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, 2013 to December 31, 2013

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
[x] Public access/notice via a Public Library
[x] 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 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 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

- 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	$ 22 000
Water Plant Equipment Maintenance/Repairs	$ 63 000
Water Plant Process Chemicals	$ 93 000
Water Quality Lab Testing	$ 17 000
Consulting/Operator Training	$ 3 000
Water Plant Utilities	$ 162 000
Water Distribution Materials/Supplies/Repairs	$ 212 000

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	2 - 148	25 – >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 #)
Turbidity	8760	Daily Average: 0.02 - 0.11 NTU
Chlorine	8760	Daily Average: 0.48 – 1.78 mg/L Instantaneous: 0.00 – >5.00 mg/L
Fluoride	8760	Daily Average: 0.37 - 0.69 mg/L Instantaneous: 0.00 – 1.95 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	43 samples	5	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	04-Mar-13	0.5	mg/L	No
Nitrite (N)	04-Mar-13	< 0.1	mg/L	No
	04-Jun-13	< 0.1	mg/L	No
	19-Nov-13	< 0.1	mg/L	No
Nitrate (N)	04-Mar-13	0.2	mg/L	No
	04-Jun-13	0.1	mg/L	No
	19-Nov-13	0.1	mg/L	No
Nitrate + Nitrite (N)	04-Mar-13	0.2	mg/L	No
	04-Jun-13	0.1	mg/L	No
	19-Nov-13	0.1	mg/L	No
Antimony	04-Mar-13	0.0005	mg/L	No
Arsenic	04-Mar-13	0.0005	mg/L	No
Barium	04-Mar-13	0.011	mg/L	No
Boron	04-Mar-13	0.006	mg/L	No
Cadmium	04-Mar-13	<0.00002	mg/L	No
Chromium	04-Mar-13	< 0.002	mg/L	No
Lead	04-Mar-13	0.00016	mg/L	No
Mercury	04-Mar-13	< 0.00002	mg/L	No
Selenium	04-Mar-13	< 0.001	mg/L	No
Sodium	04-Mar-13	1.6	mg/L	No
Uranium	04-Mar-13	< 0.00005	mg/L	No
Benzene	06-Mar-13	< 0.5	µg/L	No
Carbon Tetrachloride	06-Mar-13	< 0.2	µg/L	No
Dichlorobenzene,1,2-	06-Mar-13	< 0.1	µg/L	No

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Dichlorobenzene,1,4-	06-Mar-13	< 0.2	µg/L	No
Dichloroethane,1,2-	06-Mar-13	< 0.1	µg/L	No
Dichloroethene, 1,1-	06-Mar-13	< 0.1	µg/L	No
Dichloromethane (Methylene Chloride)	06-Mar-13	< 0.3	µg/L	No
Monochlorobenzene (Chlorobenzene)	06-Mar-13	< 0.2	µg/L	No
Tetrachloroethylene	06-Mar-13	< 0.2	µg/L	No
Trichloroethylene	06-Mar-13	< 0.1	µg/L	No
Vinyl Chloride	06-Mar-13	< 0.2	µg/L	No
Chloroform	06-Mar-13	30.1	µg/L	No
Bromodichloromethane	06-Mar-13	1.5	µg/L	No
Dibromochloromethane	06-Mar-13	< 0.1	µg/L	No
Bromoform	06-Mar-13	< 0.1	µg/L	No
Total Trihalomethanes	06-Mar-13 04-Jun-13 19-Nov-13	31.7 50.2 43.5	µg/L µg/L µg/L	No No No
Alachlor	04-Mar-13	< 0.3	µg/L	No
Aldicarb	04-Mar-13	< 3	µg/L	No
Aldrin + Dieldrin	04-Mar-13	< 0.02	µg/L	No
Atrazine + Metabolites	04-Mar-13	< 0.5	µg/L	No
Azinphos-methyl	04-Mar-13	< 1	µg/L	No
Bendiocarb	04-Mar-13	< 3	µg/L	No
Benzo(a)pyrene	04-Mar-13	< 0.005	µg/L	No
Bromoxynil	04-Mar-13	< 0.3	µg/L	No
Carbaryl	04-Mar-13	< 3	µg/L	No
Carbofuran	04-Mar-13	< 1	µg/L	No
Chlordane (Total)	04-Mar-13	< 0.04	µg/L	No
Chlorpyrifos	04-Mar-13	< 0.5	µg/L	No
Cyanazine	04-Mar-13	< 0.5	µg/L	No
DDT + Metabolites	04-Mar-13	< 0.01	µg/L	No
Diazinon	04-Mar-13	< 1	µg/L	No
Dicamba	04-Mar-13	< 5	µg/L	No
Dichlorophenol, 2,4-	04-Mar-13	< 0.1	µg/L	No
Dichlorophenoxy acetic acid, 2,4- (2,4-D)	04-Mar-13	< 5	µg/L	No
Diclofop-methyl	04-Mar-13	< 0.5	µg/L	No
Dimethoate	04-Mar-13	< 1	µg/L	No
Dinoseb	04-Mar-13	< 0.5	µg/L	No
Diquat	04-Mar-13	< 5	µg/L	No
Diuron	04-Mar-13	< 5	µg/L	No
Glyphosate	04-Mar-13	< 25	µg/L	No
Heptachlor + Heptachlor Epoxide	04-Mar-13	< 0.1	µg/L	No
Lindane (Hexachlorocyclohexane, Gamma)	04-Mar-13	< 0.1	µg/L	No
Malathion	04-Mar-13	< 5	µg/L	No
Methoxychlor	04-Mar-13	< 0.1	µg/L	No
Metolachlor	04-Mar-13	< 3	µg/L	No
Metribuzin	04-Mar-13	< 3	µg/L	No
Paraquat	04-Mar-13	< 1	µg/L	No
Parathion	04-Mar-13	< 3	µg/L	No
Pentachlorophenol	04-Mar-13	< 0.1	µg/L	No
Phorate	04-Mar-13	< 0.3	µg/L	No
Picloram	04-Mar-13	< 5	µg/L	No
Poly-Chlorinated Biphenyls (PCB's)	04-Mar-13	< 0.05	µg/L	No

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Prometryne	04-Mar-13	< 0.1	µg/L	No
Simazine	04-Mar-13	< 0.5	µg/L	No
Temephos	04-Mar-13	< 10	µg/L	No
Terbufos	04-Mar-13	< 0.3	µg/L	No
Tetrachlorophenol, 2,3,4,6-	04-Mar-13	< 0.1	µg/L	No
Triallate	04-Mar-13	< 10	µg/L	No
Trichlorophenol 2,4,6-	04-Mar-13	< 0.1	µg/L	No
Trichlorophenoxy acetic acid, 2,4,5-	04-Mar-13	< 10	µg/L	No
Trifluralin	04-Mar-13	< 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)