PETAWAWA DRINKING WATER SYSTEM

2013 ANNUAL REPORT

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Ottawa Valley Hub

02/16/2014

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 2013

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, 2013 – December 31, 2013

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	Quadra, CCC & ChemFlo
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	114690	Total Coliform result of 2 at Town Tower	23-Oct-13 to 29-Oct-13	Flushed at Town Tower and re-sampling upstream, downstream and at tower. Results came back from lab on Oct. 28/13 with no detection of coliforms. Notice of Issue Resolution provided on Oct. 29, 2013. No further action required.	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	2009	2010	2011	2012	2013
Av. Day Flow (m^3/d)	6 037.59	6 494.87	6 248.97	7 166.06	6 463.48
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)	28.1	30.2	29.1	33.3	30.1
Max. Day Flow (m^3/d)	11 201.0	13 113.0	10 952.0	13 860.0	11 664.0
% of Capacity (based on max. day flows)	52.1	61.0	50.9	64.5	54.3

In 2013, the average day flow was at approximately 30.1 % of the current plant design, and the maximum day flow was at approximately 54.3 % 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	0-5	53	0-96		
Treated	53	0-0	53	0-0	52	0-7
Distribution	374	0-0	374	0-2	368	0-65

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	0.002 – 1.054 NTU
Filter #2 Turbidity	1 NTU	0 – 1.023 NTU
Filter #3 Turbidity	1 NTU	0.03 – 0.97 NTU
Treated Free Chlorine	0.05 mg/L – 4 mg/L	0.8 – 2.17 mg/L*
Distribution Free Chlorine**	0.2 mg/L – 4.0 mg/L	0.07– 3.14 mg/L*
Treated Fluoride	1.5 mg/L***	0.02 – 0.98 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 (4) 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	1.22 – 2.0 mg/L
Treated Water Fluoride	114	1.5 mg/L	0 – 0.75 mg/L
Treated Water Turbidity	104	1 NTU	0.019 – 0.88 NTU
Treated Water Alkalinity	104	30 – 500 mg/L (OG)*	12 – 38 mg/L
Treated Water Aluminum	104	0.1 mg/L (OG)	0 – 0.031 mg/L
Treated Water Colour	104	5 TCU (AO)**	0 – 5.0 TCU
Treated Water pH	104	6.5 – 8.5 (OG)	6.51 – 7.55
Distribution Free Chlorine	828	0.2 mg/L – 4.0 mg/L	0.35 – 1.32 mg/L

Filter #1 Turbidity	104	I NTU	0.068 – 0.408 NTU
Filter #2 Turbidity	104	1 NTU	0.074 – 0.275 NTU
Filter #3 Turbidity	105	1 NTU	0.07 – 0.544 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	53	30 – 500 mg/L (OG)	22 – 40 mg/L
Treated Water Colour	53	5 TCU (AO)	2 – 5 TCU
Treated Water Conductivity	49	300 – 500 uS/cm	134 – 168 uS/cm
Treated Water pH	53	6.5 – 8.5 (OG)	6.62 – 7.51
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	52	1.5 mg/L	0.1 – 0.68 mg/L
Distribution Water Alkalinity	213	30 – 500 mg/L (OG)	12.667 – 42 mg/L
Distribution Water Colour	213	5 TCU (AO)	0.667 – 8.0 TCU
Distribution Water Conductivity	197	300 – 500 uS/cm	35.0 – 182.0 uS/cm
Distribution Water pH	212	6.5 – 8.5 (OG)	2.363 – 7.51
Distribution Water Total Dissolved Solids	213	500 mg/L (AO)	30.0 – 170.0 mg/L
Distribution Water Hardness	213	80 – 100 mg/L (OG)	6.333 – 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	8-Jan-13	5.0 mg/L
			4-Apr-13	< 2.0 mg/L
			9-Jul-13	2.0 mg/L
			9-Oct-13	5.0 mg/L*

*The annual average for Backwash Effluent Suspended Solids is 3.5 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	Jan 7/13	< 0.5 ug/L	6 ug/L	No	No
Arsenic	Jan 7/13	< 1.0 ug/L	25 ug/L	No	No
Barium	Jan 7/13	< 10.0	1000 ug/L	No	No

		ug/L			
Boron	Jan 7/13	< 10.0 ug/L	5000 ug/L	No	No
Cadmium	Jan 7/13	< 0.1 ug/L	5 ug/L	No	No
Chromium	Jan 7/13	1.0 ug/L	50 ug/L	No	No
Mercury	Jan 7/13	< 0.1 ug/L	1 ug/L	No	No
Selenium	Jan 7/13	< 1.0 ug/L	10 ug/L	No	No
Sodium	Jan 10/11	20 mg/L	20 mg/L	**Yes***	**Yes***
Uranium	Jan 7/13	< 1.0 ug/L	20 ug/L	No	No
Fluoride Residual: Mean	Dec 30/13	0.57 mg/L	1.5 mg/L	No	No
1st Quarter Nitrite	Jan 7/13	< 0.1 mg/L	1 mg/L	No	No
2nd Quarter Nitrite	Apr 2/13	< 0.1 mg/L	1 mg/L	No	No
3rd Quarter Nitrite	Jul 2/13	< 0.1 mg/L	1 mg/L	No	No
4th Quarter Nitrite	Oct 7/13	< 0.1 mg/L	1 mg/L	No	No
1st Quarter Nitrate	Jan 7/13	0.19 mg/L	10 mg/L	No	No
2nd Quarter Nitrate	Apr 2/13	0.19 mg/L	10 mg/L	No	No
3rd Quarter Nitrate	Jul 2/13	0.21 mg/L	10 mg/L	No	No
4th Quarter Nitrate	Oct 7/13	0.18 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 Result:

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

Parameter	Sample Date	Result (ug/L)	Ont. Reg. 169/03 Standard (MAC)	Exceedence of MAC	Exceedence of ½ MAC
Alachlor	Jan 7/13	< 0.5	5 ug/L	No	No
Aldicarb	Jan 7/13	< 9.0	9 ug/L	No	No
Aldrin + Dieldrin	Jan 7/13	< 0.01	0.7 ug/L	No	No
Atrazine + N-Dealkylated metobolites	Jan 7/13	< 0.2	5 ug/L	No	No
Azinphos-methyl	Jan 7/13	< 2.0	20 ug/L	No	No
Bendiocarb	Jan 7/13	< 2.0	40 ug/L	No	No
Benzene	Jan 3/12	< 0.5	5 ug/L	No	No
Benzo(a)pyrene	Jan 7/13	< 0.01	0.01 ug/L	No	No
Bromoxynil	Jan 7/13	< 0.5	5 ug/L	No	No
Carbaryl	Jan 7/13	< 5.0	90 ug/L	No	No
Carbofuran	Jan 7/13	< 5.0	90 ug/L	No	No
Carbon Tetrachloride	Jan 3/12	< 0.5	5 ug/L	No	No
Chlordane (Total)	Jan 7/13	< 0.02	7 ug/L	No	No
Chlorpyrifos	Jan 7/13	< 1.0	90 ug/L	No	No
Cyanazine	Jan 7/13	< 1.0	10 ug/L	No	No
Diazinon	Jan 7/13	< 1.0	20 ug/L	No	No
Dicamba	Jan 7/13	< 1.0	120 ug/L	No	No
1,2-Dichlorobenzene	Jan 2/12	< 0.4	200 ug/L	No	No
1,4-Dichlorobenzene	Jan 2/12	< 0.4	5 ug/L	No	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	Jan 7/13	< 0.02	30 ug/L	No	No
1,2-Dichloroethane	Jan 2/12	< 0.2	5 ug/L	No	No
1,1-Dichloroethylene (vinylidene chloride)	Jan 2/12	< 0.5	14 ug/L	No	No

Dichloromethane	Jan 2/12	< 4.0	50 ug/L	No	No
2,4-Dichlorophenol	Jan 7/13	< 0.5	900 ug/L	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Jan 7/13	< 1.0	100 ug/L	No	No
Diclofop-methyl	Jan 7/13	< 0.9	9 ug/L	No	No
Dimethoate	Jan 7/13	< 2.5	20 ug/L	No	No
Dinoseb	Jan 7/13	< 1.0	10 ug/L	No	No
Diquat	Jan 7/13	< 5.0	70 ug/L	No	No
Diuron	Jan 7/13	< 10.0	150 ug/L	No	No
Glyphosate	Jan 7/13	< 10.0	280 ug/L	No	No
Heptachlor + Heptachlor Epoxide	Jan 7/13	< 0.01	3 ug/L	No	No
Lindane (Total)	Jan 7/13	< 0.01	4 ug/L	No	No
Malathion	Jan 7/13	< 5.0	190 ug/L	No	No
Methoxychlor	Jan 7/13	< 0.01	900 ug/L	No	No
Metolachlor	Jan 7/13	< 0.5	50 ug/L	No	No
Metribuzin	Jan 7/13	< 5 .0	80 ug/L	No	No
Monochlorobenzene	Jan 3/12	< 0.2	80 ug/L	No	No
Paraquat	Jan 7/13	< 5.0	10 ug/L	No	No
Parathion	Jan 7/13	< 1.0	50 ug/L	No	No
Pentachlorophenol	Jan 7/13	< 0.5	60 ug/L	No	No
Phorate	Jan 7/13	< 0.5	2 ug/L	No	No
Picloram	Jan 7/13	< 5.0	190 ug/L	No	No
Polychlorinated Biphenyls (PCB)	Jan 7/13	< 0.1	3 ug/L	No	No
Prometryne	Jan 7/13	< 0.25	1 ug/L	No	No
Simazine	Jan 7/13	< 1.0	10 ug/L	No	No
THM (Treated) (NOTE: show latest annual average)	2013	36.3	100 ug/L	No	No
THM (Distribution) (NOTE: show latest annual average)	2013	61.3	100 ug/L	No	**Yes**
Temephos	Jan 7/13	< 10.0	280 ug/L	No	No
Terbufos	Jan 7/13	< 0.4	1 ug/L	No	No
Tetrachloroethylene	Jan 3/12	< 0.3	30 ug/L	No	No
2,3,4,6-Tetrachlorophenol	Jan 7/13	< 0.5	100 ug/L	No	No
Triallate	Jan 7/13	< 1.0	230 ug/L	No	No
Trichloroethylene	Jan 3/12	< 0.3	50 ug/L	No	No
2,4,6-Trichlorophenol	Jan 7/13	< 0.5	5 ug/L	No	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	Jan 7/13	< 1.0	280 ug/L	No	No
Trifluralin	Jan 7/13	< 0.4	45 ug/L	No	No
Vinyl Chloride	Jan 3/12	< 0.2	2 ug/L	No	No

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
01-May-13	6.73	6.60	34	32	Not Required This Year	Not Required This Year
02-Oct-13	7.39	7.26	39	37	Not Required This Year	Not Required This Year

Facility Work Order Status:

Preventative Work Orders Completed	552
Operational Work Orders Completed	55
Weekly Maintenance Orders Completed	1 632
Capital Work Orders Completed	23
Corrective Work Orders Completed	56

Maintenance Summary:

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

- Cost associated with SCADA system repairs.
- Miscellaneous capital items purchased for the repair and maintenance of the water treatment plant.
- Labour and part costs for the repair of the chlorine analyzers.
- Replacement costs for the air compressor.
- Anaylzer maintenance parts purchased for the repairs to the chlorine and turbidity anaylzers.
- Labour costs for repair of broken hinge for the gate at water plant.
- Repairs to valve for pump at BPS#2 that was leaking from position indicator stem.
- Pump removed from South Town Tower due to decommissioning, re-built and installed as lead pump at BPS#1.

- Costs for GalPower's work on diesel engines.
- Costs for repair of chamber outside of clearwell room that was full of water.
- Costs for all fire extinguishers and emergency lights at the plant to be inspected by qualified technician.
- Replacement of batteries for the PLC/UPS battery bank.
- Purchase of spare PLC cards needed for the SCADA system.
- Replacement of flexible expansion joints.
- Purchase of spare parts needed for the annual maintenance and repair of the chlorine injection systems in the distribution system.
- Purchase of maintenance parts for the Trac Vac system.
- Extra costs for the completion of water main repair in front of Our Lady of Sorrows School, including overtime and temporary water service connections to the Massage Parlour business beside school.
- Purchase of new diaphragm pump check ball assembly, belt, hoses, oil, and thread sealant.
- Installation of isolation valve, new diaphragm pump, and maintenance performed on pump for polymer.
- Replacement of solenoid valve for polymer system water spray.
- Service repair costs for water leak at 45 Laroche Crescent with help from X-Site and Watson Mechanical.
- Service costs for emergency generator at Township Tower.
- Costs associated with alum tank cleanout.
- Costs for maintenance and calibration of bench top analyzers.
- Replacement of isolation valve and piping for chlorinator back-up that was not sealing and repaired leak.
- Replacement of inlet and outlet expansion joints on pump #3 at BPS#1.
- Expenses incurred to repair water service leak at 10 Algonquin Street.
- Spare parts purchased for chemical feed pumps.
- Purchase of PAS-8 chemical feed tank replacement and cleanout and installation of level indication device.
- Replacement of soda ash silo gearbox for stock, and replacement of cracked union on inlet on the soda ash pump.
- Electrical repairs performed by Petawawa Electric at the water treatment plant.
- Air compressor maintenance performed by Valley Compressor.
- Replacement of cracked PVC coupling on post soda ash pump.
- Purchase of new metal detector for locates.
- Purchase of two 3/4" ball valves on outlet of PAS-8 pumps downstream from pressure relief valves in order to allow isolation of individual pumps for maintenance.
- Replacement of new heat exchanger for the soda ash feed system.
- Replacement of backflow preventer for soda ash feed system

Distribution Activities for 2013:

Background: OCWA is responsible for the operation of the water treatment plant, booster 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 four water main breaks during 2013:
   - April 29, 2013: Laurentian Drive
   - June 5, 2013: Doran Road
   - September 5, 2013: Simmons Street
   - October 31, 2013: Nick Street

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. 440 hydrants between August and October 2013. Annual winterizing of hydrants was completed in December.

4. The Community Lead Sampling Program was conducted during the Winter Period of December 15th, 2012 to April 15th, 2013 and again during the Summer Period of June 15th to October 15th, 2013. 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 2013 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:

   - Shut off curb stop at Springhill Motel due to broken pipe inside mechanical room
   - William Street and fire station hydrant checks
   - Herman Street temporary water services checks and sampling
   - Water & Sewage Inspections – Butler Street, Winston Avenue, Nick Street, Greenvale Crescent, Victoria Street, Doran Road, William Thomas Drive, John Street, Herman Street, Centre Street, Labine Crescent, Portage Road, Ravenwood Crescent, Steffen Street, Silke Drive, Highland Street, Fairway Street, Oak Street, and Bedard Blvd.
   - Laurentian Drive water service leak and repair
   - Service valve on Doran Road
   - H & H Morglans subdivision checks

- Two weeks of valve exercising took place in the month of June 2013
- Flow and pressure testing on Armstrong Road, and Jamie Crescent
- Locates and tie ins on Victoria Street, Boulder Creek Trail, Riverstone Trail, Northbrook Road, Highway #17 and Cowley, Herman Street and Petawawa Blvd., Moncion's on Petawawa Blvd.
- Service saddle repair on Victoria Street
- Closed valve at end of Winston Avenue for Clouthier Construction to perform tie in
- Throttle valves on James Street and Laroche Crescent for Do-All Construction to perform tie in
- Isolation of valve on Murphy Road
- Major July storm took out power, so the emergency generators ran from the Friday afternoon until Sunday.
- New hydrant installation at corner of water plant.
- Service leak on Mary Street, Nick Street and Herman Street, and John Street
- Flushed and swabbed at Limestone Trail and Petawawa Blvd., Highland Park Drive
- Taking bacti samples for numerous contractors installing new water mains
- Live tap at Vermont Meadows and Victoria Streets
- Pressurizing lines and super-chlorinating of new water mains before bringing into service
- Lead sampling at Kinder Connection Nursery School
- TSSA inspections of back-up diesel generators, and
- Divers needed to inspect water main that runs in the Petawawa River. Isolated and charged several sections of the water main crossing the river in the attempt to locate the suspected water leak. Flushed water main and returned main back to service.

SUMMARY REPORT

2013

PETAWAWA DRINKING WATER SYSTEM

2013 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, 2013 to December 31, 2013. 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	114690	Total Coliform result of 2 at Town Tower	23-Oct-13 to 29-Oct-13	Flushed at Town Tower and re-sampling upstream, downstream and at tower. Results came back from lab on Oct. 28/13 with no detection of coliforms. Notice of Issue Resolution provided on Oct. 29, 2013. No further action required.	Completed

PETAWAWA DRINKING WATER SYSTEM
2013 SUMMARY REPORTS FOR MUNICIPALITIES

2013 – 2014 Petawawa DWS MOE Inspection:

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%.

Summary of Community Complaints/Service Forms for 2013:

- Jan. 4, 2013: 2047 Sandstone Crescent – pink colour staining fixtures in shower; taste and colour of water.
- Jan. 16, 2013: 15 Portage Road – cloudy water colour.
- Feb. 4, 2013: 517 Turning Stone Crescent – white substance found in kitchen sink aerator.
- Feb. 7, 2013: Arrowhead Road – high water pressure issue.
- Feb. 22, 2013: 88 Doran Road – water running over property.
- April 12, 2013: 30 Country Lane – hot water tank issue.
- April 22, 2013: 22 Jamie Crescent – high water pressure issue.
- May 14, 2013: 19 Park Drive – brown water colour complaint.
- June 26, 2013: 30 Winston Drive – water had been turned off.
- July 27, 2013: Unknown location (would not provide) – water taste issue.
- July 29, 2013: 24 Laroche Crescent – brown water colour complaint.
- July 29, 2013: 26 Laroche Crescent – yellowish-colour to water.
- July 29, 2013: 25 Russell Street – bad taste and odour to water.
- July 31, 2013: 3025 Petawawa Blvd. – brown water colour.
- Aug. 2, 2013: 45 Armstrong Road – low water pressure issue.
- Aug. 15, 2013: Wolfe Avenue & Victoria Street – brown water complaint.
- Aug. 23, 2013: 93 Pinehurst – very low water pressure issue.
- Sept. 23, 2013: 70 Selkirk Street – rotten egg smell of water.
- Oct. 15, 2013: 15 Hoffman Street – sour smell and taste of 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 2013 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.

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Annual Record Of Surface Water Taking
Relevé annuel des prises d'eau de surface

Personal information contained on this form is collected under the authority of the Ontario Water Resources Act, Section 20. The Purpose of the form is to record details and information about the taking of water annually.Questions should be directed to the respective hub office in your area.
Les renseignements personnels qui figurent dans le présent formulaire sont recueillis en vertu de l'article 20 de la Loi sur les ressources en eau de l'Ontario. Ce formulaire sert à dossiers les détails et les renseignements concernant la prise d'eau annuelle. Prière d'adresser toutes questions au personnel du bureau régional de votre secteur.

Year(Année): 2013 Permit No.(N° de permis): 2136-5ZDPP5 Source: Allumette Lake (Ottawa River)
Location: RW - Raw Water

Name of Permittee:
Nom du titulaire du permis

Mailing Address:
Adresse postale

Location Of Taking:
Lieu de la prise d'eau

Twp. or Municipality:
Canton ou municipalité
Town of Petawawa

Concession:

Lot:

	Jan/2013	Feb/2013	Mar/2013	Apr/2013	May/2013	Jun/2013	Jul/2013	Aug/2013	Sep/2013	Oct/2013	Nov/2013	Dec/2013	<-- Total -->	<-- Avg. -->	<-- Max. -->	<-- Criteria-->
Total Hours of Taking	362.0	347.0	377.0	344.0	418.0	343.0	412.0	371.0	317.0	314.0	376.0	339.0	4,320.0	360.0		
Avg Daily Taking(m3)	5,282.97	5,583.21	5,442.0	5,160.53	6,711.84	7,078.17	8,384.61	7,972.06	7,078.8	6,853.74	7,442.9	5,011.9		6,500.23		21,500.0
Total Amt of Taking(m3)	163,772.0	156,330.0	168,702.0	154,816.0	208,067.0	212,345.0	259,923.0	247,134.0	212,364.0	212,466.0	223,287.0	155,369.0	2,374,575.0			
Max Daily Flow(m3)	6,117.0	6,338.0	6,060.0	5,577.0	8,414.0	8,551.0	11,692.0	10,324.0	9,159.0	8,011.0	9,992.0	7,199.0			11,692.0	21,500.0
Avg Daily Rate of Taking(L/sec)	61.15	64.62	62.99	59.73	77.68	81.92	97.04	92.27	81.93	79.33	86.14	58.01		75.3		
Peak Daily Rate of Taking(L/sec)	150.13	149.75	149.0	150.42	252.03	244.8	228.08	230.67	229.92	232.53	240.9	157.88			252.03	248.84
Peak Daily Rate of Taking(L/min)	9,008.0	8,985.0	8,940.0	9,025.0	15,122.0	14,688.0	13,685.0	13,840.0	13,795.0	13,952.0	14,454.0	9,473.0			15,122.0	14,930.4

ANNUAL WATER TAKING AND TRANSFER REPORT - SUBMITTED DATA TO MOE, FOR THE YEAR OF 2013

Annual Water Taking Report

For the Year 2013

Raw Flow: Sum (m3/d)

Municipality:	Town of Petawawa	Year:	2013
Facility Name:	[5710] - Petawawa Water Treatment Plant	Water Source:	Allumette Lake (Ottawa River)
Works:	[210002101] - Petawawa Water Treatment Plant	Total Design Capacity (m3/day):	21,500.00
Classification:	Class 2 Water Distribution, Class 3 Water Treatment	Population Serviced:	13,328

January	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
RW - Raw Water	5,525.000	5,778.000	5,431.000	5,565.000	4,757.000	5,453.000	5,098.000	5,105.000	5,388.000	5,405.000	5,155.000	4,707.000	5,202.000	5,618.000	6,085.000

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	5,581.000	4,993.000	5,502.000	4,529.000	4,645.000	4,238.000	5,648.000	5,079.000	5,648.000	5,142.000	5,178.000	4,875.000	6,117.000	5,599.000	5,137.000	5,589.000

February	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
RW - Raw Water	6,338.000	5,758.000	5,559.000	5,740.000	5,293.000	5,986.000	5,538.000	5,470.000	5,117.000	5,207.000	5,979.000	5,789.000	5,196.000	5,575.000	5,507.000

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	5,449.000	5,092.000	5,487.000	5,616.000	5,678.000	5,518.000	5,545.000	5,544.000	5,021.000	6,010.000	5,519.000	6,000.000	5,799.000			

Annual Water Taking Report

For the Year 2013

March	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
RW - Raw Water	5,479.000	5,380.000	5,500.000	5,648.000	5,778.000	5,725.000	5,657.000	5,844.000	5,309.000	5,348.000	5,596.000	4,971.000	5,321.000	5,434.000	5,038.000

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	5,343.000	4,929.000	5,831.000	5,416.000	5,186.000	5,740.000	5,515.000	5,037.000	5,686.000	6,060.000	5,947.000	5,761.000	5,128.000	5,262.000	5,185.000	4,648.000

April	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
RW - Raw Water	4,988.000	5,275.000	4,844.000	5,035.000	5,574.000	5,243.000	5,507.000	5,374.000	5,577.000	5,320.000	4,993.000	5,010.000	4,651.000	5,048.000	5,426.000

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	5,039.000	4,898.000	4,976.000	5,063.000	4,838.000	5,260.000	5,534.000	5,013.000	5,577.000	5,384.000	4,844.000	4,875.000	4,704.000	5,518.000	5,428.000

May	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
RW - Raw Water	4,820.000	6,256.000	6,369.000	5,936.000	6,847.000	7,981.000	7,684.000	5,554.000	7,363.000	6,460.000	5,174.000	5,719.000	5,881.000	5,291.000	7,108.000

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	6,920.000	6,743.000	8,133.000	8,149.000	5,973.000	7,257.000	6,028.000	7,068.000	6,287.000	5,786.000	6,717.000	8,269.000	8,277.000	7,452.000	6,151.000	8,414.000

June	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
RW - Raw Water	7,411.000	6,300.000	6,512.000	7,104.000	8,240.000	6,921.000	6,479.000	5,360.000	5,511.000	7,979.000	7,736.000	6,436.000	7,094.000	6,618.000	6,961.000

Annual Water Taking Report

For the Year 2013

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	7,738.000	6,400.000	6,142.000	7,117.000	8,150.000	8,043.000	7,593.000	6,416.000	8,089.000	7,767.000	7,100.000	8,551.000	8,249.000	6,489.000	5,839.000	

July	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
RW - Raw Water	7,201.000	7,154.000	7,774.000	9,200.000	7,697.000	7,860.000	8,139.000	8,832.000	8,620.000	8,080.000	7,959.000	10,437.000	9,454.000	9,802.000	11,692.000

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	10,569.000	10,564.000	8,971.000	6,750.000	5,120.000	4,552.000	9,854.000	8,450.000	8,763.000	8,687.000	9,532.000	9,300.000	7,466.000	7,865.000	6,335.000	7,244.000

August	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
RW - Raw Water	7,558.000	6,641.000	6,300.000	5,975.000	6,508.000	8,395.000	8,213.000	6,049.000	7,419.000	7,314.000	7,442.000	8,381.000	7,079.000	6,441.000	6,610.000

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	7,322.000	8,289.000	7,846.000	9,396.000	10,000.000	10,271.000	10,028.000	8,394.000	8,271.000	8,608.000	8,252.000	7,988.000	8,881.000	10,120.000	10,324.000	6,819.000

September	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
RW - Raw Water	5,863.000	9,159.000	8,448.000	6,958.000	7,494.000	6,862.000	6,944.000	6,076.000	7,187.000	7,510.000	6,440.000	5,274.000	6,332.000	6,022.000	5,872.000

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	6,903.000	4,770.000	7,302.000	7,838.000	7,502.000	7,066.000	6,763.000	6,873.000	7,871.000	7,361.000	8,131.000	8,706.000	7,253.000	7,984.000	7,600.000	

Annual Water Taking Report

For the Year 2013

October	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
RW - Raw Water	7,903.000	7,207.000	8,011.000	7,568.000	6,636.000	6,092.000	7,427.000	6,035.000	7,007.000	6,772.000	6,933.000	6,673.000	6,586.000	5,989.000	7,320.000

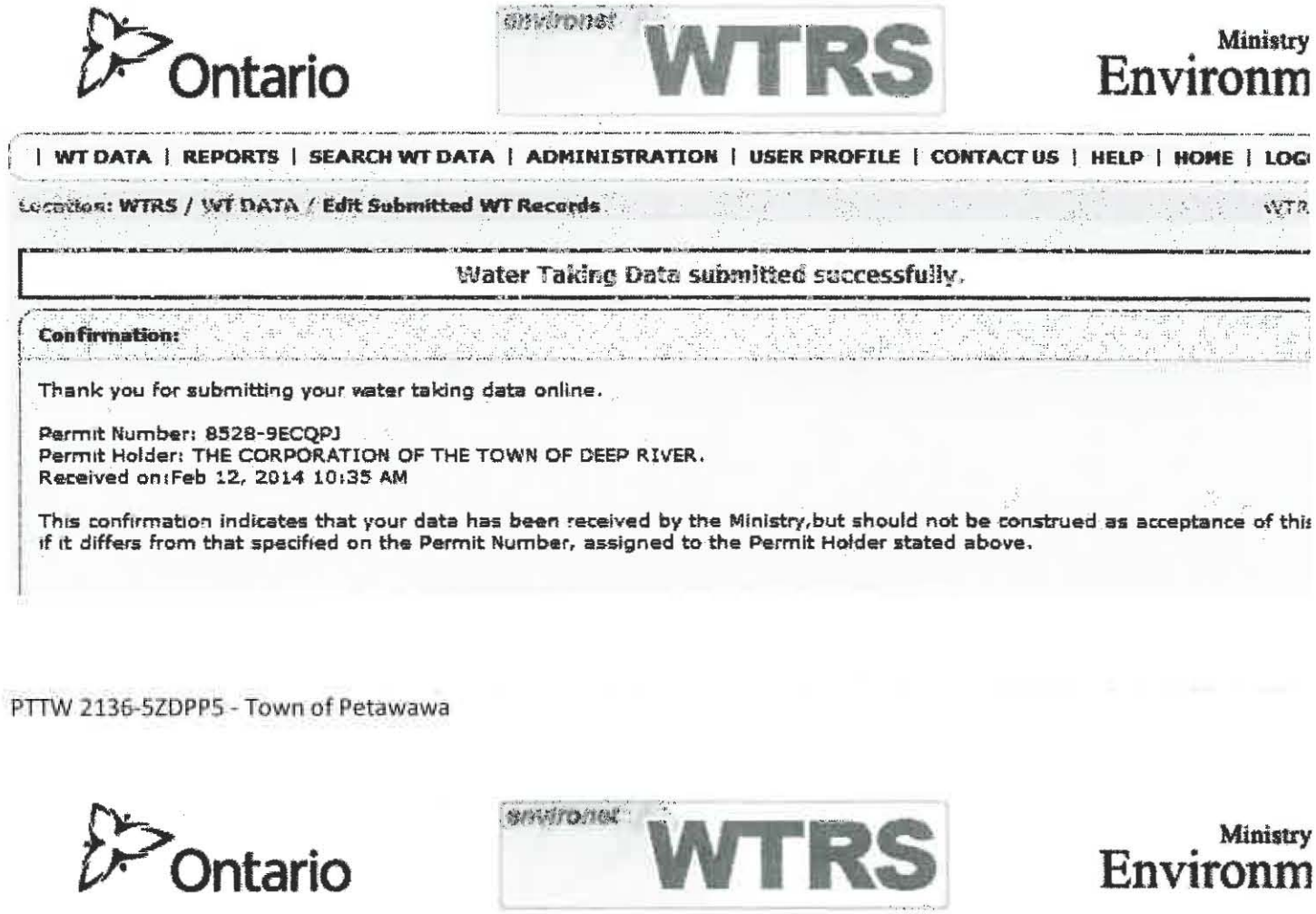
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	6,953.000	7,152.000	6,973.000	6,375.000	6,029.000	7,483.000	6,671.000	6,878.000	6,801.000	6,824.000	5,932.000	6,488.000	6,647.000	6,563.000	7,408.000	7,130.000

November	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
RW - Raw Water	6,477.000	6,291.000	7,222.000	7,494.000	6,515.000	7,072.000	6,422.000	6,923.000	7,330.000	6,792.000	7,720.000	6,715.000	7,493.000	7,728.000	6,966.000

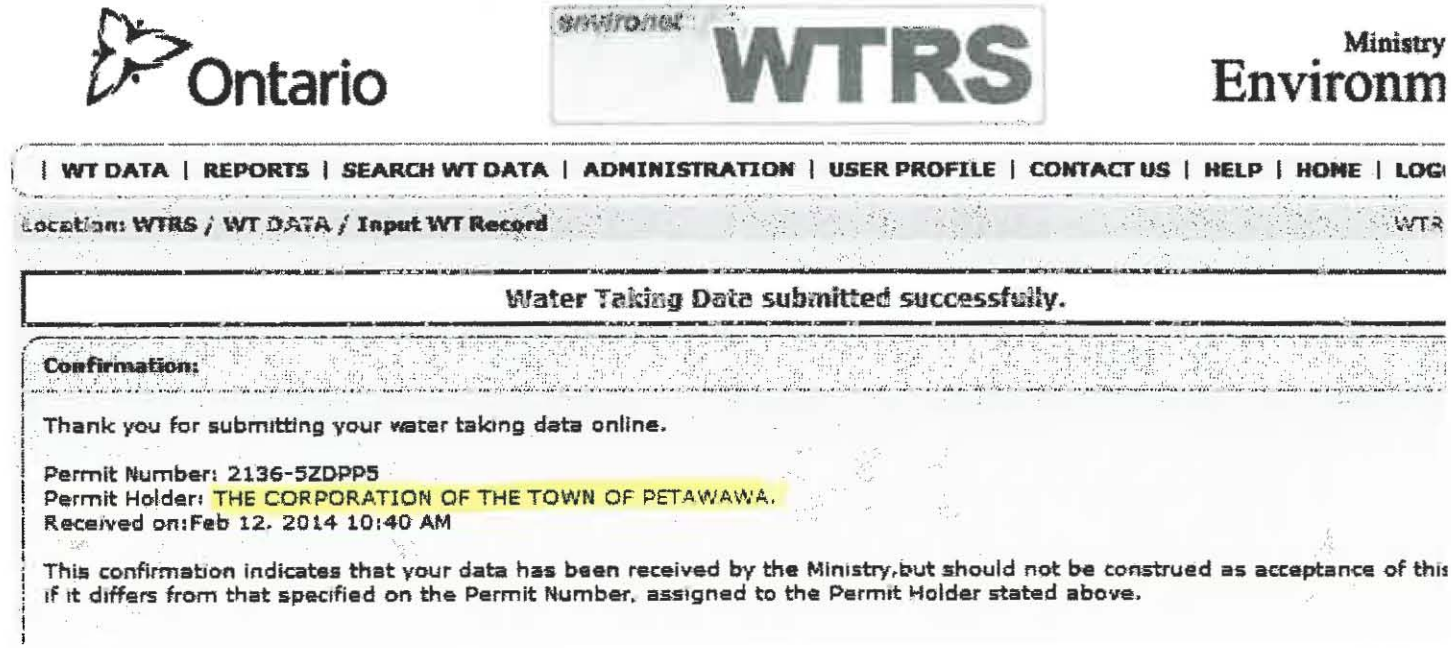
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	6,437.000	6,973.000	7,366.000	6,819.000	6,748.000	6,899.000	7,195.000	8,698.000	8,885.000	9,948.000	8,611.000	9,992.000	9,288.000	7,548.000	6,720.000	

December	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
RW - Raw Water	6,604.000	7,199.000	5,802.000	5,521.000	5,362.000	5,283.000	4,582.000	5,102.000	5,463.000	5,043.000	5,009.000	5,325.000	4,886.000	4,977.000	4,488.000

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	4,961.000	4,480.000	5,415.000	4,663.000	4,712.000	4,470.000	4,561.000	4,492.000	5,105.000	4,993.000	4,007.000	4,377.000	4,646.000	4,388.000	4,452.000	5,001.000



PTTW 2136-5ZDPP5 - Town of Petawawa



Thank you

Helen D'Apice
Water Taking and Reporting Assistant
Ministry of The Environment
Environmental Monitoring and Reporting Branch
125 Resources Rd. Etobicoke, ON M9P 3V6