



City of Summerside
Waste Water Treatment Plant
Report for 2014

Date Submitted: January, 2015

Submitted by: Summerside Waste Water Treatment Facility

1. Introduction

The City of Summerside operates a Treatment Facility that services approximately 15,000 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, 2014.

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 2014.

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 2014.

5. Major Construction Projects

The City has had no major upgrades to it operation we continue to maintain good quality maintenance on the existing equipment to insure its proper operation.

6. Summary of Biosolids Production

The City of Summerside produced a total of 3800 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.

8. Summary of Small Lift Station Operation

The City of Summerside Municipal Works department is responsible for operation and maintenance of the following small sewer lift stations within the City:

Granville Street Lift Station
Red Bridge Lift Station
Crozier Drive Lift Station
Whitecap Lift Station
Wedge Drive Lift Station
Harbour Drive Lift Station
MacKenzie Drive Lift Station
Briggs Street Lift Station

During 2014 the lift stations listed above all had their wet wells cleaned and submersible pumps serviced and inspected. No discharges from these lift stations were observed in 2015.

Table 1: Summary of Wastewater Effluent Data

Date Sampled	Samples taken After UV	ID #	cBOD (mg/l)	TSS (mg/L)	Faecal (MPN/100mL)	Report Sent
Jan07/2014	After UV Lights	W140108004	<10	3	<2	
Jan22/2014	After UV Lights	W140122001	<10	4		
Feb05/ 2014	After UV Lights	W140205001	<10	6		
Feb20/2014	After UV Lights	W140220003	<10	3	<2	
March6/2014	After UV Lights	W140306001	<10	4		
March19/2014	After UV Lights	W140319002	<10	3	<2	
April2/2014	After UV Lights	W140402003	<10	2	<2	
April17/2014	After UV Lights	W140417004	<10	2		
April30/2014	After UV Lights	W140430001	<10	2		
May14/2014	After UV Lights	W140514001	<10	3	<2	
May28/2014	After UV Lights	W140528001	<10	3	<2	
June11/2014	After UV Lights	W140611002	<10	3	<2	
June25/2014	After UV Lights	W140625001	<10	4		
July9/2014	After UV Lights	W140709013	<10	1	<2	
July23/2014	After UV Lights	W140723003	<10	2		
Aug6/2014	After UV Lights	W140806002	<10	1		
Aug20/2014	After UV Lights	W140820001	<10	3	<2	
Sept3/2014	After UV Lights	W140903001	<10	6		
Sept17/2014	After UV Lights	W140917005	<10	3		
Oct1/2014	After UV Lights	W141001002	<10	5	<2	
Oct15/2014	After UV Lights	W140015002	<10	2	<2	
Oct29/2014	After UV Lights	W141029001	<10	<1	<2	
Nov13/2014	After UV Lights	W141113002	<10	1	<2	
Nov26/2014	After UV Lights	W141126001	<10	3		
Dec4/2014	After UV Lights	W141204001	<10			
Dec10/2014	After UV Lights	W141210004	<10	8	<2	
Dec 30 2014	After UV Lights	W141230002	<10	3	5	

Note: Tests were conducted independently by PEI Water Microbiology Laboratory

Table 2: Summary of Discharge Notifications

Note: No discharges in 2014

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)
4,620,340	261,640	2,041,729	21.73	68.35	3800

Appendix C: Biosolids Quality Lab Reports

A&L Canada Laboratories

Inc Test Results

	Lime	Lime	Lime	Lime	Lime	Lime	Units	
	31/03/2	05/01/2	30/06/2	28/08/2	01410/28/2014	12/24/2014		
Date	014	014	014	014	10/28/2014	12/24/2014		
Lot Number	1	1	1	1	2	2		
Lab Number	927001	1217003	1817009	2407022	303702	358700		
Fecal Coliform	<3	<3	<3	<3	<3	<3	MPN/g	
Salmonella	NEGITIV E	NEGITIV E	NEGITIV E	NEGITIV E	NEGITI VE	NEGITI V	Empn/4g	
pH	7.9	9.5	8.3	9.6	9	9.4		
Volatile Solids	13.99	12.59	17.55	20.24	24.29	22.86%		
Ammonia (NH ₃ -N)	3043.8	1176.41	2432.18	1047.45	9	2199.3	ug/g	
TNV	83	78.8	76.3	68	24.29	68.25%		
Total Phosphorus (As P ₂ O ₅)	0.84	0.77	1.01	1.09	1.3	1.28%		
Nitrogen (Total)	0.42	0.8	1.09	1.29	1.35	1.25%		
Phosphorus (Available P ₂ O ₅)						1%		
Potassium (Soluble K ₂ O)	0.34	0.35	0.27	0.27	0.38	0.3%		
Aluminium						1114	ug/g	
Boron	18.03	19.57	13.14	13.88	17.8	7.53	ug/g	
Calcium	329500	335450	316140	312300	271934	.3269340	ug/g	
Copper	39.85	45.1	41.88	75.75	95.26	73.95	ug/g	
Iron						2020.5	ug/g	
Magnesium	2814	2915	2978.5	3293.5	3556.5	8	4007.5	ug/g
Manganese	303.3	347.9	258	315.7	290	293.9	ug/g	
Phosphorus						5605	ug/g	
Potassium						2593	ug/g	
Sodium						534.5	ug/g	
Sulphur	1135.5	1472.5	1849.5	2011	2441.4	5	1886.5	ug/g
Zinc	31.21	36.61	43.68	65.2	97.5	69.6	ug/g	
Organic Matter @ 550deg C Moisture (as received)	13.99	12.59	17.55	20.24	24.29	22.86%		
	73.8	86.58				25.41%		

Total Neutralizing Value

(CCE)

Sieve #10 (%)

Passing)

98.7 98.2 97.8 97.7 97.5 99.1%

Sieve #20 (%)

Passing)

%

Sieve #60 (%)

Passing)

89.5 83.7 82.5 82.9 77.5 85.2%

Sieve #80 (%)

Passing)

%

Sieve #100 (%)

Passing)

85.6 78.4 77.2 79.8 75.4 80.41%

271934

Calcium

329500 335450 3161140 312300 .3269340

3556.5

Magnesium

2814 2915 2978.5 3293.5 8 4007.5ug/g

Arsenic BDL BDL BDL 1.5 1.79BDL ug/g

Cadmium BDL BDL BDL BDL BDL BDL ug/g

Chromium 4 3.75 3.9 8.39 5.39 5.12ug/g

Cobalt 4.42BDL BDL BDL BDL BDL ug/g

Copper 39.85 45.1 41.88 75.75 95.26 73.95ug/g

Lead 4.64 7.15 5.33 7.05 8.09 5.05ug/g

Mercury BDL BDL BDL 0.12 0.16 0.14ug/g

Molybdenum BDL BDL BDL 1.3 1.4 1.3ug/g

Nickel 1.91 2.26 2.25 2.91 3.59 3.07ug/g

Selenium BDL BDL BDL BDL BDL BDL ug/g

Zinc 31.21 36.61 43.68 65.2 97.76 69.6ug/g

testing performed by A&L

Laboratories

ug/g equals parts

per million

SWPCC Laboratory Annual Report 2014							
Date	Influent	Final Effluent					
	Flow m ³	TSS mg/L	COD mg/L	NH ₃ mg/L	NO ₃ mg/L	PO ₄ -P mg/L	PO ₄ mg/L
Jan 2014	9767	2	28	0.6736	2.430	0.242	1.223
Feb 2014	8751	2	26	0.789	1.973	0.158	0.980
Mar 2014	8521	2	22	1.161	1.655	0.150	0.922
April 2014	16772	3	21	0.807	1.502	0.143	1.039
May 2014	12454	3	22	0.289	1.508	0.201	1.026
June 2014	11931	3	20	0.086	1.820	0.372	1.513
July 2014	8720	3	27	0.548	2.015	1.521	1.625
Aug 2014	8038	4	31	0.316	2.634	2.426	2.568
Sept 2014	7356	4	20	0.589	2.858	2.726	5.240
Oct 2014	7236	2	25	0.080	4.301	2.802	2.543
Nov 2014	8461	3	19	0.067	3.583	1.243	20.757
Dec2014	12622	4	17	0.065	2.114	0.698	1.885
Average	10053	3	23	0.456	2.366	1.057	3.443
Target		25	25(c BOD)	5	10		

Appendix D: Daily Flow Meter Average Monthly Readings



