Drinking-Water Systems Regulation O. Reg. 170/03

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, 2015 to December 31, 2015

Complete if your Category is Large Municipal Residential or Small Municipal Residential

Does your Drinking-Water System serve more than 10,000 people? Yes [ ] No [x]

Is your annual report available to the public at no charge on a web site on the Internet? Yes [x] No [ ]

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

Sturgeon Falls Water Treatment Plant
11 Nipissing Street, Sturgeon Falls, ON

Complete for all other Categories.

Number of Designated Facilities served:

0

Did you provide a copy of your annual report to all Designated Facilities you serve?
Yes [ ] No [ ] Not Applicable [x]

Number of Interested Authorities you report to: 0

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]

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.

[x] 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^3/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

- Polyaluminum chloride
- Specialty polymer
- Limestone
- Chlorine (gas)
- Hydrated lime (calcium hydroxide)
- Hydrofluosilicic acid (fluoride)
- ENV 24P10 – distribution pipe corrosion control
- ENV PYRO 50 - manganese dispersive sequestrant

Were any significant expenses incurred to?

[ ] Install required equipment
[ ] Repair required equipment
[ ] Replace required equipment
[x**]** Not Applicable

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

Water Plant Material/Supplies/Rentals	$ 12 200
Water Plant Equipment Maintenance/Repairs	$ 45 500
Water Plant Process Chemicals	$ 109 000
Water Quality Lab Testing	$ 21 300
Consulting/Operator Training	$ 17 900
Water Plant Utilities	$ 165 800
Insurance	$ 28 600
Water Distribution Materials/Supplies/Repairs	$ 127 800

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	53	<5 – 80	65 – >1000
Treated	53	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: 0.05 - 0.09 NTU
Chlorine	8760	Daily Average: 0.99 – 1.78 mg/L
Fluoride	8760	Daily Average: 0.28 - 0.76 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	54 samples	5.3	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	2015-01-13 2015-12-16	0.5 0.3	mg/L	No No
Nitrite (N)	2015-01-13 2015-04-08 2015-07-08 2015-10-07 2015-12-16	< 0.1 < 0.1 < 0.1 < 0.1 < 0.1	mg/L	No No No No No
Nitrate (N)	2015-01-13 2015-04-08 2015-07-08 2015-2015- 2015-12-16	0.1 0.2 0.1 < 0.1 0.1	mg/L	No No No No No
Nitrate + Nitrite (N)	2015-01-13 2015-04-08 2015-07-08 2015-10-07 2015-12-16	0.1 0.2 0.1 < 0.1 0.1	mg/L	No No No No No
Antimony	2015-01-13 2015-12-15	< 0.0001 < 0.0001	mg/L	No No
Arsenic	2015-01-13 2015-12-15	0.0004 0.0005	mg/L	No No
Barium	2015-01-13 2015-12-15	0.011 0.010	mg/L	No No
Boron	2015-01-13 2015-12-15	0.005 < 0.005	mg/L	No No

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Cadmium	2015-01-13	0.00002	mg/L	No
	2015-12-15	< 0.00002		No
Chromium	2015-01-13	< 0.002	mg/L	No
	2015-12-15	< 0.002		No
Lead	2015-01-13	0.00014	mg/L	No
	2015-12-15	0.00023		No
Mercury	2015-01-13	< 0.00002	mg/L	No
	2015-12-15	< 0.00002		No
Selenium	2015-01-13	< 0.001	mg/L	No
	2015-12-15	< 0.001		No
Sodium	2015-01-13	1.4	mg/L	No
	2015-12-15	1.6		No
Uranium	2015-01-13	< 0.00005	mg/L	No
	2015-12-15	< 0.00005		No
Benzene	2015-01-13	< 0.5	µg/L	No
	2015-12-15	< 0.5		No
Carbon Tetrachloride	2015-01-13	< 0.2	µg/L	No
	2015-12-15	< 0.2		No
Dichlorobenzene,1,2-	2015-01-13	< 0.1	µg/L	No
	2015-12-15	< 0.1		No
Dichlorobenzene,1,4-	2015-01-13	< 0.2	µg/L	No
	2015-12-15	< 0.2		No
Dichloroethane,1,2-	2015-01-13	< 0.1	µg/L	No
	2015-12-15	< 0.1		No
Dichloroethene, 1,1-	2015-01-13	< 0.1	µg/L	No
	2015-12-15	< 0.1		No
Dichloromethane (Methylene Chloride)	2015-01-13	< 0.3	µg/L	No
	2015-12-15	< 0.3		No
Monochlorobenzene (Chlorobenzene)	2015-01-13	< 0.2	µg/L	No
	2015-12-15	< 0.2		No
Tetrachloroethylene	2015-01-13	< 0.2	µg/L	No
	2015-12-15	< 0.2		No
Trichloroethylene	2015-01-13	< 0.1	µg/L	No
	2015-12-15	< 0.1		No
Vinyl Chloride	2015-01-13	< 0.2	µg/L	No
	2015-12-15	< 0.2		No
Chloroform	2015-01-13	24.1	µg/L	No
	2015-12-15	52.3		No
Bromodichloromethane	2015-01-13	1.4	µg/L	No
	2015-12-15	1.9		No
Dibromochloromethane	2015-01-13	< 0.1	µg/L	No
	2015-12-15	< 0.1		No
Bromoform	2015-01-13	< 0.1	µg/L	No
	2015-12-15	< 0.1		No
Total Trihalomethanes	2015-01-14	25.5	µg/L	No
	2015-04-08	34.3		No
	2015-07-08	54.7		No
	2015-10-07	72.2		No
	2015-12-16	54.2		No
Alachlor	2015-01-13	< 0.3	µg/L	No
	2015-12-15	< 0.3		No
Aldicarb	2015-01-13	< 3	µg/L	No

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
	2015-12-15	< 3		No
Aldrin + Dieldrin	2015-01-13	< 0.02	µg/L	No
	2015-12-15	< 0.02		No
Atrazine + Metabolites	2015-01-13	< 0.5	µg/L	No
	2015-12-15	< 0.5		No
Azinphos-methyl	2015-01-13	< 1	µg/L	No
	2015-12-15	< 1		No
Bendiocarb	2015-01-13	< 3	µg/L	No
	2015-12-15	< 3		No
Benzo(a)pyrene	2015-01-13	< 0.005	µg/L	No
	2015-12-15	< 0.005		No
Bromoxynil	2015-01-13	< 0.3	µg/L	No
	2015-12-15	< 0.3		No
Carbaryl	2015-01-13	< 3	µg/L	No
	2015-12-15	< 3		No
Carbofuran	2015-01-13	< 1	µg/L	No
	2015-12-15	< 1		No
Chlordane (Total)	2015-01-13	< 0.04	µg/L	No
	2015-12-15	< 0.04		No
Chlorpyrifos	2015-01-13	< 0.5	µg/L	No
	2015-12-15	< 0.5		No
Cyanazine	2015-01-13	< 0.5	µg/L	No
	2015-12-15	< 0.5		No
DDT + Metabolites	2015-01-13	< 0.01	µg/L	No
	2015-12-15	< 0.01		No
Diazinon	2015-01-13	< 1	µg/L	No
	2015-12-15	< 1		No
Dicamba	2015-01-13	< 5	µg/L	No
	2015-12-15	< 5		No
Dichlorophenol, 2,4-	2015-01-13	< 0.1	µg/L	No
	2015-12-15	< 0.1		No
Dichlorophenoxy acetic acid, 2,4- (2,4-D)	2015-01-13	< 5	µg/L	No
	2015-12-15	< 5		No
Diclofop-methyl	2015-01-13	< 0.5	µg/L	No
	2015-12-15	< 0.5		No
Dimethoate	2015-01-13	< 1	µg/L	No
	2015-12-15	< 1		No
Dinoseb	2015-01-13	< 0.5	µg/L	No
	2015-12-15	< 0.5		No
Diquat	2015-01-13	< 5	µg/L	No
	2015-12-15	< 5		No
Diuron	2015-01-13	< 5	µg/L	No
	2015-12-15	< 5		No
Glyphosate	2015-01-13	< 25	µg/L	No
	2015-12-15	< 25		No
Heptachlor + Heptachlor Epoxide	2015-01-13	< 0.1	µg/L	No
	2015-12-15	< 0.1		No
Lindane (Hexachlorocyclohexane, Gamma)	2015-01-13	< 0.1	µg/L	No
	2015-12-15	< 0.1		No
Malathion	2015-01-13	< 5	µg/L	No
	2015-12-15	< 5		No
Methoxychlor	2015-01-13	< 0.1	µg/L	No

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
	2015-12-15	< 0.1		No
Metolachlor	2015-01-13	< 3	µg/L	No
	2015-12-15	< 3		No
Metribuzin	2015-01-13	< 3	µg/L	No
	2015-12-15	< 3		No
Paraquat	2015-01-13	< 1	µg/L	No
	2015-12-15	< 1		No
Parathion	2015-01-13	< 3	µg/L	No
	2015-12-15	< 3		No
Pentachlorophenol	2015-01-13	< 0.1	µg/L	No
	2015-12-15	< 0.1		No
Phorate	2015-01-13	< 0.3	µg/L	No
	2015-12-15	< 0.3		No
Picloram	2015-01-13	< 5	µg/L	No
	2015-12-15	< 5		No
Poly-Chlorinated Biphenyls (PCB's)	2015-01-13	< 0.05	µg/L	No
	2015-12-15	< 0.05		No
Prometryne	2015-01-13	< 0.1	µg/L	No
	2015-12-15	< 0.1		No
Simazine	2015-01-13	< 0.5	µg/L	No
	2015-12-15	< 0.5		No
Temephos	2015-01-13	< 10	µg/L	No
	2015-12-15	< 10		No
Terbufos	2015-01-13	< 0.3	µg/L	No
	2015-12-15	< 0.3		No
Tetrachlorophenol, 2,3,4,6-	2015-01-13	< 0.1	µg/L	No
	2015-12-15	< 0.1		No
Triallate	2015-01-13	< 10	µg/L	No
	2015-12-15	< 10		No
Trichlorophenol 2,4,6-	2015-01-13	< 0.1	µg/L	No
	2015-12-15	< 0.1		No
Trichlorophenoxy acetic acid, 2,4,5-	2015-01-13	< 10	µg/L	No
	2015-12-15	< 10		No
Trifluralin	2015-01-13	< 0.5	µg/L	No
	2015-12-15	< 0.5		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)