

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, 2008 to Dec 31, 2008

<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;"> <p style="color: blue;">Municipality of West Nipissing Sturgeon Falls Water Treatment Plant 11 Nipissing Street Sturgeon Falls, Ontario P2B 1J4</p> </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <input style="width: 100px; height: 20px;" type="text"/></p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [] No []</p> <p>Number of Interested Authorities you report to: <input style="width: 100px; height: 20px;" type="text"/></p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []</p>
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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 []

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

Public access/notice via the web <http://www.westnipissingouest.ca/pop/dep-utilities.html>

Public access/notice via Government Office

Public access/notice via a newspaper notice given via Sturgeon Falls Tribune newspaper

Public access/notice via Public Request

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 was 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 m³/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 m³ and 234 m³ respectively. The high lift pumping station has a firm capacity of 1,090 m³/d with three (3) identical vertical turbine high lift pumps each having a capacity of 545 m³/d at a TDH of 53.3 m. An elevated storage tank of composite steel/concrete construction, having a total storage capacity of 568 m³ 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
 Repair required equipment
 Replace required equipment

Describe

- All lamps and quartz sleeves in both UV reactor units were changed
- High lift Pump #3 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
22-Jun-2008	UV Dosage	< 40	mJ/cm ²	UV Dose was less than 40 mJ/cm ² at approximately 11:20 am. Post Filter turb was 0.15, POE turb was 0.20, Raw UV %T is 18, post filter UV % T is 72 and POE free chlorine residual is 1.3 mg/L. NO further actions are required as per Mike Morrisson of MOH. AWQI # 80066	22-Jun-2008
26-Jun-2008	Soda Ash			Process loss of soda ash, pH dropped to 6.1, treated turb to 3.3 post filter turb 0.8 NTU, POE free chlorine at 1.42 mg/L. The post filtration soda ash supply was re-established. The dosage rates were increased to raise pH ASAP. pH 6.59 achieved by 8:55 am. Filter effluent turbidity was maintained below 0.2 NTU. Treated water turb decreased from 3.3 NTU to 2.7 NTU. Measured distribution turb is at 0.84 NTU. Measured distribution free chlorine residual is at .53 mg/L. AWQI # 80161	26-Jun-2008
13-Aug-2008	UV Dosage	< 40	mJ/cm ²	Primary disinfection not met. UV dose <40 mJ/cm ² . Secondary Disinfection maintained 2.00mg/L	13-Aug-2008

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				free chlorine. UV dosage above 40 mJ/cm ² with two UV reactors operating continuously. AWQI #82550	
10-Nov-08	UV Dose	< 40	mJ/cm ²	UV dosage slightly below 40 mJ/cm ² with two UV reactors operating continuously. Temporary relief for operating below 40 mJ/cm ² granted by local MOE office pending engineering study undertaken by owner. AWQI #85314	13-Nov-2008
9-Dec-2008	Sodium	> 20	mg/L	Re-sampling and notification of the elevated sodium level made to the MOH and MOE as required. AWQI # 85816. Re-sample collected 17 Dec 08. Resample result 44 mg/L. Re-sample results received on 29 Dec 08 were sent to the MOH, MOE & Owner on 05 Jan 2009.	5-Jan-2009

Microbiological testing done under section 8-2 during 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	53	10 - 520	>40 - >2000	53	>200 - >2000	NA	NA
Treated	53	0 - 0	0 - 0	53	0 - 1	53	0 - 18
Distribution	161	0 - 0	0 - 0	161	0 - 4	54	0 - 5

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	315	0.09– 0.28 NTU

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

POE Grabs

	Number of Grab Samples	Range of Results (min #)-(max #)
Turbidity	366	0.1– 2.0 NTU
Free Chlorine	347	0.89 – 2.4 mg/L

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

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Distribution Grabs

	Number of Grab Samples	Range of Results (min #)-(max #)
Free Chlorine	471	0.25 – 2.44 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	0.01– 2.00 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	0.00 – 3.95 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 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 217 – max 613	m ³ /d
	UV Transmittance	daily 5 days per wk	min 16 - max 45	% UVT
	UV Lamp Status	continuous	plant shut down interlock on lamp failure	on <u>or</u> off

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	14 Feb 08	<0.5	ug/L	
Arsenic	14 Feb 08	<1	ug/L	
Barium	14 Feb 08	11	ug/L	
Boron	14 Feb 08	<10	ug/L	
Cadmium	14 Feb 08	<0.1	ug/L	
Chromium	14 Feb 08	<5	ug/L	
Lead Dist Sample 80 Principal St. E	14 Feb 08	<0.5	ug/L	Special Note: Community Lead Testing Lead Testing was completed during two sample periods in 2008 as per Schedule 15.1. Results indicated that the concentrations of all residential lead samples were within the Ontario Drinking Water Quality Standard of 10 micrograms per liter. However one lead sample was above the ½ MAC concentration. Refer to separate community lead sampling results summary table following.
Mercury	14 Feb 08	<0.0001	mg/L	
Selenium	14 Feb 08	<2	ug/L	
Sodium	14 Feb 08 16 Dec 08 17 Dec 08	43000 38000 44000	ug/L ug/L ug/L	>20,000 notification to MOH - re-sample result
Uranium	14 Feb 08	<0.1	ug/L	
Fluoride	01 Feb 2006	<0.1	mg/L	
Nitrite	14 Feb 08 13 May 08 13 Aug 08 13 Nov 08	<0.01 0.02 <0.01 <0.01	mg/L mg/L mg/L mg/L	
Nitrate	14 Feb 08 13 May 08 13 Aug 08 13 Nov 08	0.1 <0.1 0.1 0.1	mg/L mg/L mg/L mg/L	

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Summary of lead testing under O. Reg. 170/03 Schedule 15.1 during this reporting period
 (applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Round 1	Number of Lead Samples	Number of Adverse Results	Range of Lead Samples (ug/L)		Range of PH Sample Results		Range of Alkalinity Sample Results (mg/L as CaCO ₃)	
			MIN #	MAX #	MIN #	MAX #	MIN #	MAX #
Distribution	4	0	< 1	< 1	7.25	7.46	55	66
Non-Residential	2	0	< 1	< 1	7.26	7.27	NA	NA
Residential	20	0	< 1	6	7.01	7.38	NA	NA
Round 2	Number of Lead Samples	Number of Adverse Results	Range of Lead Samples (ug/L)		Range of PH Sample Results		Range of Alkalinity Sample Results (mg/L as CaCO ₃)	
			MIN #	MAX #	MIN #	MAX #	MIN #	MAX #
Distribution	4	0	< 1	3	7.21	7.43	64	68
Non-Residential	2	0	< 1	2	6.87	6.87	NA	NA
Residential	20	0	< 1	4	7.02	7.68	NA	NA

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	14 Feb 08	<0.5	ug/L	
Aldicarb	14 Feb 08	<5	ug/L	DL > 1/2 MAC
Aldrin + Dieldrin	14 Feb 08	<0.01	ug/L	
Atrazine + N-dealkylated metabolites	14 Feb 08	<1	ug/L	
Azinphos-methyl (Guthion)	14 Feb 08	<2	ug/L	
Bendiocarb	14 Feb 08	<2	ug/L	
Benzene	14 Feb 08	<0.1	ug/L	
Benzo(a)pyrene	14 Feb 08	<0.009	ug/L	DL > 1/2 MAC
Bromoxynil	14 Feb 08	<0.5	ug/L	
Carbaryl	14 Feb 08	<5	ug/L	
Carbofuran	14 Feb 08	<5	ug/L	
Carbon Tetrachloride	14 Feb 08	<0.1	ug/L	
Chlordane (Total)	14 Feb 08	<0.01	ug/L	
Chlorpyrifos	14 Feb 08	<1	ug/L	
Cyanazine	14 Feb 08	<1	ug/L	

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Diazinon	14 Feb 08	<1	ug/L	
Dicamba	14 Feb 08	<1	ug/L	
1,2-Dichlorobenzene	14 Feb 08	<0.2	ug/L	
1,4-Dichlorobenzene	14 Feb 08	<0.2	ug/L	
Dichlorodiphenyltrichloroethane(DDT)+metabolite	14 Feb 08	<0.02	ug/L	
1,2-Dichloroethane	14 Feb 08	<0.2	ug/L	
1,1-Dichloroethylene (vinylidene chloride)	14 Feb 08	<0.1	ug/L	
Dichloromethane	14 Feb 08	<0.5	ug/L	
2-4 Dichlorophenol	14 Feb 08	<0.5	ug/L	
2,4-Dichlorophenoxy acetic acid (2,4-D)	14 Feb 08	<1	ug/L	
Diclofop-methyl	14 Feb 08	<0.9	ug/L	
Dimethoate	14 Feb 08	<3	ug/L	
Dinoseb	14 Feb 08	<1	ug/L	
Diquat	14 Feb 08	<7	ug/L	
Diuron	14 Feb 08	<10	ug/L	
Glyphosate	14 Feb 08	<10	ug/L	
Heptachlor + Heptachlor Epoxide	14 Feb 08	<0.01	ug/L	
Lindane (Total)	14 Feb 08	<0.006	ug/L	
Malathion	14 Feb 08	<5	ug/L	
Methoxychlor	14 Feb 08	<0.02	ug/L	
Metolachlor	14 Feb 08	<0.5	ug/L	
Metribuzin	14 Feb 08	<5	ug/L	
Monochlorobenzene	14 Feb 08	<0.1	ug/L	
Paraquat	14 Feb 08	<1	ug/L	
Parathion	14 Feb 08	<1	ug/L	
Pentachlorophenol	14 Feb 08	<0.5	ug/L	
Phorate	14 Feb 08	<0.5	ug/L	
Picloram	14 Feb 08	<5	ug/L	
Polychlorinated Biphenyls(PCB)	14 Feb 08	<0.05	ug/L	
Prometryn	14 Feb 08	<0.3	ug/L	
Simazine	14 Feb 08	<1	ug/L	
THM Dist Sample Location 80 Principal St. E	14 Feb 08	30.8	ug/L	
	13 May 08	59.0	ug/L	
	13 Aug 08	99.5	ug/L	
	13 Nov 08	<u>76.9</u>	ug/L	
	Ann Avg.	66.6	ug/L	
Temephos	14 Feb 08	<10	ug/L	
Terbufos	14 Feb 08	<0.5	ug/L	DL > ½ MAC
Tetrachloroethylene	14 Feb 08	<0.1	ug/L	
2,3,4,6-Tetrachlorophenol	14 Feb 08	<0.5	ug/L	
Triallate	14 Feb 08	<1	ug/L	
Trichloroethylene	14 Feb 08	<0.1	ug/L	
2,4,6-Trichlorophenol	14 Feb 08	<0.5	ug/L	
2,4,5-Trichlorophenoxy acetic acid(2,4,5-T)	14 Feb 08	<1	ug/L	

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Trifluralin	14 Feb 08	<1	ug/L	
Vinyl Chloride	14 Feb 08	<0.2	ug/L	

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	MAC Value	Date of Sample
Aldicarb	<5 lab detection level	ug/L	4.5	9	14 Feb 08
Benzo(a)pyrene	<0.009 lab detection level	ug/L	0.005	0.01	14 Feb 08
Lead	6.0	Ug/L	5.0	10.0	Spring 08

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

February 26, 2009

Mr. Jean-Pierre Barbeau, CAO
Municipality of West Nipissing
225 Holditch Street, Suite 101
Sturgeon Falls, Ontario P2B 1T1

Re: O. Reg. Section 11 Annual Reporting
For the Verner Water Treatment Plant
Waterworks No.: 210000951

Dear Mr. Barbeau,

Attached is the 2008 Annual Report for the Verner Water Treatment Plant. This report is completed in accordance **O. Reg. 170/03**, Section 11 (1); O. Reg. 247/06, s. 10 (1) under the Safe Drinking Water Act, which requires an Annual Report to be prepared no later than February 28th of each year for the preceding calendar year.

This report is no longer required to be submitted to the appointed Director of the Ministry of Environment but must be on file to be available on request for the inspection by Ministry of the Environment Inspectors.

Section 12 (4) of O. Reg. 170/03, requires this report to be made available for inspection by any member of the public during normal business hours, without charge. This report should be made available for inspection at the office of the municipality, or at a location that is reasonably convenient to the users of the water system.

Section 11 (9.1) of O. Reg. 170/03, requires the owner of a drinking water system to advise the users of the water system of the availability of the report in a public manner each time the report is prepared annually.

Sincerely,

David Walters
Operations Manager
OCWA North Bay Hub

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