Ontario
Ministry of the Environment | Ministère de l'Environnement

O. Reg. 170 SECTION 11 ANNUAL REPORT

Part III Form 2
Section 11. ANNUAL REPORT.

Drinking-Water System Number:	**210000951**
Drinking-Water System Name:	**Verner WTP**
Drinking-Water System Owner:	**The Corporation of the Municipality of West Nipissing**
Drinking-Water System Category:	**Large Municipal Residential**
Period being reported:	**Jan 01, 2007 to Dec 31, 2007**

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.

Municipality of West Nipissing
Sturgeon Falls Water Treatment Plant
11 Nipissing Street
Sturgeon Falls, Ontario P2B 1J4

Complete for all other Categories.

Number of Designated Facilities served:

Did you provide a copy of your annual report to all Designated Facilities you serve?
Yes [ ] No [ ]

Number of Interested Authorities you report to:

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
NA	

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 [ ]

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

[X] Public access/notice via the web http:www.westnipissingouest.ca/pop/dep-utilities.html
[ ] Public access/notice via Government Office
[X] Public access/notice via a newspaper notice given via Sturgeon Falls Tribune newspaper
[ ] Public access/notice via Public Request
[X] Public access/notice via a Public Library copies placed at West Nipissing Library
[ ] Public access/notice via other method

Describe your Drinking-Water System

The Verner WTP, commissioned in 1975 and under went a major upgrade in 2005 which included replacement of all chemical feed system equipment and tanks, replacement of the plant instrumentation and controls, installation of a UV system for primary disinfection, installation of piping and valves to provide treatment-to-waste functionality, new raw water and treated water magnetic flow meters, and the installation of a 125 kW standby diesel generator. Also radio telemetry equipment was installed at the elevated storage tank to permit treatment plant-elevated tank communication and control.

The Verner water works consists of a full surface water treatment facility, designed capacity of 1059 m^3/d, drawing water from the Veuve River that is part of the Nipissing watershed. The intake structure is located 12 km upstream of Lake Nipissing and 48 km downstream of the source. The water treatment plant's intake facility consists of an intake structure located 5 m below the low river level, connected to a raw water wet well by a 42.7 m long, 250 mm ductile iron pipe. The intake structure is approximately 20 m from the riverbank.

The Verner Water Treatment Plant (WTP) is a conventional treatment facility consisting of chemically assisted filtration (through the use of an "Ecodyne Graver Monoplant" package treatment plant), primary disinfection & secondary disinfection. Conventional treatment is comprised of coagulation, flocculation, sedimentation & dual media rapid sand filtration. Furthermore, disinfection is achieved through the use of chlorine dioxide, UV and chlorine gas.

The Ecodyne Graver Monoplant package treatment plant, consisting of a Mixing Zone; Flocculation Zone; Settling Compartment and flock barriers; Blowdown valve and rapid flow by gravity sand and anthracite filters.

Chemical treatment includes the addition of polymer, aluminum sulfate, pre and post soda ash, chlorine for disinfection and chlorine dioxide for iron and manganese removal to control taste and odour.

There are four (4) below grade clear wells connected in series having a total area, total capacity and useable capacity of 134 m2, 269 m^3 and 234 m^3 respectively. The high lift pumping station has a firm capacity of 1,090 m^3/d with three (3) identical vertical turbine high lift pumps each having a capacity of 545 m^3/d at a TDH of 53.3 m. An elevated storage tank of composite steel/concrete construction, having a total storage capacity of 568 m^3 and about 40 m above ground equipped with low level alarm and an overflow is located approximately 23 meters.

Standby emergency power is supplied at this plant by a 125 kW standby diesel generator with automatic switchover controls installed as part of the 2005 plant upgrades.

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List all water treatment chemicals used over this reporting period

Chlorine Gas
Sodium Chlorite
Sodium Carbonate
Aluminum Sulfate (ALUM)
Magnafloc LT20 Poly Acrylamide Polymer

Were any significant expenses incurred to?

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

Describe

- **Lamps and Quartz sleeves in UV reactor units were changed**
- **One (of the sludge pumps in the waste pit was overhauled and reinstalled**
- **#2 low lift pump was overhauled**
- **#3 low lift pump was overhauled**

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
11-Jun-2007	UV dosage	< 40	mj/cm^2	Low UV dose below 40 mj/cm2. Fluctuations started 11-Jun-2007 at 21:00 and stabilized on 12-Jun-2007 at 10:30 above 40 mj/cm2. Note: Turbidity after filters was maintained below 1.0 ntu and chlorine disinfection of treated was maintained at approximately 1.60 mg/L. AWQI # 71864	12-Jun-2007
13-Jun-2007	UV dosage	< 40	mj/cm^2	Primary disinfection not met. UV dose < 40 mj/cm2. The UV dose fluctuated slightly below 40 mj/cm2 until 21-Jun-2007 at 07:30 a.m. with 2 UV reactors operating. The dose has been above 40 mj/cm2 since approximately 07:30 a.m. on 21-Jun-2007. 05-Jul-2007 approximately 11:30 a.m. 1 reactor on > 40 mj/cm2. Back to normal. AWQI # 71911	5-Jul-2007

Microbiological testing done under section 8-2during this reporting period.

	Number of EC & TC Samples	Range of E.Coli Results (min #)-(max #)	Range of Total Coli form Results (min #)-(max #)	Number of GBP Background Samples	Range of GBP Background Results (min #)-(max #)	Number of HPC Samples	Range of HPC Results (min #)-(max #)
Raw	**52**	**10 - 670**	**0 - >2000**	**52**	**200 - >2000**	**NA**	**NA**
Treated	**52**	**0 - 0**	**0 - 0**	**52**	**0 - 0**	**52**	**0 - 2**
Distribution	**157**	**0 – 0**	**0- 0**	**157**	**0 - 32**	**21**	**0 - 4**

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

Filter Grabs

	Number of Grab Samples	Range of Results (min #)-(max #)
Post Filter Turbidity	356	0.11– 0.88 NTU

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

POE Grabs

	Number of Grab Samples	Range of Results (min #)-(max #)
Turbidity	356	0.11– 0.88 NTU
Free Chlorine	335	0.53 – 2.20 mg/L

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

Distribution Grabs

	Number of Grab Samples	Range of Results (min #)-(max #)
Free Chlorine	469	0.29 – 1.76 mg/L

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

Filter On-line Continuous Analyzers

	Number of Samples	Range of Results (min #)-(max #)
Post Filter Turbidity	8760	0.02– 0.69 NTU

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

POE On-line Continuous Analyzers

	Number of Samples	Range of Results (min #)-(max #)
POE Free Chlorine	8760	0.51 – 2.3 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 or order.

Date of legal instrument issued	Parameter	Sampling Frequency	Range of Result	Unit of Measure
C of A 7938-6T4JLY issued 28 Aug 2006	UV Intensity	continuous when units operating	plant shut down interlock activates if dosage <22 mJ/cm^2	mJ/cm^2
	Flow Rate	continuous	min 232 – max 943	m^3/d
	UV Transmittance	daily 5 days per wk	min 22 - max 56	% UVT
	UV Lamp Status	continuous	plant shut down interlock on lamp failure	on or off

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	21 Feb 2007	<0.001	mg/L	
Arsenic	21 Feb 2007	<0.001	mg/L	
Barium	21 Feb 2007	0.016	mg/L	
Boron	21 Feb 2007	<0.010	mg/L	
Cadmium	21 Feb 2007	<0.0001	mg/L	
Chromium	21 Feb 2007	<0.005	mg/L	
Lead Dist Sample 80 Principal St. E	22 Feb 2007	<0.0005	mg/L	
Mercury	21 Feb 2007	<0.0001	mg/L	
Selenium	21 Feb 2007	<0.002	mg/L	
Sodium	01 Feb 2006	38	mg/L	Yes
Uranium	21 Feb 2007	<0.0002	mg/L	
Fluoride	01 Feb 2006	<0.1	mg/L	
Nitrite	21 Feb 2007 17 May 2007 16 Aug 2007 14 Nov 2007	<0.01 <0.01 <0.01 <0.01	mg/L mg/L mg/L mg/L	
Nitrate	21 Feb 2007 17 May 2007 16 Aug 2007 14 Nov 2007	0.2 <0.1 <0.1 0.1	mg/L mg/L mg/L mg/L	

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	21 Feb 2007	<0.5	ug/L	
Aldicarb	21 Feb 2007	<5	ug/L	DL > ½ MAC
Aldrin + Dieldrin	21 Feb 2007	<0.012	ug/L	
Atrazine + N-dealkylated metobolites	21 Feb 2007	<1	ug/L	
Azinphos-methyl (Guthion)	21 Feb 2007	<2	ug/L	
Bendiocarb	21 Feb 2007	<2	ug/L	
Benzene	21 Feb 2007	<0.1	ug/L	
Benzo(a)pyrene	21 Feb 2007	<0.009	ug/L	DL > ½ MAC
Bromoxynil	21 Feb 2007	<0.5	ug/L	
Carbaryl	21 Feb 2007	<5	ug/L	
Carbofuran	21 Feb 2007	<5	ug/L	
Carbon Tetrachloride	21 Feb 2007	<0.1	ug/L	
Chlordane (Total)	21 Feb 2007	<0.012	ug/L	
Chlorpyrifos	21 Feb 2007	<1	ug/L	
Cyanazine	21 Feb 2007	<1	ug/L	
Diazinon	21 Feb 2007	<1	ug/L	
Dicamba	21 Feb 2007	<1	ug/L	

1,2-Dichlorobenzene	**21 Feb 2007**	**<0.2**	**ug/L**	
1,4-Dichlorobenzene	**21 Feb 2007**	**<0.2**	**ug/L**	
Dichlorodiphenyltrichloroethane(DDT)+metabolite	**21 Feb 2007**	**<0.024**	**ug/L**	
1,2-Dichloroethane	**21 Feb 2007**	**<0.1**	**ug/L**	
1,1-Dichloroethylene (vinylidene chloride)	**21 Feb 2007**	**<0.1**	**ug/L**	
Dichloromethane	21 Feb 2007	**<0.5**	**ug/L**	
2-4 Dichlorophenol	**21 Feb 2007**	**<0.5**	**ug/L**	
2,4-Dichlorophenoxy acetic acid (2,4-D)	**21 Feb 2007**	**<1**	**ug/L**	
Diclofop-methyl	**21 Feb 2007**	**<0.9**	**ug/L**	
Dimethoate	**21 Feb 2007**	**<2.5**	**ug/L**	
Dinoseb	**21 Feb 2007**	**<1**	**ug/L**	
Diquat	**21 Feb 2007**	**<7**	**ug/L**	
Diuron	**21 Feb 2007**	**<10**	**ug/L**	
Glyphosate	**21 Feb 2007**	**<10**	**ug/L**	
Heptachlor + Heptachlor Epoxide	**21 Feb 2007**	**<0.012**	**ug/L**	
Lindane (Total)	**21 Feb 2007**	**<0.006**	**ug/L**	
Malathion	**21 Feb 2007**	**<5**	**ug/L**	
Methoxychlor	**21 Feb 2007**	**<0.024**	**ug/L**	
Metolachlor	**21 Feb 2007**	**<0.5**	**ug/L**	
Metribuzin	**21 Feb 2007**	**<5**	**ug/L**	
Monochlorobenzene	**21 Feb 2007**	**<0.1**	**ug/L**	
Paraquat	**21 Feb 2007**	**<1**	**ug/L**	
Parathion	**21 Feb 2007**	**<1**	**ug/L**	
Pentachlorophenol	**21 Feb 2007**	**<0.5**	**ug/L**	
Phorate	**21 Feb 2007**	**<0.5**	**ug/L**	
Picloram	**21 Feb 2007**	**<5**	**ug/L**	
Polychlorinated Biphenyls(PCB)	**21 Feb 2007**	**<0.05**	**ug/L**	
Prometryn	**21 Feb 2007**	**<0.25**	**ug/L**	
Simazine	**21 Feb 2007**	**<1**	**ug/L**	
THM Dist Sample Location 80 Principal St. E	**22 Feb 2007** **17 May 2007** **16 Aug 2007** **14 Nov 2007** **Ann Avg.**	**24.6** **51.3** **65.3** **46.1** **46.8**	**ug/L** **ug/L** **ug/L** **ug/L** **ug/L**	
Temephos	**21 Feb 2007**	**<10**	**ug/L**	
Terbufos	**21 Feb 2007**	**<0.7**	**ug/L**	**DL > ½ MAC**
Tetrachloroethylene	**21 Feb 2007**	**<0.1**	**ug/L**	
2,3,4,6-Tetrachlorophenol	**21 Feb 2007**	**<0.5**	**ug/L**	
Triallate	**21 Feb 2007**	**<1**	**ug/L**	
Trichloroethylene	**21 Feb 2007**	**<0.1**	**ug/L**	
2,4,6-Trichlorophenol	**21 Feb 2007**	**<0.5**	**ug/L**	
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	**21 Feb 2007**	**<1**	**ug/L**	
Trifluralin	**21 Feb 2007**	**<1**	**ug/L**	
Vinyl Chloride	**21 Feb 2007**	**<0.2**	**ug/L**	

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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	½ MAC VALUE	Date of Sample
Aldicarb	<5 (lab detection level)	ug/L	4.5 ug/L	21 Feb 2007
Benzo(a)pyrene	<0.01 (lab detection level)	ug/L	0.005 ug/L	21 Feb 2007
Tebufos	<0.7 (lab detection level)	ug/L	0.50 ug/L	21 Feb 2007

Note! **In all three cases above the analysis result value was less that the lab detection limit. However the lab detection limit is above the ½ MAC value.**