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, 2008 to December 31, 2008

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 P2B 1J4

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 [ ]

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 [ ]

Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

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 [ ]

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
[x] Public access/notice via a newspaper
[ ] Public access/notice via Public Request
[x] 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; flocculating chemicals consist of powdered limestone and aluminum sulphate, and activated silica as a coagulant aid
- 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 tanks with optional filter-to-waste capability return to the Sturgeon River (unchlorinated)
- Chlorine gas addition points located before filters and after filter-to-waste valve
- 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)
- Activated silica (sodium silicate and alum)
- Chlorine (gas)
- Limestone
- Hydrated lime (calcium hydroxide)
- Hydrofluosilicic acid (fluoride)

Were any significant expenses incurred to?

[ ] Install required equipment
[ ] Repair required equipment
[ ] Replace required equipment

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

Water Plant Material/Supplies/Rentals	$ 14 000
Water Plant Equipment Maintenance/Repairs	$ 56 000
Water Plant Process Chemicals	$ 59 000
Water Quality Lab Testing	$ 16 900
Consulting/Operator Training	$ 19 000
Water Plant Utilities	$ 107 000
Water Distribution Materials/Supplies/Repairs	$ 129 000

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	Unit of Measure	Corrective Action	Corrective Action Date
08-07-29	Total Coliform measured in Distribution	2		• On July 29, 2008, a water sample collected at a fire hydrant where a new water main was installed had a result of 2 counts of total coliform. • Samples were collected on July 30 and 31 and both passed with no coliform detected. • AWQI 81919	08-08-06
08-08-05	Possible inadequate disinfection at treatment plant	<0.5		• Giardia log dropped below 0.5 due to repairing vacuum leak in chlorinating feed system, at the final treatment stage before the reservoirs. • System ran on and off to find and repair the leak. Low Giardia log condition lasted one hour. • Finished water to the distribution remained constant at 0.90mg/L. • AWQI 82245	08-08-06

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
08-09-24	Low chlorine residual in Distribution	0.00	mg/L	• No free available chlorine (FAC) measured at 136 Cache Bay Road • Broken water valve in closed position has created a water main dead end at 136 and 138 Cache Bay Road • Continuous bleed installed to maintain residual, until valve is repaired • AWQI 84108	07-11-15

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 Or Fecal Results (min #)-(max #)	Range of Total Coliform Results (min #)-(max #)	Number of HPC Samples	Range of HPC Results (min #)-(max #)
Raw	53	20 - 760	4 - 50	0	n/a
Treated	53	0 – 0	0 - 0	53	0 - 79
Distribution	217	0 – 0	0 - 0	53	0 - 38

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 0.024 - 0.217 NTU
Chlorine	8760	Daily Average 0.72 - 1.58 mg/L
Fluoride (If the DWS provides fluoridation)	8760	Daily Average 0.50 - 0.80 mg/L

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

__NOTE__: Record the unit of measure if it is __not__ milligrams per litre.

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	monthly	21	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	2008-08-12	< 0.0001	mg/L	no
Arsenic	2008-08-12	0.0004	mg/L	no
Barium	2008-08-12	0.01	mg/L	no
Boron	2008-08-12	0.005	mg/L	no
Cadmium	2008-08-12	< 0.00002	mg/L	no
Chromium	2008-08-12	< 0.002	mg/L	no
Lead	2008-08-12	0.00062	mg/L	no
Mercury	2008-08-12	< 0.00002	mg/L	no
Selenium	2008-08-12	< 0.0002	mg/L	no
Sodium	2008-08-12	1.9	mg/L	no
Uranium	2008-08-12	< 0.00005	mg/L	no
Fluoride	2008-08-12	0.7	mg/L	no
Nitrite	2008-11-12 2008-06-09 2008-08-12 2008-03-12	< 0.1 < 0.1 < 0.1 < 0.1	mg/L	no
Nitrate	2008-11-12 2008-06-09 2008-08-12 2008-03-12	0.2 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	2008-08-12	< 0.3	µg/L	no
Aldicarb	2008-08-12	< 3	µg/L	no
Aldrin + Dieldrin	2008-08-12	< 0.02	µg/L	no
Atrazine + N-dealkylated metobolites	2008-08-12	< 0.5	µg/L	no
Azinphos-methyl	2008-08-12	< 1	µg/L	no
Bendiocarb	2008-08-12	< 3	µg/L	no
Benzene	2008-08-12	< 0.5	µg/L	no
Benzo(a)pyrene	2008-08-12	< 0.005	µg/L	no
Bromoxynil	2008-08-12	< 0.3	µg/L	no
Carbaryl	2008-08-12	< 3	µg/L	no
Carbofuran	2008-08-12	< 1	µg/L	no
Carbon Tetrachloride	2008-08-12	< 0.2	µg/L	no
Chlordane (Total)	2008-08-12	< 0.04	µg/L	no
Chlorpyrifos	2008-08-12	< 0.5	µg/L	no
Cyanazine	2008-08-12	< 0.5	µg/L	no
Diazinon	2008-08-12	< 1	µg/L	no
Dicamba	2008-08-12	< 5	µg/L	no
1,2-Dichlorobenzene	2008-08-12	< 0.1	µg/L	no
1,4-Dichlorobenzene	2008-08-12	< 0.2	µg/L	no
Dichlorodiphenyltrichloroethane (DDT) + metabolites	2008-08-12	< 0.1	µg/L	no
1,2-Dichloroethane	2008-08-12	< 0.1	µg/L	no

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Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
1,1-Dichloroethylene (vinylidene chloride)	2008-08-12	< 0.1	µg/L	no
Dichloromethane	2008-08-12	< 0.3	µg/L	no
2-4 Dichlorophenol	2008-08-12	< 0.1	µg/L	no
2,4-Dichlorophenoxy acetic acid (2,4-D)	2008-08-12	< 5	µg/L	no
Diclofop-methyl	2008-08-12	< 0.5	µg/L	no
Dimethoate	2008-08-12	< 1	µg/L	no
Dinoseb	2008-08-12	< 0.5	µg/L	no
Diquat	2008-08-12	< 5	µg/L	no
Diuron	2008-08-12	< 5	µg/L	no
Glyphosate	2008-08-12	< 25	µg/L	no
Heptachlor + Heptachlor Epoxide	2008-08-12	< 0.1	µg/L	no
Lindane (Total)	2008-08-12	< 0.1	µg/L	no
Malathion	2008-08-12	< 5	µg/L	no
Methoxychlor	2008-08-12	< 0.1	µg/L	no
Metolachlor	2008-08-12	< 3	µg/L	no
Metribuzin	2008-08-12	< 3	µg/L	no
Monochlorobenzene	2008-08-12	< 1	µg/L	no
Paraquat	2008-08-12	< 3	µg/L	no
Parathion	2008-08-12	< 0.1	µg/L	no
Pentachlorophenol	2008-08-12	< 0.1	µg/L	no
Phorate	2008-08-12	< 0.3	µg/L	no
Picloram	2008-08-12	< 5	µg/L	no
Polychlorinated Biphenyls(PCB)	2008-08-12	< 0.05	µg/L	no
Prometryne	2008-08-12	< 0.1	µg/L	no
Simazine	2008-08-12	< 0.5	µg/L	no
THM (NOTE**:** show latest annual average**)**	2008-11-12 2008-06-09 2008-08-12 2008-03-12	46.4 60.6 56.4 29.4	µg/L	no
Temephos	2008-08-12	< 10	µg/L	no
Terbufos	2008-08-12	< 0.3	µg/L	no
Tetrachloroethylene	2008-08-12	< 0.1	µg/L	no
2,3,4,6-Tetrachlorophenol	2008-08-12	< 10	µg/L	no
Triallate	2008-08-12	< 0.1	µg/L	no
Trichloroethylene	2008-08-12	< 10	µg/L	no
2,4,6-Trichlorophenol	2008-08-12	< 0.5	µg/L	no
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	2008-08-12	< 10	µg/L	no
Trifluralin	2008-08-12	< 0.3	µg/L	no
Vinyl Chloride	2008-08-12	< 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	**N/A**	**N/A**	**N/A**

(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)