PETAWAWA DRINKING WATER SYSTEM - 2014 ANNUAL REPORT

Prepared by:

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Ottawa Valley Hub

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Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Foreword

This document contains three different reports required for the Petawawa Drinking Water System:

- Section 11, Annual Report, as per the SDWA, 2002- Section 11 of the Ontario Regulation 170/03
- Summary Report, as per the SDWA, 2002- Schedule 22 of the Ontario Regulation 170/03
- Summary of the Raw Water values that were submitted to the Ministry of the Environment under the Ontario Regulation 387/04, OWRA, 1990- Water Taking.

Section 12 of Ontario Regulation 170/03 of the SDWA, 2002, requires both the Summary Report and the Annual Report be made available for inspection by any member of the public during normal business hours, without charge. These reports are to be made available for inspection at the office of the municipality and on the municipality internet site.

SECTION 11

ANNUAL REPORT 2014

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Drinking Water Systems Regulation O. Reg. 170/03
Section 11- Annual Report

System Information:

Drinking Water System Name	Petawawa Drinking Water System
Municipal Drinking Water License #	199-101, Issue #1
Drinking Water Works Permit #	199-201, Issue #1
Drinking Water System Number	210002101
System Owner	Town of Petawawa
Operating Authority	Ontario Clean Water Agency
Drinking Water System Category	Large Municipal Residential
DWQMS Status (SAI Global Certified- File # 1634127-01)	Full Scope/ Entire DWQMS (December 15, 2012)
Reporting Period	January 1, 2014 – December 31, 2014

Summary Report (170/03 Schedule 22) will be available for inspection at:

Town of Petawawa
1111 Victoria Street
Petawawa, ON
K8H 2E6

List all Drinking Water Systems which receive all of their drinking water from your system:

Name	Drinking Water System Number
CFB Petawawa	Federal jurisdiction

Provide a brief description of the system:

Petawawa Water Treatment Plant is a conventional water treatment system using PAS-8 as the primary and polymer as the secondary coagulant to achieve coagulation, flocculation, and sedimentation. Pre and post pH adjustment with soda ash is also utilized during the water treatment process. Dual media filters provide filtration and chlorine gas is used for disinfection. Fluoridation is also practiced.

What Treatment Chemicals were used during the Reporting Year:

Chemical Name	Use	Supplier
PAS-8	Coagulant	Kemira
Fluoride	Fluoridation	Brenntag
Soda Ash Dense	pH Adjustment	CCC & Flochem
Chlorine Gas	Disinfection	Brenntag
Superfloc A-100 Flocculant (Polymer)	Coagulant Aid	Kemira

Summary of any Reports made to the Ministry under Subsection 18 (1) of the Act or Section 16-4 of Schedule 16:

DRINKING WATER LEGISLATION	AWQI #	Cause			STATUS
		PARAMETER/ EQUIPMENT FAILURE	DURATION	CORRECTIVE ACTION TAKEN	
SDWA 170/03	121662	Chlorine analyzer failure	22-Nov-14	Replaced defective chlorine analyzer.	Completed
SDWA 170/03	119779	Fluoride analyzer failure	23-Aug-14 to 25-Aug-14	Found air bubble inside electrode eye. Re-filled solution and replaced electrode. Put back in service.	Completed
SDWA 170/03	117819	3 Total Coliform from distribution sample	4-Jun-14 to 9-Jun-14	Re-sampled at same location and upstream and downstream locations. Re-sample came back good.	Completed
SDWA 170/03	117119	Fluoride analyzer failure	26-Apr-14 to 28-Apr-14	Installed used reference electrode in analyzer. Adjusted water flow to conditioning tank to eliminate air bubbles and increased pumps to raise dosage.	Completed
SDWA 170/03	115981	Sodium exceedance of 20 mg/L	07-Feb-14 to 26-Feb-14	Re-sampled by request of the Health Unit and since sample was again 20 mg/L, the HU provided advisory notices to local schools and physicians.	Completed

Does your Drinking-Water System serve more than 10 000 people?

(YES) NO

If yes, is your annual report available to the public at no charge on a web site on the internet?

(YES) NO

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

- Notice via Government Office
- Town of Petawawa internet Web-Site

Capacity Assessment of the Petawawa Drinking Water System:

Year	2010	2011	2012	2013	2014
Av. Day Flow (m^3/d)	6 494.87	6 248.97	7 166.06	6 463.48	6 573.42
Design Capacity (m^3/d)	21 500.0	21 500.0	21 500.0	21 500.0	21 500.0
% of Capacity (based on av. day flows)	30.2	29.1	33.3	30.1	30.5
Max. Day Flow (m^3/d)	13 113.0	10 952.0	13 860.0	11 664.0	13 017.0
% of Capacity (based on max. day flows)	61.0	50.9	64.5	54.3	60.5

In 2014, the average day flow was at approximately 30.5 % of the current plant design, and the maximum day flow was at approximately 60.5 % of the plant design of 21 500.0 m^3/d.

Regulatory Sample Results Summary:

Microbiological Testing (Ont. Reg. 170/03, Sch.10, Sch.11 or Sch.12 & Ont. Reg. 169/03 Standards – Not Detectable):

	# of E-coli Samples Taken	E-Coli Results (min-max)	# of Total Coliform Samples Taken	Total Coliform Results (min-max)	# of HPC Samples Taken	HPC Results (min-max)
Raw	53	0-2	53	0-20		
Treated	52	0-0	52	0-0	52	0-10
Distribution	288	0-0	288	0-3	288	0-8

Operational Testing, On-Line (Ont. Reg. 170/03, Sch. 7, Sch. 8 or Sch. 9):

Parameter	Ont. Reg. 170/03 Standard	Range of Results (min # - max #)
Filter #1 Turbidity	1 NTU	0.047 – 1.000 NTU
Filter #2 Turbidity	1 NTU	0 – 1.870 NTU
Filter #3 Turbidity	1 NTU	0 – 2.000 NTU
Treated Free Chlorine	0.05 mg/L – 4 mg/L	0.96 – 2.28 mg/L*
Distribution Free Chlorine**	0.2 mg/L – 4.0 mg/L	0.70– 1.36 mg/L*
Treated Fluoride	1.5 mg/L***	0.04 – 0.96 mg/L

*spikes recorded by on-line instrumentation were a result of various maintenance/calibration activities and power outages. All spikes are reviewed for compliance with O. Reg. 170/03 and reported as required.
**Includes all Booster Stations (2) and Tower (3) samples.
***Where fluoride is added to drinking water, it is recommended that the concentration be adjusted to 0.5 – 0.8 mg/L which is the optimum level for the control of tooth decay. Where supplies contain naturally occurring fluoride at levels higher than 1.5 mg/L, but less than 2.4 mg/L, the Ministry of Health and Long Term Care recommends an approach through the local boards of health to raise public and professional awareness to control excessive exposure to fluoride from other sources (taken from the Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines, June 2006, MOE PIBS 4449e01).

Summary of Additional Non-Required Samples, In-House:

Parameter	# of grab samples taken	Ont. Reg. 170/03 / Ont. Reg. 169/03 Standard (MAC), as applicable	Range of Results (min # - max #)
Treated Water Free Chlorine	106	0 mg/L – 1.0 mg/L	1.29 – 1.94 mg/L
Treated Water Fluoride	133	1.5 mg/L	0.3 – 0.80 mg/L
Treated Water Turbidity	105	1 NTU	0.060 – 0.189 NTU
Treated Water Alkalinity	103	30 – 500 mg/L (OG)*	25 – 50 mg/L
Treated Water Aluminum	103	0.1 mg/L (OG)	0 – 3 mg/L
Treated Water Colour	96	5 TCU (AO)**	0 – 4.0 TCU
Treated Water pH	86	6.5 – 8.5 (OG)	6.63 – 7.54
Distribution Free Chlorine	820	0.2 mg/L – 4.0 mg/L	0.45 – 1.32 mg/L
Filter #1 Turbidity	104	I NTU	0.061 – 1.000 NTU
Filter #2 Turbidity	96	1 NTU	0.063 – 0.990 NTU
Filter #3 Turbidity	104	1 NTU	0.062 – 1.030 NTU

* (OG) - Operational Guidelines- are established for parameters that, if not controlled, may negatively affect the efficient and effective treatment, disinfection and distribution of the water.

**(AO) – Aesthetic Objectives- are established for parameters that may impair the taste, odour or colour of water, or which may interfere with good water quality control practices (taken from the Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines, MOE PIBS 4449e01, June 2006).

Laboratory:

Parameter	# of grab samples taken	Ont. Reg. 170/03 / Ont. Reg. 169/03 Standard (MAC), as applicable	Range of Results (min # - max #)
Treated Water Alkalinity	52	30 – 500 mg/L (OG)	28 – 45 mg/L
Treated Water Colour	52	5 TCU (AO)	< 2 – < 5 TCU
Treated Water Conductivity	52	300 – 500 uS/cm	145 – 164 uS/cm
Treated Water pH	52	6.5 – 8.5 (OG)	6.72 – 7.75
Treated Water Total Dissolved Solids	53	500 mg/L (AO)	40 – 130 mg/L
Treated Water Hardness	53	80 – 100 mg/L (OG)	10 – 28 mg/L
Treated Water Fluoride	91	1.5 mg/L	0.1 – 0.68 mg/L
Distribution Water Alkalinity	156	30 – 500 mg/L (OG)	30 – 49 mg/L
Distribution Water Colour	156	5 TCU (AO)	< 2 – 3.0 TCU
Distribution Water Conductivity	156	300 – 500 uS/cm	127 – 175.0 uS/cm
Distribution Water pH	156	6.5 – 8.5 (OG)	2.573 – 7.72
Distribution Water Total Dissolved Solids	156	500 mg/L (AO)	< 10.0– 500.0 mg/L
Distribution Water Hardness	156	80 – 100 mg/L (OG)	4.667 – 31.0 mg/L

Summary of Additional Samples:

Reason	Date of Issuance	Parameter	Date Sampled	Result
MDWL # 199-101	August 4, 2011	Backwash Effluent Suspended Solids	7-Jan-14	4.0 mg/L
			8-Apr-14	< 2.0 mg/L
			9-Jul-14	8.0 mg/L
			7-Oct-14	< 2.0 mg/L*

*The annual average for Backwash Effluent Suspended Solids is 4.0 mg/L, which is below the limit of 25 mg/L.

Summary of Inorganic Parameters Tested or Most Recent Sample Results:

MAC = Maximum Allowable Concentration as per O. Reg. 169/03

Parameter	Sample Date	Result	Ont. Reg. 169/03 Standard (MAC)	Exceedence of MAC	Exceedence of ½ MAC
Antimony	6-Jan-14	< 0.5 ug/L	6 ug/L	No	No
Arsenic	6-Jan-14	< 1.0 ug/L	25 ug/L	No	No
Barium	6-Jan-14	10.0 ug/L	1000 ug/L	No	No
Boron	6-Jan-14	< 10.0 ug/L	5000 ug/L	No	No
Cadmium	6-Jan-14	< 0.1 ug/L	5 ug/L	No	No
Chromium	6-Jan-14	< 1.0 ug/L	50 ug/L	No	No
Mercury	6-Jan-14	< 0.1 ug/L	1 ug/L	No	No
Selenium	6-Jan-14	< 1.0 ug/L	10 ug/L	No	No
Sodium	10-Feb-14	20 mg/L	20 mg/L	No	Yes*
Uranium	6-Jan-14	< 1.0 ug/L	20 ug/L	No	No
Fluoride Residual: Mean	29-Dec-14	0.58 mg/L	1.5 mg/L	No	No
1st Quarter Nitrite	6-Jan-14	< 0.1 mg/L	1 mg/L	No	No
2nd Quarter Nitrite	7-Apr-14	< 0.1 mg/L	1 mg/L	No	No
3rd Quarter Nitrite	7-Jul-14	< 0.1 mg/L	1 mg/L	No	No
4th Quarter Nitrite	6-Oct-14	0.1 mg/L	1 mg/L	No	No
1st Quarter Nitrate	6-Jan-14	0.23 mg/L	10 mg/L	No	No
2nd Quarter Nitrate	7-Apr-14	0.22 mg/L	10 mg/L	No	No
3rd Quarter Nitrate	7-Jul-14	0.14 mg/L	10 mg/L	No	No
4th Quarter Nitrate	6-Oct-14	0.19 mg/L	10 mg/L	No	No

*Sodium is required to be tested every 60 months. The local Medical Officer of Health is notified when the sodium concentration equals or exceeds 20 mg/L, so this information may be passed on to local physicians for their use with patients on sodium restricted diets. The aesthetic objective for sodium in drinking water is 200mg/L at which it can be detected by a salty taste (taken from the Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines, June 2006, MOE PIBS 4449e01).

Summary of Organic Parameters Tested or Most Recent Sample Results:

MAC = Maximum Allowable Concentration as per O. Reg. 169/03

(SEE TABLE 6 INSERTED ON NEXT PAGE)

Drinking-Water System Number: *5710*
Drinking-Water System Name: *PETAWAWA DRINKING WATER SYSTEM*
Drinking-Water System Owner: *Title Holder: Municipality*
Drinking-Water System Category: *Large Municipal Residential*
Period being reported: *01/2014* *12/2014*

Table 6

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

TREATED WATER	Sample Date (mm/dd/yyyy)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Alachlor (ug/L) - TW	1/6/2014	< 1.0	5.00	No	No
Aldicarb (ug/L) - TW	1/6/2014	< 9.0	9.00	No	Yes
Aldrin+Dieldrin (ug/L) - TW	1/6/2014	< 0.012	0.70	No	No
Atrazine + N-dealkylated metabolites (ug	1/6/2014	< 0.2	5.00	No	No
Azinphos-methyl (ug/L) - TW	1/6/2014	< 2.0	20.00	No	No
Bendiocarb (ug/L) - TW	1/6/2014	< 2.0	40.00	No	No
Benzene (ug/L) - TW	1/6/2014	< 0.5	5.00	No	No
Benzo(a)pyrene (ug/L) - TW	1/6/2014	< 0.01	0.01	No	Yes
Bromoxynil (ug/L) - TW	1/6/2014	< 0.5	5.00	No	No
Carbaryl (ug/L) - TW	1/6/2014	< 5.0	90.00	No	No
Carbofuran (ug/L) - TW	1/6/2014	< 5.0	90.00	No	No
Carbon Tetrachloride (ug/L) - TW	1/6/2014	< 0.2	5.00	No	No
Chlordane: Total (ug/L) - TW	1/6/2014	< 0.018	7.00	No	No
Chlorpyrifos (ug/L) - TW	1/6/2014	< 1.0	90.00	No	No
Cyanazine (ug/L) - TW	1/6/2014	< 1.0	10.00	No	No
Diazinon (ug/L) - TW	1/6/2014	< 1.0	20.00	No	No
Dicamba (ug/L) - TW	1/6/2014	< 1.0	120.00	No	No
1,2-Dichlorobenzene (ug/L) - TW	1/6/2014	< 0.4	200.00	No	No
1,4-Dichlorobenzene (ug/L) - TW	1/6/2014	< 0.4	5.00	No	No
DDT + metabolites (ug/L) - TW	1/6/2014	< 0.024	30.00	No	No
1,2-Dichloroethane (ug/L) - TW	1/6/2014	< 0.2	5.00	No	No
1,1-Dichloroethylene (ug/L) - TW	1/6/2014	< 0.5	14.00	No	No
Dichloromethane (Methylene Chloride) (	1/6/2014	< 4.0	50.00	No	No
2,4-Dichlorophenol (ug/L) - TW	1/6/2014	< 0.5	900.00	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (	1/6/2014	< 1.0	100.00	No	No
Diclofop-methyl (ug/L) - TW	1/6/2014	< 1.0	9.00	No	No
Dimethoate (ug/L) - TW	1/6/2014	< 2.5	20.00	No	No
Dinoseb (ug/L) - TW	1/6/2014	< 1.0	10.00	No	No
Diquat (ug/L) - TW	1/6/2014	< 5.0	70.00	No	No
Diuron (ug/L) - TW	1/6/2014	< 10.0	150.00	No	No
Glyphosate (ug/L) - TW	1/6/2014	< 10.0	280.00	No	No
Heptachlor+hepachlor epoxide (ug/L) - T	1/6/2014	< 0.012	3.00	No	No
Lindane (ug/L) - TW	1/6/2014	< 0.006	4.00	No	No
Malathion (ug/L) - TW	1/6/2014	< 5.0	190.00	No	No
Methoxychlor (ug/L) - TW	1/6/2014	< 0.006	900.00	No	No
Metolachlor (ug/L) - TW	1/6/2014	< 1.0	50.00	No	No
Metribuzin (ug/L) - TW	1/6/2014	< 5.0	80.00	No	No
Monochlorobenzene (Chlorobenzene) (u	1/6/2014	< 0.2	80.00	No	No
Paraquat (ug/L) - TW	1/6/2014	< 5.0	10.00	No	No
Parathion (ug/L) - TW	1/6/2014	< 1.0	50.00	No	No
PCB (ug/L) - TW	1/6/2014	< 0.1	3.00	No	No
Pentachlorophenol (ug/L) - TW	1/6/2014	< 0.5	60.00	No	No
Phorate (ug/L) - TW	1/6/2014	< 1.0	2.00	No	No
Picloram (ug/L) - TW	1/6/2014	< 5.0	190.00	No	No
Prometryne (ug/L) - TW	1/6/2014	< 1.0	1.00	No	Yes
Simazine (ug/L) - TW	1/6/2014	< 1.0	10.00	No	No
Temephos (ug/L) - TW	1/6/2014	< 10.0	280.00	No	No
Terbufos (ug/L) - TW	1/3/2014	< 1.0	1.00	No	Yes
Tetrachloroethylene (ug/L) - TW	1/6/2014	< 0.3	30.00	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	1/6/2014	< 0.5	100.00	No	No
Triallate (ug/L) - TW	1/6/2014	< 1.0	230.00	No	No
Trichloroethylene (ug/L) - TW	1/6/2014	< 0.3	50.00	No	No
2,4,6-Trichlorophenol (ug/L) - TW	1/6/2014	< 0.5	5.00	No	No
2,4,5-T (ug/L) - TW	1/6/2014	< 1.0	280.00	No	No
Trifluralin (ug/L) - TW	1/6/2014	< 1.0	45.00	No	No
Vinyl Chloride (ug/L) - TW	1/6/2014	< 0.2	2.00	No	No
DISTRIBUTION WATER					
Trihalomethane: Total (ug/L) Annual Ave	1/1/2014	67.95	100.00	No	Yes

Summary of Community Lead Sampling Program: (Ont. Reg. 169/03 Standard = 10 ug/L or 0.01 mg/L (MAC):

Reduced Sampling: Distribution Samples Only Required (Dec 15th-Apr 15th & Jun 15th-Oct 15th annually): Taken from 4 hydrants for Petawawa DWS.

Distribution Samples-

Date Sampled	pH Results		Alkalinity Results		Lead Results	
	Max Result	Min Result	Max Result	Min Result	Max Result	Min Result
10-Apr-14	7.42	7.37	44	38	Not Required This Year	Not Required This Year
9-Oct-14	7.17	6.69	34	32	Not Required This Year	Not Required This Year

Facility Work Order Status:

Preventative Work Orders Completed	506
Operational Work Orders Completed	70
Weekly Maintenance Work Orders Completed	1 395
Capital Work Orders Completed	28
Corrective Work Orders Completed	40

Maintenance Summary:

Brief Description - Summary of Expenses Incurred for Installations, Repairs or Replacements:

- Investigation of suspected leak in water system after river crossing was isolated.
- Replacement lamps for turbidity analyzers and chlorine analyzer maintenance repair kits.
- Costs associated with electrical work performed by Petawawa Electric at the plant.
- Miscellaneous capital costs for repair and maintenance at the water treatment plant.
- Replacement of inlet and outlet expansion joints on pump #1 at Booster Pumping Station #1 (BPS #1).
- Replacement of inlet expansion joint on pump #5 at Booster Pumping Station #2.

- Installation of new fan motor and fan blade for electric unit heater at Township Tower.
- Parts installed to perform preventative maintenance on the chlorine systems throughout the distribution system.
- Replacement of new controller required for flow meter at Wolfe Street.
- Installation of new battery for BPS #2 for emergency generator.
- Calibrations completed by Hetek on gas chlorine analyzers.
- Replacement of stem, bushing and o'rings on singer valves for BPS #1, pumps #4 & #5.
- Replacement of outlet piping and tubing to injection point on soda ash feed pump.
- Annual inspections performed by Gal Power on diesel generators.
- Costs associated with semi-annual maintenance of air compressors at the plant.
- Costs associated with having all fire extinguishers and emergency lights inspected by contractor.
- Repair costs for the leak in high lift pump #2 by Rick's Electric.
- Pump rebuilt of the wastewater submersible pump #2.
- Pump set to Rick's Electric to install new seals and dry out windings.
- Purchase of replacement turbidity analyzers, rebuilt kits for check valves at BPS #1, and new check valve for pumping station at water plant.
- Costs associated with Valley Compressor performing maintenance on compressor and dryer.
- Costs for sending out actuator for repair from the wastewater tank, spare parts required for the chemical feed systems, and new solenoid valve required for the poly feed system.
- Investigation of water leak on Willard Street and repairs completed by Clouthier Construction.
- Repair of water leak at the end of Van Hoof Crescent performed by Clouthier Construction.
- Costs associated with TSSA generator inspections.
- Replacement of eyewash station and scale for fluoride day tank.

Distribution Activities for 2014:

Background: OCWA is responsible for the operation of the water treatment plant, booster pumping stations (2), water storage facilities (3 towers), and the distribution system that OCWA assumed responsibility for on January 1st, 2011.

- Petawawa Water Treatment Plant is a Class 3 Facility.
- Petawawa Distribution System is a Class 1 System.

Distribution Summary:

1. OCWA Operators attended to no water main breaks during 2014!

2. Booster Pumping Stations are checked every week on Mondays and Thursdays. Towers are inspected twice weekly, as well.

3. Hydrant Flushing was performed on approx. 534 hydrants between August and October 2014. Annual winterizing of hydrants was completed in December.

4. The Community Lead Sampling Program was conducted during the Winter Period of December 15th, 2013 to April 15th, 2014 and again during the Summer Period of June 15th to October 15th, 2014. See Summary of Community Lead Sampling above for results.

5. Water Service Inspections (including water turn on/offs, new home piping inspections, backflow preventer installations, charging/pressure and flow testing, locates, exercising valves, opening curb stops, assisting contractors, etc.) were performed during 2014 on numerous homes, businesses and roads within the Town of Petawawa. These types of inspections to various locations within the town, included such activities as:

   - Park Drive service leak repaired by Public Works, and Victor thermal expansion issue.
   - Locates performed at Bridgeway Mall.
   - Water and sewer inspections at 55 & 68 and 103 Bedard Blvd., 26 & 35 Gardner, 46 & 38 and 70 Butler Blvd., and 20 Oak Avenue.
   - Numerous locates for contractors throughout the town.
   - Painting and numbering hydrants.
   - Tie-in for Radtke subdivision at Doran Road and tie-in at Dairy Queen.
   - Flushing of hydrants (spring and fall) and flow tests performed.
   - TSSA inspections of diesel generators, and Energy Audit for plant.
   - Service leak at 68 John Street.
   - Exercised water main valves 1-154, 260-305, and 335-405. Flushed all dead end hydrants.
   - Inspected live tap and water tie-in on Wolfe Avenue and Murphy Road.
   - Water service break repair on Algonquin Street performed by RGT Clouthier Construction.
   - Saddle changing on Petawawa Blvd, by Do-All Construction.
   - Winterizing of hydrants.
   - New 400 mm and 500 mm watermains and other upgrades for the header pipeline replacement project performed at the water treatment plant.
   - Annual third party tower inspections.
   - Maintenance of hydrant on Schwantz Road at fire hall.
   - Watermain service leak on River Drive.

SUMMARY REPORT

2014

PETAWAWA DRINKING WATER SYSTEM

2014 SUMMARY REPORTS FOR MUNICIPALITIES

Report:

This report is a summary of water quality information for the Petawawa Drinking Water System, published in accordance with Schedule 22 of Ontario's Drinking-Water Systems Regulation for the reporting period of January 1, 2014 to December 31, 2014. The Petawawa Drinking Water System is categorized as a Large Municipal Residential Drinking Water System.

This report was prepared by the Ontario Clean Water Agency on behalf of the Town of Petawawa.

Who gets a copy of the Report?

- in the case of a drinking-water system owned by a municipality, the members of the municipal council;

What must the Report contain?

The report must,

(a) list the requirements of the Act, the regulations, the system's approval and any order that the system **failed to meet** at any time during the period covered by the report and specify the duration of the failure; and

(b) for each failure referred to in clause (a) describe the measures that were taken to correct the failure.

The following table lists the requirements that the system failed to meet and the measures taken to correct the failure:

Drinking Water Legislation	AWQI #	List the requirement(s) the system failed to meet	Specify the duration of the failure (i.e. date(s))	Describe the measures taken to correct the failure	Status (complete or outstanding)
SDWA 170/03	121662	Chlorine analyzer failure	22-Nov-14	Replaced defective chlorine analyzer.	Completed
SDWA 170/03	119779	Fluoride analyzer failure	23-Aug-14 to 25-Aug-14	Found air bubble inside electrode eye. Re-filled solution and replaced electrode. Put back in service.	Completed

SDWA 170/03	117819	3 Total Coliform from distribution sample	4-Jun-14 to 9-Jun-14	Re-sampled at same location and upstream and downstream locations. Re-sample came back good.	Completed
SDWA 170/03	117119	Fluoride analyzer failure	26-Apr-14 to 28-Apr-14	Installed used reference electrode in analyzer. Adjusted water flow to conditioning tank to eliminate air bubbles and increased pumps to raise dosage.	Completed
SDWA 170/03	115981	Sodium exceedance of 20 mg/L	07-Feb-14 to 26-Feb-14	Re-sampled by request of the Health Unit and since sample was again 20 mg/L, the HU provided advisory notices to local schools and physicians.	Completed

Petawawa DWS MOE Inspections:

The Ministry of Environment conducted their annual site visit for the 2013-2014 reporting year on December 3rd, 2013. The MOE Drinking Water Inspector had no 'Actions Required' or 'BMP/Recommended Actions' identified in the inspection report. The final report was received on January 23, 2014 with an Inspection Rating of 100%.

The MOE Inspector returned on Feb. 4th, 2015 to conduct the 2014-2015 inspection. No draft report has been received, as yet.

Summary of Community Complaints/Service Forms for 2014:

- Jan. 20, 2014: 42 Vereyken Street – chlorine taste of water and turning hair green colour.
- Feb. 12, 2014: 800 First Avenue – water pressure too high in town.
- Feb. 27, 2014: 72 Woodland Crescent – smelly, dirty water complaint from home on dead end.
- Mar. 11, 2014: 2 Victor Street – water pressure too high and hot water tank relief was discharging.
- June 2, 2014: 633 Birch Street – dark coloured water for last two months and has been boiling her water before using it.
- June 9, 2014: 785 Pinegrove Crescent – high water pressure complaint.
- June 11, 2014: 16 Winfield: low water pressure concern.
- Sept. 15, 2014: 17 Maple Avenue – low water pressure concern.
- Sept. 18, 2014: 12 Elmer Avenue – rusty coloured water complaint.

- Oct. 9, 2014: 28 Northbrook Road – iron had been increasing in the past six months; staining occurring in shower, toilets and sinks.
- Oct. 13, 2014: 15 Hoffman Street – strong sulphur smell from water.

What else must the Report contain?

The report must also include the following information for the purpose of enabling the owner of the system to assess the capability of the system to meet existing and planned uses of the system:

1. Summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows.
2. A comparison of the summary referred to in paragraph 1 to the rated capacity and flow rates approved in the system's approval, drinking water works permit or municipal drinking water licence.

Attached is a copy of the Annual Record of Water Taking for the Petawawa Drinking Water System. This document contains all required flow information. Also, attached is the confirmation for the submission into the MOE WTRS for the 2014 reporting period.

When Does the Report Get Submitted?

If a report is prepared for a system that supplies water to a municipality under the terms of a contract, the owner of the system shall give a copy of the report to the municipality by March 31st.

Facility Flow Summary

Drinking-Water System Number: *5710*
Drinking-Water System Name: *PETAWAWA DRINKING WATER SYSTEM*
Drinking-Water System Owner: *Title Holder: Municipality*
Drinking-Water System Category: *Large Municipal Residential*
Municipal Drinking Water License: *199-101*
Period being reported: *Jan-14* *Dec-14*

	Raw Water									Treated Water				
Raw Water (Source Name)	*Raw Water*									Treated Water (Source Name)	*Treated Water*			
Source Type:	*RIVER*													
Drinking Water Permit to Take Water No:	*3814-9J2RQN*													
Month	Monthly Flow Total (m3/month)	Daily Flow Average (m3/day)	Daily Flow Maximum (m3/day)	Daily Flow Peak Flow Rate (L/min)	Daily Flow Peak Flow Rate (L/sec)	Number of Days of Water Taking	Daily Run Hours, Total	Well Level, Minimum	Well Level, Maximum	Monthly Flow Total (m3/month)	Daily Flow Average (m3/day)	Daily Flow Maximum (m3/day)	Daily Flow Peak Flow Rate (L/min)	Daily Flow Peak Flow Rate (L/sec)
Jan	166832.00	5381.68	6931.00			31				172815.00	5574.68	6297.00		
Feb	165487.00	5910.25	7885.00			28				160625.00	5736.61	7746.00		
Mar	184560.00	5953.55	7253.00			31				172128.00	5552.52	7092.00		
Apr	170776.00	5692.53	6723.00			30				166142.00	5538.07	6216.00		
May	210627.00	6794.42	8753.00			31				191115.00	6165.00	8245.00		
Jun	278215.00	9273.83	13017.00			30				258071.00	8602.37	12037.00		
Jul	261778.00	8444.45	9862.00			31				245426.00	7916.97	9321.00		
Aug	227931.00	7352.61	9460.00			31				216999.00	6999.97	8661.00		
Sep	204867.00	6828.90	8218.00			30				198299.00	6609.97	8104.00		
Oct	169281.00	5460.68	6508.00			31				166534.00	5372.06	6285.00		
Nov	149244.00	4974.80	5613.00			30				152183.00	5072.77	5862.00		
Dec	211213.00	6813.32	8644.00			30				148944.00	4804.65	6306.00		
Total	2400811.00	78881.02	98867.00			364				2249281.00	73945.63	92172.00		
Avg	200067.58	6573.42	8238.92			30				187440.08	6162.14	7681.00		
Max	278215.00	9273.83	13017.00			31				258071.00	8602.37	12037.00		
Criteria														

ANNUAL WATER TAKING AND TRANSFER REPORT - SUBMITTED DATA TO MOECC, FOR THE YEAR OF 2014

Water Taking Data

Permit Number:	2136-5ZDPP5	Source Name:	Allumette Lake (Ottawa
Year:	2014	Last Update:	2015/02/09

Month: JANUARY

Unit of Measurement: Cubic meters Method of Determination: Metered

Date	Amount	Date	Amount	Date	Amount	Date	Amount
1	4,798.0000	2	4,561.0000	3	4,670.0000	4	5,167.0000
5	4,953.0000	6	5,216.0000	7	5,434.0000	8	5,665.0000
9	5,678.0000	10	5,528.0000	11	5,168.0000	12	5,455.0000
13	5,902.0000	14	5,174.0000	15	5,212.0000	16	5,407.0000
17	5,479.0000	18	4,968.0000	19	5,319.0000	20	5,571.0000
21	5,380.0000	22	5,363.0000	23	5,440.0000	24	5,652.0000
25	5,111.0000	26	4,918.0000	27	5,804.0000	28	5,431.0000
29	5,881.0000	30	5,596.0000	31	6,931.0000		

Water Taking Data

Permit Number:	2136-5ZDPP5	Source Name:	Allumette Lake (Ottawa
Year:	2014	Last Update:	2015/02/09

Month: FEBRUARY

Unit of Measurement: Cubic meters Method of Determination: Metered

Date	Amount	Date	Amount	Date	Amount	Date	Amount
1	5,718.0000	2	5,804.0000	3	6,943.0000	4	5,406.0000
5	6,205.0000	6	5,949.0000	7	6,130.0000	8	5,758.0000
9	5,972.0000	10	6,155.0000	11	6,301.0000	12	5,804.0000
13	5,858.0000	14	5,748.0000	15	5,461.0000	16	5,347.0000
17	5,535.0000	18	6,003.0000	19	5,563.0000	20	6,014.0000
21	5,578.0000	22	5,485.0000	23	5,298.0000	24	5,599.0000
25	6,154.0000	26	6,685.0000	27	7,885.0000	28	5,129.0000

Water Taking Data

Permit Number:	2136-5ZDPP5	Source Name:	Allumette Lake (Ottawa
Year:	2014	Last Update:	2015/02/09

Month: MARCH

Unit of Measurement: Cubic meters Method of Determination: Metered

Date	Amount	Date	Amount	Date	Amount	Date	Amount
1	5,304.0000	2	5,997.0000	3	6,485.0000	4	5,947.0000
5	5,991.0000	6	6,352.0000	7	5,829.0000	8	5,865.0000
9	5,906.0000	10	5,619.0000	11	5,539.0000	12	5,484.0000
13	5,467.0000	14	5,793.0000	15	5,899.0000	16	5,387.0000
17	6,022.0000	18	6,287.0000	19	6,089.0000	20	6,073.0000
21	6,091.0000	22	5,763.0000	23	6,110.0000	24	7,253.0000
25	6,154.0000	26	6,175.0000	27	5,930.0000	28	6,122.0000
29	5,718.0000	30	5,759.0000	31	6,150.0000		

Water Taking Data

Permit Number:	2136-52DPP5	Source Name:	Allumette Lake (Ottawa
Year:	2014	Last Update:	2015/02/09

Month: APRIL

Unit of Measurement: Cubic meters Method of Determination: Metered

Date	Amount	Date	Amount	Date	Amount	Date	Amount
1	6,026.0000	2	6,723.0000	3	6,279.0000	4	6,643.0000
5	6,280.0000	6	5,648.0000	7	6,684.0000	8	6,578.0000
9	6,108.0000	10	6,088.0000	11	5,944.0000		

Ontario

Location:WTRS /WT DATA /Input WT Record

WTRS-WT-008

Water Taking Data submitted successfully.

Confirmation:

Thank you for submitting your water taking data online.

Permit Number: 2136-5ZDPP5
Permit Holder: THE CORPORATION OF THE TOWN OF PETAWAWA.
Received on:Feb 9, 2015 11:41 AM

This confirmation indicates that your data has been received by the Ministry,but should not be construed as acceptance of this data if it differs from that specified on the Permit Number, assigned to the Permit Holder stated above.

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version: v4.2.0.3
Last modified: 2014/04/15

Water Taking Data

Permit Number:	3814-9J2RQN	Source Name:	Allumette Lake (Ottawa
Year:	2014	Last Update:	2015/02/09

Month: APRIL

Unit of Measurement: Cubic meters Method of Determination: Metered

Date	Amount	Date	Amount	Date	Amount	Date	Amount
11	5,944.0000	12	5,932.0000	13	5,726.0000	14	5,755.0000
15	5,309.0000	16	5,452.0000	17	5,429.0000	18	4,976.0000
19	4,902.0000	20	4,740.0000	21	4,928.0000	22	5,176.0000
23	5,435.0000	24	5,289.0000	25	5,452.0000	26	4,995.0000
27	5,198.0000	28	5,435.0000	29	5,622.0000	30	6,024.0000

Water Taking Data

Permit Number:	3814-9J2RQN	Source Name:	Allumette Lake (Ottawa
Year:	2014	Last Update:	2015/02/09

Month: MAY

Unit of Measurement: Cubic meters Method of Determination: Metered

Date	Amount	Date	Amount	Date	Amount	Date	Amount
1	5,261.0000	2	6,252.0000	3	6,199.0000	4	6,318.0000
5	6,952.0000	6	5,044.0000	7	6,373.0000	8	6,267.0000
9	6,404.0000	10	5,677.0000	11	5,712.0000	12	6,863.0000
13	6,907.0000	14	5,433.0000	15	6,357.0000	16	6,493.0000
17	5,618.0000	18	5,934.0000	19	6,391.0000	20	8,306.0000
21	7,743.0000	22	7,194.0000	23	6,464.0000	24	6,210.0000
25	7,405.0000	26	7,844.0000	27	8,746.0000	28	8,604.0000
29	8,156.0000	30	8,747.0000	31	8,753.0000		

Water Taking Data

Permit Number:	3814-9J2RQN	Source Name:	Allumette Lake (Ottawa
Year:	2014	Last Update:	2015/02/09

Month: JUNE

Unit of Measurement: Cubic meters Method of Determination: Metered

Date	Amount	Date	Amount	Date	Amount	Date	Amount
1	9,986.0000	2	11,544.0000	3	8,736.0000	4	8,641.0000
5	8,759.0000	6	6,798.0000	7	7,820.0000	8	11,100.0000
9	11,241.0000	10	13,017.0000	11	11,890.0000	12	8,076.0000
13	7,280.0000	14	6,890.0000	15	7,239.0000	16	10,537.0000
17	8,048.0000	18	7,368.0000	19	7,982.0000	20	9,417.0000
21	9,844.0000	22	10,244.0000	23	11,216.0000	24	9,609.0000
25	7,124.0000	26	8,093.0000	27	10,042.0000	28	10,257.0000
29	10,268.0000	30	9,176.0000				

Water Taking Data

Permit Number:	3814-9J2RQN	Source Name:	Allumette Lake (Ottawa
Year:	2014	Last Update:	2015/02/09

Month: JULY

Unit of Measurement: Cubic meters Method of Determination: Metered

Date	Amount	Date	Amount	Date	Amount	Date	Amount
1	8,739.0000	2	8,899.0000	3	9,030.0000	4	8,159.0000
5	8,466.0000	6	9,414.0000	7	9,862.0000	8	7,624.0000
9	7,017.0000	10	7,818.0000	11	9,047.0000	12	9,128.0000
13	9,287.0000	14	8,181.0000	15	8,786.0000	16	7,747.0000
17	8,065.0000	18	9,229.0000	19	9,749.0000	20	9,009.0000
21	6,674.0000	22	8,453.0000	23	9,695.0000	24	8,498.0000
25	9,468.0000	26	7,695.0000	27	7,649.0000	28	6,251.0000
29	8,027.0000	30	8,457.0000	31	7,655.0000		

Water Taking Data

Permit Number:	3814-9J2RQN	Source Name:	Allumette Lake (Ottawa
Year:	2014	Last Update:	2015/02/09

Month: AUGUST

Unit of Measurement: Cubic meters Method of Determination: Metered

Date	Amount	Date	Amount	Date	Amount	Date	Amount
1	7,425.0000	2	6,344.0000	3	6,985.0000	4	7,753.0000
5	7,790.0000	6	8,210.0000	7	6,654.0000	8	8,204.0000
9	8,670.0000	10	8,422.0000	11	8,746.0000	12	9,460.0000
13	6,597.0000	14	6,706.0000	15	6,782.0000	16	6,188.0000
17	5,582.0000	18	6,771.0000	19	6,708.0000	20	7,189.0000
21	7,044.0000	22	6,600.0000	23	6,193.0000	24	6,951.0000
25	8,273.0000	26	8,086.0000	27	7,820.0000	28	7,873.0000
29	8,086.0000	30	7,400.0000	31	6,419.0000		

Water Taking Data

Permit Number:	3814-9J2RQN	Source Name:	Allumette Lake (Ottawa
Year:	2014	Last Update:	2015/02/09

Month: SEPTEMBER

Unit of Measurement: Cubic meters Method of Determination: Metered

Date	Amount	Date	Amount	Date	Amount	Date	Amount
1	6,627.0000	2	8,184.0000	3	7,225.0000	4	7,632.0000
5	7,531.0000	6	6,745.0000	7	6,519.0000	8	7,926.0000
9	8,218.0000	10	7,414.0000	11	7,604.0000	12	6,473.0000
13	6,274.0000	14	6,154.0000	15	6,842.0000	16	6,606.0000
17	7,439.0000	18	6,625.0000	19	6,613.0000	20	5,694.0000
21	5,849.0000	22	6,222.0000	23	6,747.0000	24	6,409.0000
25	6,577.0000	26	6,618.0000	27	5,895.0000	28	6,638.0000
29	6,881.0000	30	6,686.0000				

Water Taking Data

Permit Number:	3814-9J2RQN	Source Name:	Allumette Lake (Ottawa
Year:	2014	Last Update:	2015/02/09

Month: OCTOBER

Unit of Measurement: Cubic meters Method of Determination: Metered

Date	Amount	Date	Amount	Date	Amount	Date	Amount
1	6,090.0000	2	6,508.0000	3	5,540.0000	4	5,765.0000
5	4,240.0000	6	5,407.0000	7	5,926.0000	8	5,479.0000
9	5,791.0000	10	5,477.0000	11	5,173.0000	12	5,623.0000
13	4,936.0000	14	6,105.0000	15	5,542.0000	16	5,878.0000
17	5,897.0000	18	5,169.0000	19	6,058.0000	20	5,692.0000
21	5,964.0000	22	5,110.0000	23	5,285.0000	24	5,267.0000
25	4,487.0000	26	4,703.0000	27	5,459.0000	28	5,059.0000
29	5,249.0000	30	5,237.0000	31	5,165.0000		

Water Taking Data

Permit Number:	3814-9J2RQN	Source Name:	Allumette Lake (Ottawa
Year:	2014	Last Update:	2015/02/09

Month: NOVEMBER

Unit of Measurement: Cubic meters Method of Determination: Metered

Date	Amount	Date	Amount	Date	Amount	Date	Amount
1	4,955.0000	2	4,895.0000	3	5,147.0000	4	5,613.0000
5	4,448.0000	6	5,203.0000	7	5,499.0000	8	4,650.0000
9	5,009.0000	10	4,969.0000	11	4,970.0000	12	4,838.0000
13	5,307.0000	14	4,508.0000	15	4,941.0000	16	4,440.0000
17	5,313.0000	18	4,710.0000	19	5,199.0000	20	4,783.0000
21	5,183.0000	22	4,777.0000	23	4,806.0000	24	4,902.0000
25	5,222.0000	26	4,815.0000	27	5,175.0000	28	5,245.0000
29	5,092.0000	30	4,630.0000				

Water Taking Data

Permit Number:	3814-9J2RQN	Source Name:	Allumette Lake (Ottawa
Year:	2014	Last Update:	2015/02/09

Month: DECEMBER

Unit of Measurement: Cubic meters Method of Determination: Metered

Date	Amount	Date	Amount	Date	Amount	Date	Amount
1	5,453.0000	2	5,543.0000	3	5,928.0000	4	5,348.0000
5	5,357.0000	6	4,641.0000	7	5,395.0000	8	5,140.0000
9	5,902.0000	10	5,481.0000	11	4,156.0000	12	
13	4,083.0000	14	5,306.0000	15	6,360.0000	16	8,608.0000
17	8,644.0000	18	8,639.0000	19	8,589.0000	20	8,533.0000
21	8,636.0000	22	8,602.0000	23	8,588.0000	24	8,515.0000
25	8,508.0000	26	8,558.0000	27	8,527.0000	28	8,546.0000
29	8,542.0000	30	8,535.0000	31	8,550.0000		

Ontario

Location:WTRS /WT DATA /Input WT Record

WTRS-WT-008

Water Taking Data submitted successfully.

Confirmation:

Thank you for submitting your water taking data online.

Permit Number: 3814-9J2RQN
Permit Holder: THE CORPORATION OF THE TOWN OF PETAWAWA.
Received on:Feb 9, 2015 11:26 AM

This confirmation indicates that your data has been received by the Ministry,but should not be construed as acceptance of this data if it differs from that specified on the Permit Number, assigned to the Permit Holder stated above.

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