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, 2012 to Dec 31, 2012**

Complete if your Category is Large Municipal Residential or Small Municipal Residential	***Complete for all other Categories.***
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**	**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
[ ] Public access/notice via a 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 was originally commissioned in 1975 and underwent major regulatory upgrades 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 Municipal Water System is a surface water system that draws water from the Veuve River which is part of the Lake Nipissing watershed. The intake structure is located 12 km upstream of Lake Nipissing and 48 km downstream of the source. The Veuve River, upstream from the intake, has a catchment area of approximately 92,000 ha. This area is well developed and includes: Hwy 17 corridor; CPR railway tracks; housing and cottage development.

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, with a designed capacity of 1059 m^3/d. Conventional treatment is comprised of coagulation, flocculation, sedimentation & dual media rapid sand filtration, primary disinfection & secondary disinfection. Furthermore, disinfection is achieved through the use of chlorine dioxide, UV and chlorine gas. Chemically assisted filtration is through the use of an "Ecodyne Graver Monoplant" package treatment plant

The Ecodyne Graver Monoplant package treatment plant, consists 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.

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

The Verner Water Distribution System consists of approximately eight kilometers of watermain. The system includes an off site water storage facility located on the west side of

Dubeau Street (192 m north of the intersection of Dubeau Street and Vercheres Avenue). The facility is a steel and concrete elevated storage tank, having a total storage capacity of 568 m^3 and about 40 m above ground equipped with low level alarm and an overflow. The system has approximately 50 hydrants, and serves approximately 1,100 consumers. The Distribution system is classified as a Class I system.

List all water treatment chemicals used over this reporting period

Chlorine Gas
Sodium Chlorite
Sodium Carbonate
Aluminum Sulfate (ALUM)
Magnafloc LT20 Poly Acrylamide Polymer
Chlorine dioxide is produced on site by combining Chlorine solution with sodium chlorite.

Were any significant expenses incurred to?

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

Description of major repairs, equipment replacement or capital improvements

UV repl. Parts $6983.79
UV sensor calibration $519.61
New breaker (part of lamp repl. Job) $1003.35
DWQMS audit - full scope $1698.32
PH electrode $667.55
Tower cleaning & insp. $7715.23
Repair to chimney & re-insulate tube heaters
$1322.88

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
N/A					

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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	**49**	**2-590**	**22 - >2000**	**N/A**	**NA**	**NA**	**NA**
Treated	**49**	**0 - 0**	**0 - 0**	**N/A**	**NA**	**49**	**0 - 6**
Distribution	**157**	**0 – 0**	**0- 0**	**N/A**	**NA**	**53**	**0 - 2**

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	**322**	**0.09– 0.31 NTU**

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

POE Grabs

	Number of Grab Samples	Range of Results (min #)-(max #)
Turbidity	**281**	**0.7– 0.18 NTU**
Free Chlorine	**320**	**0.99 – 2.6 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	**413**	**0.36 – 1.8 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**	**0.04– 2.0 NTU**

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

POE On-line Continuous Analyzers

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

	Number of Samples	Range of Results (min #)-(max #)
POE Free Chlorine	8760	0.64 – 2.99 mg/L

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
Municipal Drinking Water Licence 202-101 issued May 25, 2011	UV Intensity Design dose 40mj/cm2 = Min 12.7 W/m2 & Min UVT 65.3% & Max flow of 12.2 L/ OR Min 18.2 W/m2 & Min UVT of 72.2% & Max flow of 12.	continuous when units operating	plant shut down interlock activates if dosage <13 W/m^2	W/m^2
	Flow Rate	continuous	min 297 – max 800.9 (4.42 L/s – 11.23 L/s)	m^3/d
	UV Transmittance	monthly	min 83- max 91	% UVT
	UV Sensor >/ = 0.8& </ = 1.2	annually	Calibration Ratio Range VN 004 0.96 – 1.01 VN 0028 0.95 – 1.01	calibration ratio
	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	Feb 22, 2012	0.9	ug/L	No
Arsenic	Feb 22, 2012	<1	ug/L	No
Barium	Feb 22, 2012	13	ug/L	No
Boron	Feb 22, 2012	<10	ug/L	No
Cadmium	Feb 22, 2012	<0. 1	ug/L	No
Chromium	Feb 22, 2012	<5	ug/L	No
Mercury	Feb 22, 2012	<0.0001	mg/L	No
Selenium	Feb 22, 2012	<2	ug/L	No
Sodium	Feb 22, 2012	46000	ug/L	YES
Uranium	Feb 22, 2012	<0.1	ug/L	No
Fluoride	Mar 22, 2011	<0.1	mg/L	

Nitrite	Feb 22, 2012 May 30, 2012 Aug 21, 2012 Nov 25, 2012	<0.01 <0.01 <0.01 <0.005	mg/L mg/L mg/L mg/L	No No No No
Nitrate	Feb 22, 2012 May 30, 2012 Aug 21, 2012 Nov 25, 2012	0.2 <0.1 <0.1 0.051	mg/L mg/L mg/L mg/L	No No No No

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 Dec 15 2011 to Apr 15 2012	Number of Lead Samples	Number of Adverse Results	Number of Hydrants Sampled	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	0	0	2	N/A	N/A	6.93	6.96	50.3	51.2
Non-Residential	0	0	N/A	N/A	N/A	N/A	N/A	NA	NA
Residential	0	0	N/A	N/A	N/A	N/A	N/A	NA	NA

Round 2 June 15 2012 to Oct 15 2012	Number of Lead Samples	Number of Adverse Results	Number of Hydrants Sampled	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	0	0	2	N/A	N/A	7.08	7.25	65.1	66.2
Non-Residential	0	0	N/A	N/A	N/A	N/A	N/A	NA	NA
Residential	0	0	N/A	N/A	N/A	N/A	N/A	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	Feb 22, 2012	<0.5	ug/L	No
Aldicarb	Feb 22, 2012	<5	ug/L	DL > ½ MAC

Aldrin	Feb 22, 2012	<0.006	ug/L	no
Aldrin + Dieldrin	Feb 22, 2012	<0.01	ug/L	no
Atrazine	Feb 22, 2012	<0.5	ug/L	No
Atrazine + N-dealkylated metobolites	Feb 22, 2012	<1	ug/L	No
Azinphos-methyl (Guthion)	Feb 22, 2012	<2	ug/L	no
Bendiocarb	Feb 22, 2012	<2	ug/L	No
Benzene	Feb 22, 2012	<0.1	ug/L	no
Benzo(a)pyrene	Feb 22, 2012	<0.009	ug/L	DL > ½ MAC
Bromoxynil	Feb 22, 2012	<0.5	ug/L	No
Carbaryl	Feb 22, 2012	<5	ug/L	No
Carbofuran	Feb 22, 2012	<5	ug/L	No
Carbon Tetrachloride	Feb 22, 2012	<0.1	ug/L	No
g-Clorodane	Feb 22, 2012	<0.006	ug/L	No
a-Chlorodane	Feb 22, 2012	<0.006	ug/L	No
Chlordane (Total)	Feb 22, 2012	<0.01	ug/L	no
Chlorpyrifos	Feb 22, 2012	<1	ug/L	No
Cyanazine	Feb 22, 2012	<1	ug/L	No
DDT + Metabolites (Dichlorodiphenyltrichloroethane)	Feb 22, 2012	<0.02	ug/L	no
Des-ethyl atrazine	Feb 22, 2012	<0.5	ug/L	no
Diazinon	Feb 22, 2012	<1	ug/L	No
Dicamba	Feb 22, 2012	<1	ug/L	No
Dieldin	Feb 22, 2012	<0.006	ug/L	No
1,2-Dichlorobenzene	Feb 22, 2012	<0.2	ug/L	No
1,4-Dichlorobenzene	Feb 22, 2012	<0.2	ug/L	no
1,2-Dichloroethane	Feb 22, 2012	<0.2	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	Feb 22, 2012	<0.1	ug/L	no
Dichloromethane	Feb 22, 2012	<0.5	ug/L	No
2-4 Dichlorophenol	Feb 22, 2012	<0.5	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Feb 22, 2012	<1	ug/L	no
Diclofop-methyl	Feb 22, 2012	<0.9	ug/L	No
Dimethoate	Feb 22, 2012	<3	ug/L	No
Dinoseb	Feb 22, 2012	<1	ug/L	No
Diquat	Feb 22, 2012	<7	ug/L	No
Diuron	Feb 22, 2012	<10	ug/L	No
Glyphosate	Feb 22, 2012	<10	ug/L	No
Heptachlor	Feb 22, 2012	<0.006	ug/L	No
Heptachlor Epoxide	Feb 22, 2012	<0.006	ug/L	No
Heptachlor + Heptachlor Epoxide	Feb 22, 2012	<0.01	ug/L	No
Lindane (Total)	Feb 22, 2012	<0.006	ug/L	No
Malathion	Feb 22, 2012	<5	ug/L	no
Methoxychlor	Feb 22, 2012	<0.02	ug/L	no
Metolachlor	Feb 22, 2012	<0.5	ug/L	No
Metribuzin	Feb 22, 2012	<5	ug/L	No
Monochlorobenzene	Feb 22, 2012	<0.1	ug/L	no

Oxychlorodane	**Feb 22, 2012**	**<0.006**	**ug/L**	**No**
p,p-DDE	**Feb 22, 2012**	**<0.006**	**ug/L**	**No**
p,p-DDD	**Feb 22, 2012**	**<0.006**	**ug/L**	**No**
o,p-DDT	**Feb 22, 2012**	**<0.006**	**ug/L**	**No**
p,p-DDT	**Feb 22, 2012**	**<0.006**	**ug/L**	**No**
Paraquat	**Feb 22, 2012**	**<1**	**ug/L**	**no**
Parathion	**Feb 22, 2012**	**<1**	**ug/L**	**No**
Pentachlorophenol	**Feb 22, 2012**	**<0.5**	**ug/L**	**No**
Phorate	**Feb 22, 2012**	**<0.5**	**ug/L**	**No**
Picloram	**Feb 22, 2012**	**<5**	**ug/L**	**No**
Polychlorinated Biphenyls (PCB)	**Feb 22, 2012**	**<0.05**	**ug/L**	**no**
Prometryn	**Feb 22, 2012**	**<0.3**	**ug/L**	**No**
Simazine	**Feb 22, 2012**	**<1**	**ug/L**	**No**
Temephos	**Feb 22, 2012**	**<10**	**ug/L**	**No**
Terbufos	**Feb 22, 2012**	**<0.5**	**ug/L**	**No**
Tetrachloroethylene	**Feb 22, 2012**	**<0.1**	**ug/L**	**No**
2,3,4,6-Tetrachlorophenol	**Feb 22, 2012**	**<0.5**	**ug/L**	**No**
Tolulene	**Feb 22, 2012**	**<0.2**	**ug/L**	**No**
Triallate	**Feb 22, 2012**	**<1**	**ug/L**	**No**
Trichloroethylene	**Feb 22, 2012**	**<0.1**	**ug/L**	**no**
2,4,6-Trichlorophenol	**Feb 22, 2012**	**<0.5**	**ug/L**	**No**
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	**Feb 22, 2012**	**<1**	**ug/L**	**no**
Trifluralin	**Feb 22, 2012**	**<1**	**ug/L**	**no**
Vinyl Chloride	**Feb 22, 2012**	**<0.2**	**ug/L**	**no**

THM **Dist Sample Location 80 Principal St. E (arena)** Result marked with * not used in calculating the annual average. The regulation requires that the highest result from each quarter be used to calculate the average	**1 st Quarter Result Value**	**2 nd Quarter Result Value**	**3 rd Quarter Result Value**	**4th Quarter Result Value**	**Unit of Measure**	**Exceedance**
Date Sampled	**Feb 22, 2012**	**30 May 12**	**21 Aug 12**	**25 Nov 12**		
Bromodichloromethane	**1.47**	**1.43**	**4.35**	**2.0**	**ug/L**	**No**
Bromoform	**< 0.2**	**< 0.2**	**< 0.2**	**< 0.34**	**ug/L**	**No**
Chloroform	**38.2**	**30.0**	**49.1**	**85**	**ug/L**	**No**
Dibromochloromethane	**< 0.2**	**< 0.2**	**<0.21**	**< 0.37**	**ug/L**	**No**
Total Trihalomethanes	**39.7**	**31.4**	**53.7**	**87**	**ug/L**	**No**

Total Trihalomethanes 4 Quarter Average	**52.95**	**ug/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	½ MAC VALUE	MAC Value	Date of Sample
Aldicarb	**<5 lab detection level**	**ug/L**	**4.5**	**9**	**Feb 22, 2012**
Benzo(a)pyrene	**<0.009 lab detection level**	**ug/L**	**0.005**	**0.01**	**Feb 22, 2012**

Note! **With the exception of Lead, in all of the cases above the analysis result value was less that the lab detection limit; however, the lab detection limit is above the ½ MAC value.**