-Dichloroethane	2011-05-11	< 1	µg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2011-05-11	< 0.5	µg/L	No
Dichloromethane	2011-05-11	< 5	µg/L	No
2-4 Dichlorophenol	2011-05-11	< 5	µg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2011-05-11	< 25	µg/L	No
Diclofop-methyl	2011-05-11	< 0.005	µg/L	No
Dimethoate	2011-05-11	< 0.3	µg/L	No
Dinoseb	2011-05-11	< 3	µg/L	No
Diquat	2011-05-11	< 1	µg/L	No
Diuron	2011-05-11	< 0.04	µg/L	No
Glyphosate	2011-05-11	< 0.5	µg/L	No
Heptachlor + Heptachlor Epoxide	2011-05-11	< 0.1	µg/L	No
Lindane (Total)	2011-05-11	< 0.1	µg/L	No
Malathion	2011-05-11	< 5	µg/L	No
Methoxychlor	2011-05-11	< 0.1	µg/L	No
Metolachlor	2011-05-11	< 3	µg/L	No
Metribuzin	2011-05-11	< 3	µg/L	No
Monochlorobenzene	2011-05-11	< 1	µg/L	No
Paraquat	2011-05-11	< 3	µg/L	No
Parathion	2011-05-11	< 0.1	µg/L	No
Pentachlorophenol	2011-05-11	< 0.3	µg/L	No
Phorate	2011-05-11	< 5	µg/L	No
Picloram	2011-05-11	< 0.05	µg/L	No
Polychlorinated Biphenyls(PCB)	2011-05-11	< 0.1	µg/L	No
Prometryne	2011-05-11	< 0.5	µg/L	No
Simazine	2011-05-11	< 0.1	µg/L	No

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
THM (NOTE: show latest annual average)	2012-02-13	23.1	µg/L	No
	2012-04-17	26.7		
	2012-07-04	66.9		
	2012-10-10	45.7		
Temephos	2011-05-11	< 10	µg/L	No
Terbufos	2011-05-11	< 0.3	µg/L	No
Tetrachloroethylene	2011-05-11	< 0.1	µg/L	No
2,3,4,6-Tetrachlorophenol	2011-05-11	< 10	µg/L	No
Triallate	2011-05-11	< 0.1	µg/L	No
Trichloroethylene	2011-05-11	< 10	µg/L	No
2,4,6-Trichlorophenol	2011-05-11	< 0.5	µg/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	2011-05-11	< 10	µg/L	No
Trifluralin	2011-05-11	< 0.3	µg/L	No
Vinyl Chloride	2011-05-11	< 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
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)