



PETAWAWA DRINKING WATER SYSTEM
2011 ANNUAL REPORT

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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, SDWA, 2002- Water Taking and Transfer.

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 2011



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
Reporting Period	January 1, 2011 – December 31, 2011

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	Mid-Chem Canada Ltd.
Soda Ash Dense	pH Adjustment	Quadra & CCC
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	101611	Loss of Communications with Township Tower for over one hour	26-Jun-11	Re-started main computers at Petawawa WTP and communications was restored at tower.	Completed
SDWA 170/03	102057	Loss of Communications with Town & South Town Towers	17-Jul-11	Started generators for both towers. Communications was restored.	Completed
SDWA 170/03	102114	Total Coliform result of 10 from a distribution sample taken at 20 Wilson Road in Petawawa, as a result of a Community Complaint	20-Jul-11 to 26-Jul-11	Flushed distribution line and re-sampled on July 21, 2011. Re-samples came back good. on July 18 th for chemical samples and July 21 st for bacti samples. No further action required.	Completed
SDWA 170/03	102213	Loss of sample pump for filter #2 turbidity	25-Jul-11 to 28-Jul-11	Replaced motor on sample pump. Pump was back in service.	Completed
SDWA 170/03	103321	Fluoride exceedance of 1.61 mg/L (Bench test 1.33 mg/L)	15-Sep-11 to 22-Sep-11	Efforts are being made to resolve spike issues with fluoride analyzer. Health Unit permitted us to discontinue the injection of fluoride while we worked through the issue. If analyzer is off-line and fluoride is injected, sampling will be performed with bench tests, as per O. Reg. 170/03.	Completed
SDWA 170/03	104040	Loss of sample pump for filter #2 turbidity	28-Oct-11 to 03-Nov-11	New motor installed at time of incident. Failed motor sent for repair and analysis.	Completed
SDWA 170/03	104330	Fluoride exceedance of 1.70 mg/L (Bench test of 0.57 mg/L)	26-Nov-11 to 01-Dec-11	Bench tests performed. Health Unit was contacted on Nov. 28 th to suggest a delay timer to be installed. On Dec. 1 st , OCWA received confirmation from Health Unit and MOE that a delay timer could be installed into program and was completed.	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	2007	2008	2009	2010	2011
Av. Day Flow (m ³ /d)	6 569.69	5 865.25	6 037.59	6 494.87	6 248.97
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)	30.6	27.2	28.1	30.2	29.1
Max. Day Flow (m ³ /d)	10 776.0	8 885.0	11 201.0	13 113.0	10 952.0
% of Capacity (based on max. day flows)	50.1	41.3	52.1	61.0	50.9

In 2011, the average day flow was at approximately 29.1% of the current plant design, and the maximum day flow was at approximately 50.9 % of the plant design of 21 500.0 m³/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	52	0-17	52	0-50	0	0
Treated	52	0-0	52	0-0	52	0-11
Distribution	317	0-0	317	0-10	317	0-79

Operational Testing (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 – 1.99 NTU
Filter #2 Turbidity	1 NTU	0 – 1.93 NTU
Filter #3 Turbidity	1 NTU	0 – 2.04 NTU
Treated Free Chlorine	0.05 mg/L – 4 mg/L	0.46 – 2.11 mg/L*
Distribution Free Chlorine**	0.2 mg/L – 4.0 mg/L	0.03 – 5.11 mg/L*
Fluoride	1.5 mg/L***	0 – 1.7 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	104	0 mg/L – 1.0 mg/L	1.05 – 1.93 mg/L
Treated Water Fluoride	112	1.5 mg/L	0 – 0.96 mg/L
Treated Water Turbidity	103	1 NTU	0.074 – 1.36 NTU
Treated Water Alkalinity	100	30 – 500 mg/L (OG)*	18 – 37 mg/L
Treated Water Aluminum	100	0.1 mg/L (OG)	0 – 0.18 mg/L
Treated Water Colour	100	5 TCU (AO)**	0 – 3.0 TCU
Treated Water pH	101	6.5 – 8.5 (OG)	6.33 – 7.62
Distribution Free Chlorine	931	0.2 mg/L – 4.0 mg/L	0.23 – 1.67 mg/L
Filter #1 Turbidity	102	1 NTU	0.069 – 1.38 NTU
Filter #2 Turbidity	101	1 NTU	0.046 – 0.257 NTU
Filter #3 Turbidity	102	1 NTU	0.062 – 1.05 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)	17 – 50 mg/L
Treated Water Colour	53	5 TCU (AO)	2 – 7 TCU
Treated Water Conductivity	28	300 – 500 uS/cm	111 – 167 uS/cm
Treated Water pH	53	6.5 – 8.5 (OG)	6.22 – 7.65
Treated Water Total Dissolved Solids	53	500 mg/L (AO)	50 – 152 mg/L
Treated Water Hardness	53	80 – 100 mg/L (OG)	12 – 28 mg/L
Treated Water Fluoride	53	1.5 mg/L	0.1 – 0.94 mg/L
Distribution Water Alkalinity	214	30 – 500 mg/L (OG)	9.67 – 46 mg/L
Distribution Water Colour	214	5 TCU (AO)	0.67 – 9.0 TCU
Distribution Water Conductivity	28	300 – 500 uS/cm	121.0 – 173.0 uS/cm
Distribution Water pH	214	6.5 – 8.5 (OG)	2.24 – 7.81
Distribution Water Total Dissolved Solids	214	500 mg/L (AO)	30.0 – 120.0 mg/L
Distribution Water Hardness	214	80 – 100 mg/L (OG)	7.0 – 304.0 mg/L

Summary of Additional Samples:

Reason	Date of Issuance/Complaint	Parameter	Date Sampled	Result
Certificate of Approval # 7373-7H2K93	30-Sep-08	Backwash Effluent Suspended Solids	19-Jan-11	3.0 mg/L
			6-Apr-11	2.0 mg/L
			07-Jul-11	4.0 mg/L
			5-Oct-11	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 10/11	< 0.5 ug/L	6 ug/L	No	No
Arsenic	Jan 10/11	< 1.0 ug/L	25 ug/L	No	No
Barium	Jan 10/11	10.0 ug/L	1000 ug/L	No	No
Boron	Jan 10/11	< 10.0 ug/L	5000 ug/L	No	No
Cadmium	Jan 10/11	< 0.1 ug/L	5 ug/L	No	No
Chromium	Jan 10/11	< 1.0 ug/L	50 ug/L	No	No
Mercury	Jan 10/11	< 0.1 ug/L	1 ug/L	No	No
Selenium	Jan 10/11	< 1.0 ug/L	10 ug/L	No	No
Sodium	Jan 10/11	20 mg/L	20 mg/L	No	Yes*
Uranium	Jan 10/11	< 1.0 ug/L	20 ug/L	No	No

Fluoride Residual: Mean	Dec 28/11	< 0.1 mg/L	1.5 mg/L	No	No
1 st Quarter Nitrite	Jan 11/11	< 0.1 mg/L	1 mg/L	No	No
2 nd Quarter Nitrite	Apr 4/11	< 0.1 mg/L	1 mg/L	No	No
3 rd Quarter Nitrite	Jul 4/11	< 0.1 mg/L	1 mg/L	No	No
4 th Quarter Nitrite	Oct 3/11	< 0.1 mg/L	1 mg/L	No	No
1 st Quarter Nitrate	Jan 11/11	< 0.1 mg/L	10 mg/L	No	No
2 nd Quarter Nitrate	Apr 4/11	0.17 mg/L	10 mg/L	No	No
3 rd Quarter Nitrate	Jul 4/11	0.15 mg/L	10 mg/L	No	No
4 th Quarter Nitrate	Oct 3/11	0.14 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 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 Lead Sampling: (Ont. Reg. 169/03 Standard = 10 ug/L or 0.01 mg/L (MAC)

Round #3 – December 15/08 to April 15/09

Residential Samples-

# of Samples	# Adverse (> 0.01 mg/L)	# Exceed 1/2 MAC (0.005 mg/L)	Lead Sample #1		Lead Sample #2		pH	
			Max Result (mg/L)	Min Result (mg/L)	Max Result (mg/L)	Min Result (mg/L)	Max Result	Min Result
60	0	1	0.005	< 0.001	0.003	< 0.001	7.83	7.05

Non-Residential Samples-

# of Samples	# Adverse (> 0.01 mg/L)	# Exceed 1/2 MAC (0.005 mg/L)	Lead Sample #1		Lead Sample #2		pH	
			Max Result (mg/L)	Min Result (mg/L)	Max Result (mg/L)	Min Result (mg/L)	Max Result	Min Result
6	0	0	0.004	< 0.001	0.004	< 0.001	7.62	7.37

Distribution Samples-

# of Samples	# Adverse (> 0.01 mg/L)	# Exceed 1/2 MAC (0.005 mg/L)	Lead Sample #1		pH		Alkalinity	
			Max Result (mg/L)	Min Result (mg/L)	Max Result	Min Result	Max Result	Min Result
12	0	0	0.002	< 0.001	7.63	7.27	34	27

Summary of Lead Sampling:

Round #4 – June 15/09 to October 15/09

Residential Samples-

# of Samples	# Adverse (> 0.01 mg/L)	# Exceed 1/2 MAC (0.005 mg/L)	Lead Sample #1		Lead Sample #2		pH	
			Max Result (mg/L)	Min Result (mg/L)	Max Result (mg/L)	Min Result (mg/L)	Max Result	Min Result
60	0	0	0.004	< 0.001	0.002	< 0.001	7.52	6.94

Non-Residential Samples-

# of Samples	# Adverse (> 0.01 mg/L)	# Exceed 1/2 MAC (0.005 mg/L)	Lead Sample #1		Lead Sample #2		pH	
			Max Result (mg/L)	Min Result (mg/L)	Max Result (mg/L)	Min Result (mg/L)	Max Result	Min Result
6	0	1	0.005	< 0.001	0.004	< 0.001	7.24	7.07

Distribution Samples-

# of Samples	# Adverse (> 0.01 mg/L)	# Exceed 1/2 MAC (0.005 mg/L)	Lead Sample #1		pH		Alkalinity	
			Max Result (mg/L)	Min Result (mg/L)	Max Result	Min Result	Max Result	Min Result
12	0	0	0.003	< 0.001	7.28	7.09	40	38

Summary of Lead Sampling:

Reduced Sampling- next round for the Town of Petawawa will be from December 15, 2011 to April 15, 2012 and from June 15, 2012 to October 15, 2012.

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 10, 2011	< 0.5	5 ug/L	No	No
Aldicarb	Jan 10, 2011	< 5.0	9 ug/L	No	No
Aldrin + Dieldrin	Jan 10, 2011	< 0.01	0.7 ug/L	No	No
Atrazine + N-Dealkylated metabolites	Jan 10, 2011	< 0.2	5 ug/L	No	No
Azinphos-methyl	Jan 10, 2011	< 2.0	20 ug/L	No	No
Bendiocarb	Jan 10, 2011	< 2.0	40 ug/L	No	No
Benzene	Jan 10, 2011	< 0.5	5 ug/L	No	No

Benzo(a)pyrene	Jan 10, 2011	< 0.01	0.01 ug/L	No	No
Bromoxynil	Jan 10, 2011	< 0.5	5 ug/L	No	No
Carbaryl	Jan 10, 2011	< 5.0	90 ug/L	No	No
Carbofuran	Jan 10, 2011	< 5.0	90 ug/L	No	No
Carbon Tetrachloride	Jan 10, 2011	1.2	5 ug/L	No	No
Chlordane (Total)	Jan 10, 2011	< 0.02	7 ug/L	No	No
Chlorpyrifos	Jan 10, 2011	< 1.0	90 ug/L	No	No
Cyanazine	Jan 10, 2011	< 1.0	10 ug/L	No	No
Diazinon	Jan 10, 2011	< 1.0	20 ug/L	No	No
Dicamba	Jan 10, 2011	< 1.0	120 ug/L	No	No
1,2-Dichlorobenzene	Jan 10, 2011	< 0.4	200 ug/L	No	No
1,4-Dichlorobenzene	Jan 10, 2011	< 0.4	5 ug/L	No	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	Jan 10, 2011	< 0.02	30 ug/L	No	No
1,2-Dichloroethane	Jan 10, 2011	< 0.5	5 ug/L	No	No
1,1-Dichloroethylene (vinylidene chloride)	Jan 10, 2011	< 0.5	14 ug/L	No	No
Dichloromethane	Jan 10, 2011	< 4.0	50 ug/L	No	No
2,4-Dichlorophenol	Jan 10, 2011	< 0.5	900 ug/L	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Jan 10, 2011	< 1.0	100 ug/L	No	No
Diclofop-methyl	Jan 10, 2011	< 0.9	9 ug/L	No	No
Dimethoate	Jan 10, 2011	< 2.5	20 ug/L	No	No
Dinoseb	Jan 10, 2011	< 1.0	10 ug/L	No	No
Diquat	Jan 10, 2011	< 5.0	70 ug/L	No	No
Diuron	Jan 10, 2011	< 10.0	150 ug/L	No	No
Glyphosate	Jan 10, 2011	< 10.0	280 ug/L	No	No
Heptachlor + Heptachlor Epoxide	Jan 10, 2011	< 0.01	3 ug/L	No	No
Lindane (Total)	Jan 10, 2011	< 0.01	4 ug/L	No	No
Malathion	Jan 10, 2011	< 5.0	190 ug/L	No	No
Methoxychlor	Jan 10, 2011	< 0.02	900 ug/L	No	No
Metolachlor	Jan 10, 2011	< 0.5	50 ug/L	No	No
Metribuzin	Jan 10, 2011	< 5.0	80 ug/L	No	No
Monochlorobenzene	Jan 10, 2011	< 0.2	80 ug/L	No	No
Paraquat	Jan 10, 2011	< 5.0	10 ug/L	No	No
Parathion	Jan 10, 2011	< 1.0	50 ug/L	No	No
Pentachlorophenol	Jan 10, 2011	< 0.5	60 ug/L	No	No
Phorate	Jan 10, 2011	< 0.5	2 ug/L	No	No
Picloram	Jan 10, 2011	< 5.0	190 ug/L	No	No
Polychlorinated Biphenyls (PCB)	Jan 10, 2011	< 0.1	3 ug/L	No	No
Prometryne	Jan 10, 2011	< 0.25	1 ug/L	No	No
Simazine	Jan 10, 2011	< 1.0	10 ug/L	No	No
THM (Treated) (NOTE: show latest annual average)	2011	38.03	100 ug/L	No	No
THM (Distribution) (NOTE: show latest annual average)	2011	74.2	100 ug/L	No	Yes
Temephos	Jan 10, 2011	< 10.0	280 ug/L	No	No
Terbufos	Jan 10, 2011	< 0.4	1 ug/L	No	No
Tetrachloroethylene	Jan 10, 2011	< 0.3	30 ug/L	No	No
2,3,4,6-Tetrachlorophenol	Jan 10, 2011	< 0.5	100 ug/L	No	No
Triallate	Jan 10, 2011	< 1.0	230 ug/L	No	No
Trichloroethylene	Jan 10, 2011	< 0.3	5 ug/L	No	No
2,4,6-Trichlorophenol	Jan 10, 2011	< 0.5	5 ug/L	No	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	Jan 10, 2011	< 1.0	280 ug/L	No	No
Trifluralin	Jan 10, 2011	< 0.4	45 ug/L	No	No
Vinyl Chloride	Jan 10, 2011	< 0.2	2 ug/L	No	No

Facility Work Order Status:

Preventative Work Orders Completed	508
Operational Work Orders Completed	54
Weekly Maintenance Orders Completed	1 608
Capital Work Orders Completed	26
Corrective Work Orders Completed	15

Maintenance Summary-

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

- REPLACED SEAL ON PUMP AT BOOSTER STATION #2.
- MISCELLANEOUS CAPITAL ITEMS PURCHASED FOR REPAIR AND MAINTENANCE AT THE PETAWAWA WTP.
- INSTALLATION OF BACKUP GENERATOR AT TOWNSHIP TOWER.
- GENERATOR RAN DURING POWER OUTAGES (DIESEL AND GAS ENGINE FUEL) - THREE TIMES THIS YEAR.
- ANNUAL INSPECTION COMPLETED BY LANDMARK MUNICIPAL SERVICES (WATER TOWER INSPECTION).
- HETEK FOR SEMI ANNUAL CALIBRATION AND CHECKS.
- GAL POWER FOR ANNUAL MAINTENANCE ON GENSET.
- PARTS FOR CHLORINE INJECTION SYSTEMS IN THE DISTRIBUTION SYSTEM IN PETAWAWA.
- REPLACEMENT OF PH PROBE.
- REPLACED CELL ON CHLORINE ANALYZER AT BOOSTER STATION #2.
- CHANGED LINES ON PUMP DIAPHRAPM FOR CL2 PUMPS AT BOOSTER STATION #1.
- VALLEY COMPRESSOR COMPLETED ANNUAL PREVENTATIVE MAINTENANCE.
- CHANGED SEAT AND POPPETS FOR THE PUMP DIAPHRAPM FOR FLUORIDE MP5 LEFT AND MP6 LEFT.

- NEW SOFT START INSTALLED FOR HIGH LIFT PUMP #2.
- VALVE PIT VALVE AND ACTUATOR REPLACEMENT.
- PURCHASED CHEMICAL DISPENSER FOR FLUORIDE RESIDUAL TESTING.
- PURCHASED UNIT HEATER FAN MOTORS AND NEW CONTROL VALVES FOR HEATING SYSTEM.
- PURCHASED WOLFE AVENUE FLOW METER.
- REPLACEMENT OF HIGH LIFT PUMP MOTOR.
- REPLACEMENT OF DEFECTIVE VACUUM REGULATOR.
- SCADA SYSTEM REPAIRS COMPLETED BY ASPEC AUTOMATION.
- REPLACEMENT BATTERY CHARGER FOR BACK-UP DIESEL GENERATOR.
- PURCHASED DIFFUSER TRUCK MOUNT AND HYDRANT OUT-OF-SERVICE BAGS FOR DISTRIBUTION WORK.
- WIRING FOR NEW HIGH LIFT PUMP MOTOR FOR PETAWAWA WTP.
- REPLACEMENT ELECTRODES PURCHASED FOR FLUORIDE ANALYZER.
- PARTS FOR ANNUAL MAINTENANCE OF ANALYZERS AND ALSO A CHLORINE TEST KIT FOR DISTRIBUTION TRUCK.
- PURCHASE OF CHLORINE CONTROL SOLENOIDS NEEDED FOR REPLACEMENT OF DEFECTIVE UNIT AND ANOTHER FOR STOCK.
- REPLACED BLADDERS ON TRAC VAC, SINCE IT WAS LEAKING.
- REPLACED BELLOWS ON CREEPER FOR VACUUM.
- PURCHASED GEARBOX FOR SODA ASH FEEDER.
- PURCHASED CHECK VALVE FOR PUMPING STATION.
- PURCHASED MOTOR AND WIRING FOR SAMPLE PUMP.
- O.D.S MARINE PERFORMED INTAKE AND OUTFALL INSPECTIONS.

Distribution Activities for 2011:

Background: OCWA is responsible for the operation of the water treatment plant, booster stations (2), water storage facilities (4 towers), and the distribution system that OCWA assumed responsibility for, as of January 1, 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 three watermain breaks during 2011:
 - February 10, 2011: 2152 Petawawa Blvd.; Cause- corroded pipe saddle.
 - October 27, 2011: 8 East Street; Cause- deterioration of main stop.
 - December 15, 2011: 2081 Petawawa Blvd.; Cause- corroded pipe saddle.
2. Hydrant Flushing was performed on 438 hydrants between May to October 2011.
3. Water Service Inspections were performed during April to August on numerous new homes (both single dwelling and duplexes) within the Town of Petawawa. The numbers are as follows: (Total of 71 Inspections)
 - Bedard Avenue: 2
 - Sandstone Crescent: 7
 - Renfrew Street: 8
 - Riverstone Trail: 17
 - Oak Street: 7
 - Nick Street: 7
 - Oriole Street: 5
 - Albert: 2
 - Winston Avenue: 6
 - Earl Street: 1
 - Greenvale Crescent: 8
 - Spruce Street: 1

SUMMARY REPORT

2011

PETAWAWA DRINKING WATER SYSTEM
2011 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, 2011 to December 31, 2011. 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 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	101611	Loss of Communications with Township Tower for over one hour	26-Jun-11	Re-started main computers at Petawawa WTP and communications were restored at tower.	Completed
SDWA 170/03	102057	Loss of Communications with Town & South Town Towers	17-Jul-11	Started generators for both towers. Communications was restored.	Completed

PETAWAWA DRINKING WATER SYSTEM
2011 SUMMARY REPORTS FOR MUNICIPALITIES

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	102114	Total Coliform result of 10 from a distribution sample taken at 20 Wilson Road in Petawawa, as a result of a Community Complaint	20-Jul-11 to 26-Jul-11	Flushed distribution line and re-sampled on July 21, 2011. Re-samples came back good. on July 18 th for chemical samples and July 21 st for bacti samples. No further action required.	Completed
SDWA 170/03	102213	Loss of sample pump for filter #2 turbidity	25-Jul-11 to 28-Jul-11	Replaced motor on sample pump. Pump was back in service.	Completed
SDWA 170/03	103321	Fluoride exceedance of 1.61 mg/L (Bench test 1.33 mg/L)	15-Sep-11 to 22-Sep-11	Efforts are being made to resolve spike issues with fluoride analyzer. Health Unit permitted us to discontinue the injection of fluoride while we worked through the issue. If analyzer is off-line and fluoride is injected, sampling will be performed with bench tests, as per O. Reg. 170/03.	Completed
SDWA 170/03	104040	Loss of sample pump for filter #2 turbidity	28-Oct-11 to 03-Nov-11	New motor installed at time of incident. Failed motor sent for repair and analysis.	Completed
SDWA 170/03	104330	Fluoride exceedance of 1.70 mg/L (Bench test of 0.57 mg/L)	26-Nov-11 to 01-Dec-11	Bench tests performed. Health Unit was contacted on Nov. 28 th to suggest a delay timer to be installed. On Dec. 1 st , OCWA received confirmation from Health Unit and MOE that a delay timer could be installed into program and was completed.	Completed

PETAWAWA DRINKING WATER SYSTEM
2011 SUMMARY REPORTS FOR MUNICIPALITIES

2010 – 2011 Petawawa DWS MOE Inspection -

The Ministry of Environment conducted their annual site visit for the 2010 - 2011 reporting year on November 10th, 2010. The MOE Drinking Water Inspector returned to the plant to complete this inspection on January 27th, 2011 to take water samples and to interview Town Public Works staff. The final report was received on April 7th, 2011 with an Inspection Rating of 97.88%.

The Ministry of the Environment 2010-2011 Drinking Water System Inspection Report noted the following:

Item #	Item	Action to Address Item	Current Status (Complete, In progress)
1	<p>Logs for the treatment subsystem(s) of the drinking water system did not contain the required information.</p> <p>Action(s) Required:</p> <ol style="list-style-type: none"> 1. By no later than April 30, 2011, the operating authority for the Petawawa DWS water treatment sub-system shall provide to the undersigned inspector for his review and acceptance a standard operating procedure (SOP) for ensuring that all duties of the operator in charge (OIC) as per Section 26, O. Reg. 128/04 are complied with. 2. Upon receipt of written acceptance of the SOP identified above from the undersigned inspector, implement the procedure. 3. By no later than May 15, 2011, the operating authority for the Petawawa DWS water treatment sub-system shall provide to the undersigned inspector written confirmation that all operators have received training on the aforementioned SOP. 	<p>Ensure the SOP in our SOP Manual clearly states the duties of the operator in charge (OIC), as per Section 26, O. Reg. 128/04.</p> <p>Training will be given before this date and copies of the training records of all the certified operators at the Petawawa DWS that participated will be provided to the Provincial Officer.</p>	COMPLETED
2	<p>Entries in the logbook were not always made by the appropriate and authorized personnel.</p> <p>Action(s) Required: See Item #1 for Action Required.</p>	<p>Ensure our SOP on logbooks clearly states all required information, as per the regulations, in respect to OIT work performed is either reviewed or approved by the OIC.</p>	COMPLETED
3	<p>The operator-in-charge did not ensure that records were maintained of all adjustments made to the processes within his or her</p>	<p>Make sure our SOP for logbook entries complies with Section 25 (1), O. Reg.</p>	COMPLETED

**PETAWAWA DRINKING WATER SYSTEM
2011 SUMMARY REPORTS FOR MUNICIPALITIES**

	responsibility. Action(s) Required: See Item #1 for Action Required.	128/04.	
4	<p>Operators in charge had not been designated for all subsystems which comprised the drinking water-system.</p> <p>Action(s) Required:</p> <ol style="list-style-type: none"> 1. By no later than April 30, 2011, the operating authority for the Petawawa DWS water treatment sub-system shall provide to the undersigned inspector for his review and acceptance a standard operating procedure (SOP) for ensuring that an Operator-in-Charge (OIC) is designated for all subsystems which comprise the drinking-water system. Such SOP shall at a minimum, provide the minimum qualification requirements to be the OIC, the role and responsibility of the OIC, the process of designating the OIC and the procedures to follow when activities are undertaken by uncertified persons in the drinking-water subsystems. 2. Upon receipt of written acceptance of the SOP identified above from the undersigned inspector, implement the procedure. 3. By no later than May 14, 2011, the operating authority for the Petawawa DWS water treatment subsystem shall provide to the undersigned inspector written confirmation that all operators have received training on the aforementioned SOP. 	<p>Provide our SOP for the Petawawa DWS that clearly states the minimum qualifications, and roles and responsibilities of the OIC, as per the regulations.</p> <p>Training will be done with all Petawawa DWS operators on this SOP and documented with training records that will be provided to the Provincial Officer.</p>	COMPLETED

PETAWAWA DRINKING WATER SYSTEM
2011 SUMMARY REPORTS FOR MUNICIPALITIES

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 and daily instantaneous peak flow rates.
2. A comparison of the summary referred to in paragraph 1 to the rated capacity and flow rates approved in the system's approval.

Attached is a copy of the Annual Record of Water Taking for the Petawawa Drinking Water System. This document contains all required flow information.

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 31.

**Annual Record Of Surface Water Taking
Relève 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): 2011 Permit No.(N° de permis): 2136-5ZDPPP5 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

Concession:

Lot:

	Jan/2011	Feb/2011	Mar/2011	Apr/2011	May/2011	Jun/2011	Jul/2011	Aug/2011	Sep/2011	Oct/2011	Nov/2011	Dec/2011	<- Total ->	<- Avg. ->	<- Max. ->	<- Criteria ->
Total Hours of Taking	351.0	335.0	367.0	354.0	407.0	699.0	694.0	720.0	556.0	520.0	473.0	493.0	5,968.0	497.42		
Avg Daily Taking(m3)	5,820.84	5,376.18	5,308.65	5,560.8	6,576.06	7,160.43	7,544.55	7,909.48	6,722.87	5,635.23	5,413.43	5,870.19	6,241.56	6,241.56		21,500.0
Total Amt of Taking(m3)	180,446.0	150,533.0	164,568.0	166,824.0	203,858.0	214,813.01	233,881.0	245,194.0	201,686.0	174,692.0	162,403.0	181,976.0	2,280,874.01			
Max Daily Flow(m3)	6,895.0	6,690.0	5,941.0	6,677.0	8,657.0	10,952.0	10,216.0	9,942.0	7,972.0	6,345.0	5,918.0	7,057.0		10,952.0		21,500.0
Avg Daily Rate of Taking(L/sec)	67.37	62.22	61.44	64.36	76.11	82.88	87.32	91.54	77.81	65.22	62.66	67.94		72.33		
Peak Daily Rate of Taking(L/sec)	220.9	154.45	154.56	193.42	210.67	239.83	228.42	227.0	225.13	224.47	223.28	225.32		239.83		248.84
Peak Daily Rate of Taking(L/min)	13,264.0	9,267.0	9,275.0	11,605.0	12,640.0	14,390.0	13,705.0	13,620.0	13,508.0	13,488.0	13,397.0	13,519.0		14,390.0		14,930.4

**ANNUAL WATER TAKING AND TRANSFER
REPORT - SUBMITTED DATA TO MOE,
FOR THE YEAR OF 2011**

Annual Water Taking Report
 For the Year 2011

Raw Flow: Sum (m3/d)

Municipality:	Town of Petawawa	Year:	2011													
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 Served:	13,328													
January	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
RW - Raw Water	5,425.000	4,910.000	5,755.000	6,247.000	6,137.000	6,279.000	6,564.000	5,506.000	6,090.000	6,895.000	6,153.000	6,400.000	6,308.000	6,418.000	6,156.000	
RW - Raw Water	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	6,279.000	6,695.000	6,849.000	6,305.000	6,523.000	6,320.000	5,173.000	4,948.000	5,450.000	5,034.000	4,320.000	4,673.000	5,273.000	4,913.000	4,793.000	5,655.000
February	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
RW - Raw Water	5,674.000	5,209.000	5,236.000	5,224.000	5,166.000	5,225.000	5,873.000	5,413.000	5,027.000	5,314.000	5,679.000	4,949.000	5,055.000	5,593.000	5,030.000	
RW - Raw Water	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	5,306.000	6,690.000	5,414.000	5,120.000	5,315.000	5,480.000	5,304.000	5,278.000	5,712.000	5,353.000	5,132.000	5,170.000	5,592.000	5,170.000	5,592.000	

Annual Water Taking Report
For the Year 2011

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
March															
RW - Raw Water															
	5,699,000	5,403,000	5,439,000	5,649,000	4,927,000	5,343,000	5,822,000	5,538,000	5,467,000	5,099,000	5,505,000	4,880,000	4,030,000	4,623,000	4,988,000
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
April															
RW - Raw Water															
	5,021,000	5,063,000	4,953,000	4,887,000	5,310,000	5,941,000	5,329,000	5,723,000	5,398,000	5,754,000	5,101,000	5,612,000	5,734,000	5,439,000	5,420,000
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
May															
RW - Raw Water															
	5,097,000	4,878,000	5,281,000	5,318,000	5,161,000	5,322,000	5,995,000	5,879,000	5,049,000	5,577,000	6,275,000	5,940,000	6,677,000	5,625,000	6,002,000
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
June															
RW - Raw Water															
	6,782,000	6,661,000	6,551,000	6,810,000	6,221,000	6,668,000	7,542,000	6,736,000	6,379,000	6,658,000	6,774,000	8,657,000	6,120,000	5,733,000	7,560,000
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
July															
RW - Raw Water															
	9,540,000	8,256,000	7,373,000	8,008	7,070	8,361	8,572	8,556,000	8,636,000	8,619,000	7,459,000	7,607,000	6,444,000	7,652,000	9,050,000
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Annual Water Taking Report
For the Year 2011

RW - Raw Water	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	9,663.000	10,890.000	8,969.000	9,566.000	9,984.000	9,302.000	10,952.000	8,029.000	6,531.000	6,869.000	7,894.000	6,454.000	7,435.000	6,440.000	6,671.000	
July	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
RW - Raw Water	7,305.000	8,009.000	8,311.000	9,367.000	9,832.000	10,216.000	7,118.000	7,339.000	6,401.000	7,052.000	8,177.000	7,196.000	6,647.000	6,898.000	7,745.000	
RW - Raw Water	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	8,572.000	7,306.000	6,846.000	8,284.000	8,061.000	8,998.000	9,157.000	7,620.000	6,701.000	6,764.000	5,640.000	7,318.000	6,389.000	6,882.000	5,988.000	5,742.000
August	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
RW - Raw Water	6,022.000	7,502.000	6,614.000	7,090.000	9,461.000	9,935.000	9,925.000	7,653.000	8,456.000	8,584.000	7,463.000	9,001.000	7,619.000	7,738.000	8,272.000	
RW - Raw Water	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	8,464.000	8,470.000	9,549.000	9,942.000	9,910.000	6,491.000	6,894.000	6,572.000	8,027.000	7,169.000	7,218.000	6,646.000	7,250.000	7,691.000	6,920.000	6,706.000
September	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
RW - Raw Water	7,570.000	7,670.000	7,010.000	6,832.000	6,065.000	6,602.000	7,206.000	7,012.000	6,916.000	7,034.000	7,548.000	7,972.000	6,708.000	6,587.000	6,421.000	
RW - Raw Water	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	6,621.000	6,191.000	6,077.000	6,855.000	5,985.000	6,570.000	6,407.000	6,902.000	6,000.000	6,040.000	7,049.000	6,421.000	6,893.000	5,730.000	6,792.000	

Annual Water Taking Report
For the Year 2011

October	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
RW - Raw Water	5,142.000	5,632.000	5,810.000	5,663.000	6,293.000	6,345.000	5,343.000	5,581.000	5,474.000	5,602.000	6,114.000	5,290.000	6,040.000	5,689.000	4,851.000	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	5,206.000	5,649.000	6,207.000	6,057.000	5,636.000	4,992.000	5,551.000	5,242.000	5,247.000	5,957.000	5,022.000	6,265.000	5,924.000	5,572.000	5,636.000	5,660.000
November	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
RW - Raw Water	5,868.000	5,789.000	5,423.000	5,668.000	5,392.000	5,381.000	5,665.000	4,474.000	5,704.000	5,749.000	5,518.000	4,551.000	5,234.000	5,574.000	5,330.000	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	5,510.000	5,680.000	5,280.000	5,154.000	5,624.000	5,330.000	5,918.000	5,187.000	5,011.000	5,560.000	5,489.000	4,945.000	5,780.000	5,402.000	5,213.000	
December	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
RW - Raw Water	4,996.000	6,051.000	6,015.000	5,670.000	6,126.000	5,722.000	6,090.000	6,247.000	6,493.000	6,016.000	5,743.000	6,229.000	6,170.000	6,053.000	6,203.000	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	5,730.000	6,604.000	6,574.000	7,057.000	6,570.000	5,835.000	5,368.000	5,456.000	5,606.000	4,897.000	4,909.000	5,238.000	4,758.000	5,620.000	5,884.000	6,046.000

Brenda Royce

From: D'Apice, Helen (ENE) [Helen.DApice@ontario.ca]
Sent: Friday, February 10, 2012 11:10 AM
To: Brenda Royce
Subject: RE: XML Files for WTRS

Confirmation for 2011 daily water taking submission



[WT DATA](#) | [REPORTS](#) | [SEARCH WT DATA](#) | [ADMINISTRATION](#) | [USER PROFILE](#) | [CONTACT US](#) | [HELP](#) | [HOME](#) | [LOG](#)

Location: [WTRS / WT DATA / Input WT Record](#)

Water Taking Data submitted successfully.

Confirmation:

Thank you for submitting your water taking data online.

Permit Number: 2136-52DPP5

Permit Holder: THE CORPORATION OF THE TOWN OF PETAWAWA.

Received on: Feb 10, 2012 11:20 AM

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

Regards