



City of Summerside  
Waste Water Treatment Plant  
Report for 2013

**Date Submitted:** January, 2014

**Submitted by:** Summerside Waste Water Treatment Facility

**1. Introduction**

The City of Summerside operates a Treatment Facility that services approximately 13,000 people within the city. The plant is a tertiary BNR system that removes ammonia, phosphorus and nitrogen from the water before it leaves the facility. The facility is also responsible for three lift stations at Northumberland St, Eustane St, and Reid's Corner.

This report is prepared to give the Public a clear understanding of the facilities operation over the past year, 2013.

**2. Summary of Wastewater Effluent Data Operation**

The City of Summerside is required to meet 25mg/L of Carbonaceous Biochemical Oxygen Demand (CBOD) and 25 mg/L of Total Suspended Solids (TSS) with Faecal Coliform of 200 Most Probable Number (MPN) / 100ml.

**3. Summary of Discharge Notifications**

The City of Summerside Waste Water Treatment Plant reported 0 discharge notices to the PEI Department of Environment, Energy and Forestry (DEEF) in 2013.

**4. Major Operational Modifications**

The City of Summerside continues to produce a useable product that is being sold to Agro-Mart Services.

We Have made no major changes to the operating process in 2003.

**5. Major Construction Projects**

The City has put new impellers and wear ring on all pumps at our Eustane Street lift station that has improved the pumping capacity of this station and it was noticed that the station was not performing well.

**6. Summary of Biosolids Production**

The City of Summerside produced a total of 3,753 tons of product through their N-Viro system. See table 3 for the breakdown of product used.

**7. Summary of Flow Metering**

The flows at the City of Summerside WWTP is measured at a parshall flume and recorded on our SCADA system. See Appendix D for daily flow readings.

**Table 1: Summary of Wastewater Effluent Data**

Date Sampled	Samples taken After UV	ID #	BOD (mg/l)	TSS (mg/L)	Faecal (MPN/100mL)	Report Sent
Jan 09/13	Samples taken After UV	W130109001	<10	2		
Jan 23/13	Samples taken After UV	W130123001	<10	5	5	
Feb 06/13	Samples taken After UV	W130206002	<10	7		
Feb 14/13	Samples taken After UV	W130214001	<10			
Feb20/13	Samples taken After UV	W130220001	<10	6	2	
Mar 06/13	Samples taken After UV	W130306004	<10	6		
Mar 13/13	Samples taken After UV	W130313021	<10	7	13	
Mar21/13	Samples taken After UV	W130321004	<10	5	8	
April 03/13	Samples taken After UV	W130403001	<10	6		
April 17/13	Samples taken After UV	W130417001	<10	5	<2	
May 01/13	Samples taken After UV	W130501001	<10	6		
May 15/13	Samples taken After UV	W130515002	<10			
May 17/13	Samples taken After UV	W130517001	<10	8		
May 29/13	Samples taken After UV	W130529001	<10	5		
June 12/13	Samples taken After UV	W130612002	<10	3		
June 26/13	Samples taken After UV	W130626002	<10	6	2	
July 10/13	Samples taken After UV	W130710002	<10	4	<2	
July 24/13	Samples taken After UV	W130724003	<10	3	<2	
Aug 7/13	Samples taken After UV	W130807001	<10	2		
Aug 21/13	Samples taken After UV	W130821002	<10	3	2	
Sept 4/13	Samples taken After UV	W130904004	<10	2		
Sept 18/13	Samples taken After UV	W130918014	<10	4	5	
Oct 2/13	Samples taken After UV	W131002001	<10	1		
Oct 16/13	Samples taken After UV	W131016002	<10	1		
Oct 30/13	Samples taken After UV	W131030001	<10	1	<2	
Nov 13/13	Samples taken After UV	W131113002	<10	3		
Nov 27/13	Samples taken After UV	W131127007	<10	2	13	
Dec11/13	Samples taken After UV	W131211002	<10	4		
Dec 19/13	Samples taken After UV	W131219007	<10	4	<2	

Note: Tests were conducted independently by PEI Water Microbiology Laboratory

**Table 2: Summary of Discharge Notifications**

Note: No discharges in 2013

Date	Time	WW Type	Location	Period of Discharge	Total Discharge	Reason for Discharge
-	-	-	-	-	-	-

**Table 3: Summary of Biosolids Production Data:**

Sludge Total (Kg)	Lime Total (Kg)	Lime Dust Total (Kg)	Fournier Press % Solids Average	Final Product % Solids Average	Product Total (tonnes)
3,564,412	198,607	1,516,369	21.84%	66.36%	3,753

**Appendix C: Biosolids Quality Lab Reports**

**A&L Canada  
Laboratories Inc  
Test Results**

	Lime	Lime	Lime	Lime	Lime	Lime	Lime	Units
<b>Date of Sample</b>	1/24/2013	3/24/2013	4/25/2013	5/23/2013	7/25/2013	9/30/2013	11/25/2013	
<b>Lot #</b>	1	1	1	1	2	2	2	
<b>Lab Number</b>	287005	927009	1207014	1477003	217002	2737001	3297008	
Fecal Coliform	<3	<3	<3	<3	<3	<3	<3	<3MPN/g
Salmonella	<3	<3	5	NEGATIVE	NEGATIVE	NEGATIVE	NEGATIVE	mpn/4g

pH	9.5	7.3	7.5	7.5	7.7	8.3	8.7	
Volatile Solids	21.38	19.6	24.21	23.91	26.01	26.28	21.17%	
Ammonia (NH <sub>3</sub> -N)	2431.19	4085.4	3545.08	2748.2	1847.86	1465.41	1768.24ug/g	
TNV	72.5	72.8	69.8	67	65	66.3	71.8%	
Total Phosphorus (As P <sub>2</sub> O <sub>5</sub> )	1.46	1.35	1.65	1.52	1.62	1.49	1.12%	
Nitrogen (Total)	1.17	1.1	1.3	1.45	1.58	1.31	1.18%	
Phosphorus (Available P <sub>2</sub> O <sub>5</sub> )								%
Potassium (Soluble K <sub>2</sub> O)	0.41				0.38	0.33	0.29%	
Aluminium								ug/g
Boron	18	21.2	16.6	11.25	17.01	15.26	7.76ug/g	
Calcium	359466.8	292554.9	299555.2	300165.2	296505	312510	273075ug/g	
Copper	74.35	69.9	75.1	76.65	74.65	70.55	61.55ug/g	
Iron								ug/g
Magnesium	3365.5	4154.9	3853.55	3966.1	3348	3281	3098.5ug/g	
Manganese	458.85	432.8	413.35	380.3	296.45	315.6	254.5ug/g	
Phosphorus								ug/g
Potassium								ug/g
Sodium								ug/g
Sulphur	1717.9	1804.25	2109.35	2137.95	2042	1985.5	1544.5ug/g	
Zinc	68.15	54.55	63.4	72.55	70.1	74.1	68.5ug/g	
<b>Organic Matter @ 550deg C</b>								
<b>Moisture (as received)</b>	21.38	19.6	24.21	23.91	26.01	26.28	21.17%	%
<b>Total Neutralizing Value (CCE)</b>								
<b>Sieve #10 (% Passing)</b>	90.4	96.4	97.4	88.8	93.6	97.1	95.9%	
Sieve #20 (% Passing)								%
Sieve #60 (% Passing)	74.4	84	78.6	69.2	79.3	82	84.4%	
Sieve #80 (% Passing)								%
<b>Sieve #100 (% Passing)</b>	71.6	83.1	76	67	75.6	79.1	82.4%	
<b>Calcium</b>					296505	312510	273075	
<b>Magnesium</b>					3348	3281	3098.5ug/g	
Arsenic	BDL	1.4BDL		1BDL	BDL	BDL	BDL	ug/g
Cadmium	BDL	BDL	BDL	BDL	BDL	BDL	BDL	ug/g
Chromium	2.4	3.2	3.6	3.6	4.43	4.4	4.91ug/g	
Cobalt	BDL	BDL	BDL	BDL	BDL	BDL	BDL	ug/g
Copper	74.35	69.9	75.1	76.65	74.65	70.55	61.55ug/g	

Lead	7.05	6.05	2	4.25	7.23	8.09	7.32ug/g
Mercury	0.55	0.23	0.14	0.1	0.13	0.11	0.14ug/g
Molybdenum	BDL	BDL	BDL	BDL	BDL	BDL	ug/g
Nickel	1.1	1.65	2.15	3.3	2.45	3.04	3.45ug/g
Selenium	BDL	BDL	BDL	BDL	BDL	BDL	ug/g
Zinc	68.15	54.55	63.4	72.55	70.1	74.1	68.5ug/g

testing performed by  
A&L Laboratories  
ug/g equals parts  
per million

SWPCC Laboratory Annual Report 2013							
Date	Influent	Final Effluent					
	Flow m <sup>3</sup>	TSS mg/L	COD mg/L	NH <sub>3</sub> mg/L	NO <sub>3</sub> mg/L	PO <sub>4</sub> -P mg/L	PO <sub>4</sub> mg/L
Jan 2013	7873	10	39	0.412	1.584	1.438	0.840
Feb 2013	7906	12	49	1.231	1.190	0.441	0.918
Mar 2013	9252	10	41	0.377	1.523	0.164	0.553
April 2013	8423	6	31	0.174	2.172	0.184	0.542
May 2013	7856	7	34	1.520	1.524	0.289	0.849
June 2013	7859	4	29	0.127	1.912	0.279	0.640
July 2013	7595	4	31	0.111	2.213	0.362	0.695
Aug 2013	7251	3	29	0.089	2.464	0.351	0.718
Sept 2013	7094	2	26	0.509	2.960	0.543	1.004
Oct 2013	6661	2	27	0.092	4.770	2.462	0.505
Nov 2013	6481	2	32	0.064	4.172	0.148	0.624
Dec 2013	7443	2	32	0.142	3.859	0.111	0.391
Average	7641	5	33	0.404	2.529	0.564	0.690
Target		25	25 (cBOD)	5	10		1

**Appendix D: Daily Flow Meter Average Monthly Readings**



