October 23, 2015

Ray Ritcey, Chair
Halifax Water
Halifax, Nova Scotia

The regular meeting of the Halifax Water Board will be held on Thursday, October 29, 2015 at 9:00 a.m. in the Boardroom at 450 Cowie Hill Road, Halifax.

AGENDA

In Camera

1C Approval of Minutes of In-Camera Meeting held on Thursday, September 24, 2015

2C Business Arising from Minutes

In Camera Information Items

IC-I Labour Relations Matter

Regular Meeting

1. a) Ratification of In-Camera Motions
   b) Approval of the Order of Business and Approval of Additions and Deletions

2. Approval of Minutes of Regular Meeting held on Thursday, September 24, 2015

3. Business Arising From Minutes
   a)

4. Operating Results for the Six Months Ended September 30, 2015

5. Capital Projects:

5.1 2015/16 SCADA Master Plan Implementation Program..... $500,000

6. Stormwater Rate Design Hearing

7. Date of Next Meeting

Information Reports

1-I Operations and Financial Monthly Update
2-I Capital Budget Approvals to Date - 2015/16 *(Report unavailable)*
3-I Bank Balance
4-1 Cost Containment
5-I Pension Plan Investment Performance 2nd Quarter, 2015
6-I Capital Cost Contribution - Financial Status Report for Fiscal Year Ended March 31, 2015

Original signed by James Spurr

James G. Spurr
Secretary

HALIFAX REGIONAL WATER COMMISSION
MINUTES

September 24, 2015

PRESENT:	Commissioner Ray Ritcey, Chair Commissioner Russell Walker, Vice Chair Commissioner Don Mason Commissioner David Hendsbee Commissioner Darlene Fenton
REGRETS:	Commissioner Barry Dalrymple Commissioner Mike Savage Commissioner Richard Butts
STAFF:	Carl Yates, General Manager, HRWC Cathie O'Toole, Director, Finance & Customer Service, HRWC James Spurr, Legal Counsel, HRWC Lorna Skinner, Administrative Assistant, HRWC

TABLE OF CONTENTS

CALL TO ORDER

The Chair called the regular meeting to order at 9:03 a.m. in the Board Room of the HRWC, 450 Cowie Hill Road. The Board moved In Camera at 9:03 and the regular meeting reconvened at 9:21 a.m. At this time, James Spurr and Cathie O'Toole re-joined the meeting.

1.a) RATIFICATION OF IN CAMERA MOTIONS

MOVED BY Commissioner Hendsbee, seconded by Commissioner Mason that the Halifax Regional Water Commission Board ratify the following In Camera motions:

MOVED BY Commissioner Ritcey, seconded by Commissioner Mason that the Halifax Regional Water Commission Board approve the In Camera minutes of July 30, 2015.

MOVED BY Commissioner Mason, seconded by Commissioner Walker that the Halifax Regional Water Commission Board appoint the Corporate Counsel for HRWC to act as Secretary to the Commission with duties separate from those of the Treasurer.

MOTION PUT AND PASSED.

1.b) APPROVAL OF THE ORDER OF BUSINESS AND APPROVAL OF ADDITIONS AND DELETIONS

MOVED BY Commissioner Mason, seconded by Commissioner Walker that the Halifax Regional Water Commission Board approve the order of business and approve additions and deletions.

MOTION PUT AND PASSED

2.a) APPROVAL OF MINUTES – July 30, 2015

MOVED BY Commissioner Ritcey, seconded by Commissioner Hendsbee that the Halifax Regional Water Commission Board approve the minutes of June 18, 2015.

MOTION PUT AND PASSED.

2.b) APPROVAL OF MINUTES – August 27, 2015 (Special Meeting)

MOVED BY Commissioner Walker, seconded by Commissioner Fenton that the Halifax Regional Water Commission Board approve the minutes of the special meeting held on August 27, 2015.

MOTION PUT AND PASSED.

3. BUSINESS ARISING FROM MINUTES

a) Commissioner Ritcey requested that, with regard to the Item #5.1, CMMS Phase 2

Implementation, updates to the Board be more frequent that annually. Commissioner Mason suggested another vehicle for receiving updates and bringing them to the Board would be through the Environment, Safety and Capital Project Planning Committee.

b) Commissioner Ritcey requested that with regard to Item #6, Corporate Balanced Scorecard (CBS), that an Operational Indictor (OI) linked to capital work be included on a go-forward basis. Mr. Yates agreed to incorporate with the 2016/17 CBS.

c) Commissioner Ritcey inquired if Ms. O'Toole had sent him the policy of the Nova Scotia Utility and Review Board (NSUARB) with regard to the netting of capital projects. Ms. O'Toole responded that she had not as she was waiting for relevant information from the Director of Engineering and Information Services.

4.1 & 4.2 OPERATING RESULTS FOR THE THREE MONTHS ENDED JUNE 30, 2015 and OPERATING RESULTS FOR THE FOUR MONTHS ENDED JULY 31, 2015

Reports dated September 16, 2015 were submitted.

Cathie O'Toole informed the Board that at July 31, 2015, there was a cash balance of $32.3M. It has increased since then and as at September 23, 2015, there was a cash balance of $39.5M. This will, however, change significantly by September 25, 2015, at which time a balance of $29M is anticipated. This is due to a $7M debt payment to be made to HRM for the Harbour Solutions Project as well as the processing of the retroactive payroll payment based on the settlement of the Collective Agreement.

Capital Assets Under Construction are $53.6M. Several major projects are underway including the Lakeside Pumping Station project ($21.7), the Bedford West Collection System ($5.4M), the Cow Bay Road Deep Storm Sewer ($4.6M). Commissioner Ritcey asked if the amount of $53.6M is close to what was budgeted. Ms. O'Toole stated that it is.

Ms. O'Toole stated that a net surplus is projected. As of July 31, 2015 the surplus was $1.6M.

Water consumption is still below what was projected; rates were based on a consumption decrease of 3%; currently consumption on a rolling twelve month basis is down by 4.5%. Some of the decrease in consumption is offset by customer growth.

Ms. O'Toole informed the Board that Halifax Water is in compliance with the debt service ratio imposed by HRM.

5. CAPITAL PROJECTS

5.1 J.D. Kline WSP – Filter Media and Underdrain Replacement

A report dated September 11, 2015, was submitted.

MOVED BY Commissioner Mason, seconded by Commissioner Walker that the

Halifax Regional Water Commission Board approve additional funding of $1,000,000 for the J.D. Kline WSP – Filter Media and Underdrain Replacement project for a total estimated cost of $1,300,000 for Phase 1 of the project.

MOTION PUT AND PASSED.

5.2 Meter Renewal and Installation Program

A report dated September 11, 2015, was submitted.

Commissioner Walker inquired if a resident had concerns about the emission of radio frequencies, would they have the option to choose a different type of meter. Mr. Yates responded Halifax Water does not offer that option; however, other utilities have allowed residents to choose a different type of meter but they charge the resident a significant fee to read the meter (e.g., $100.00).

MOVED BY Commissioner Mason, seconded by Commissioner Hendsbee that the Halifax Regional Water Commission Board approve the 2015/16 Meter Renewal and Installation Program, at an estimated cost of $1,000,000.

MOTION PUT AND PASSED.

5.3 Intercolonial Street Sewer Separation Funding Increase

A report dated September 16, 2015, was submitted.

MOVED BY Commissioner Mason, seconded by Commissioner Walker that the Halifax Regional Water Commission Board approve an increase in capital funding for the Intercolonial Street Sewer Separation Project in the amount of $392,000 to install 101m of 600mm dia. sewer pipe for a revised project cost of $922,000.

MOTION PUT AND PASSED.

5.4 Capital Project Spending Summary – 2014/15

A report dated September 16, 2015, was submitted.

Cathie O'Toole stated that this is an annual filing requirement of the NSUARB and the format of the filing has been evolving over the past few years. Last year, when the same report was filed for the 2013/14 Capital Spending Summary, the NSUARB's Decision Letter noted that they were very pleased with the reporting/explanations of projects over or under budget. They also noted that in future, they would like a listing of projects that were either deferred or cancelled. Therefore, that was included in the 2014/15 filing.

After the Board approves the Spending Summary, it will be filed with the NSUARB. The NSUARB will likely respond with some information requests on various projects. Once those requests have been responded to, it is likely the NSUARB will approve the Summary. In most cases, these projects have already been closed out and added to Utility Plant in

Service and were part of the audited financial statements as at March 31, 2015. Those financial statements will also be filed with the NSUARB as part of a financial information filing on September 30, 2015. Ms. O'Toole also stated that there is a Capital Funding Policy that the Board approved in 2014.

Commissioner Ritcey inquired as to why Halifax Water is allowed to allocate funding from one capital project to another when it is not acceptable practice in the private sector. Ms. O'Toole responded that there are distinct factors that separate municipal utilities from for-profit utilities. One factor is that municipal utilities are not permitted to have any interplay between capital and operating in that capital funds cannot be used for an operating purpose. As well, when the NSUARB approves the Capital Budget, there is a funding plan that exactly balances to the Capital Budget. When a capital project is closed out, there may be debt capacity left that can be used for the following year on another capital project. Ms. O'Toole added that under the Municipal Finance Corporation (MFC) rules, Halifax Water cannot debenture for operating costs and generally don't debenture for capital projects until they are completed. There are four aspects of oversight in that the NSUARB approves the capital budget, the inclusion of capital within the rate base when projects are completed, the specific debenture issuance and the year-end financial results.

Commissioner Hendsbee inquired as to how accurate the estimations are for capital projects. Mr. Yates responded that generally, the estimations are relatively close; if a project is within 5% of its estimated cost, this is considered to be exceptional. There is a concerted effort to ensure large capital projects fall within this 5% variance.

MOVED BY Commissioner Walker, seconded by Commissioner Mason that the Halifax Regional Water Commission Board approve the individual project over expenditures as identified with *"Capital Project Spending Summary, April 1, 2014 – March 31, 2015"* and direct staff to forward the subset of project "over $250,000" to the NSUARB for information and approval.

MOTION PUT AND PASSED.

6.1 HALIFAX REGIONAL WATER COMMISSION EMPLOYEES' PENSION PLAN FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2014

A report dated September 11, 2015, was submitted.

Commissioner Ritcey stated that it would appear that the Pension Plan will face increasing deficiencies which will result in requests for further special payments in the future. Ms. O'Toole stated that the financial statements as at December 31, 2014, do not reflect the Pension Plan redesign that was negotiated as part of the Collective Agreement. That re-design will take effect January 1, 2016. Under that redesign, there is a 50% likelihood that the Pension Plan will be fully funded within ten years. However, there has also been a recent deterioration in some of the economic conditions which may mean that the valuation to be done in 2016 after the Pension Plan redesign is approved may not show as much of the improvement to the Pension Plan performance that was hoped for.

MOVED BY Commissioner Walker, seconded by Commissioner Mason that the Halifax Regional Water Commission Board approve the Audited Financial Statements for the Halifax Regional Water Commission Employees' Pension Plan for the year ended December 31, 2014.

MOTION PUT AND PASSED.

6.2 CONTRACT EXTENSION FOR AUDITORS, GRANT THORNTON

MOVED BY Commissioner Walker, seconded by Commissioner Mason that the Halifax Regional Water Commission Board approve a one-year extension of the contract of the Halifax Regional Water Commission's Auditors, Grant Thornton, LLB.

MOTION PUT AND PASSED.

7. 2015 DEBENTURE

A report dated September 18, 2015, was submitted.

Cathie O'Toole informed the Board that Halifax Water will be borrowing $28.3M. MFC advises that the interest cap will be at 5.5% but in all likelihood the Debenture will be financed at a lower rate than that. As well, a small balloon payment will be re-financed. After the Board approves the Debenture, a commitment letter will be sent to MFC. There will also be a submission to the NSUARB to have the debt approved.

MOVED BY Commissioner Walker, seconded by Commissioner Mason that the Halifax Water Board:

1. **Approve the attached borrowing resolution that HRWC participate in the Fall 2015 Municipal Finance Corporation (MFC) Debenture Issue in the amount of $28,307,026. The borrowing will be amortized over a 20 year period, with a ten year term, with an all-inclusive rate not to exceed 5.5%.**

2. **Approve the refinancing of $2,500,000 balloon payment for the remaining 10 year term with an all-inclusive rate not to exceed 5.5%.**

MOTION PUT AND PASSED.

8. DATE OF NEXT MEETING

The next meeting is scheduled for October 29, 2015.

The meeting was adjourned at 10:25 a.m.

James G. Spurr
Secretary

Commissioner Ray Ritcey
Chair

The following Information Items were submitted:

1-I Operations and Financial Monthly Update
2-I Capital Budget Approvals to Date 2015/16
3-I Bank Balance
4-I 2014/15 Corporate Balanced Scorecard - Results

Halifax Water
Halifax Regional Water Commission

ITEM # 4
HRWC Board
October 29, 2015

TO: Ray Ritcey, BComm, MBA, CPA, CGA, Chair, and Members of the Halifax Regional Water Commission Board

SUBMITTED BY: Cheryl M. Little, BBA, CPA, CMA, Controller/ Cathie O'Toole, MBA, CPA, CGA, Director of Finance and Customer Service

APPROVED: Carl Yates, M.A.Sc., P.Eng., General Manager

DATE: **October 21, 2015**

SUBJECT: **Operating Results for the six months ended September 30, 2015**

INFORMATION REPORT

ORIGIN

Financial Statements

BACKGROUND

The Board is required to review periodic financial information throughout the year.

DISCUSSION

Attached are the operating results for the first six (6) months of the 2015/16 fiscal year, period ending September 30, 2015. Operating results for the first five months of the 2015/16 fiscal year, period ending August 31, 2015 are also attached but are not discussed in detail. The statements reflect direct operating costs by department and allocations among water, wastewater and stormwater for common costs shared across all the services provided by Halifax Regional Water Commission (HRWC).

Balance Sheet - Page 1

The cash balance of $28.4 million is up $7.6 million from the prior year and down $5.0 million from the previous month.

The Customers & Contractual Accounts Receivable balance has increased $2.9 million to $31.0 million, due to the May 1, 2015 increase in customer rates approved by the Nova Scotia Utility and Review Board (NSUARB). The customer receivables balance also includes the Right of Way charge that HRWC is billing property owners on behalf of Halifax Regional Municipality

(HRM). The amounts receivable from HRM have decreased $0.6 million to $13.6 million. The liquidity on the balance sheet (ratio of current assets divided by current liabilities) is 2.91, up from the ratio of 2.41 at the same time last year.

Plant in Service assets net of Accumulated Depreciation is $1.0 billion and is $4.2 million higher than at this time last year. Capital Assets Under Construction is up $24.1 million to $59.3 million. The following table highlights the major projects currently underway:

Capital Assets Under Construction	
	Cumulative '000
Lakeside Pumping Station Diversion	**$22,020**
Bedford West Collection System CCC	**$6,760**
Cow Bay Road Deep Storm Sewer	**$5,544**
All other projects	**$24,989**
Total	**$59,313**

Figures used in the various tables throughout the report may contain differences due to Excel rounding.

Trade liabilities of $10.4 million have decreased $2.6 million when compared to the prior year. Liabilities to HRM increased by $1.4 million to $5.5 million. The amount owing to HRM includes the accrual for the annual Dividend ($2.3 million accrued towards the $4.5 million annual payment), the accrued balance of the valve box and manhole adjustment work ($2.1 million), the Stormwater Right of Way customer billings ($0.6 million), plus other miscellaneous operating and capital accruals.

Long Term Debt is up $7.3 million from last year, with new debt of $28.2 million offset by repayments of $20.9 million. New debt in the amount of $28.3 million plus a refinancing of $2.5 million will be obtained with MFC's fall debenture. The debt service ratio, which is the ratio of debt related costs (including principal and interest payments and amortization of debt discount) divided by operating revenue, is an indicator of the ability to make debt payments. The debt service ratio is currently 21.3%, a slight increase from 21.0% last year. This is well below the maximum 35% ratio allowed under the blanket guarantee agreement with HRM.

Total Debt by Service		
	2015/16 '000	2014/15 '000
Water	**$64,953**	$60,524
Wastewater	**$144,992**	$147,839
Stormwater	**$8,896**	$3,152
Combined	**$218,842**	$211,515

Debt Servicing Ratio by Service		
	YTD Debt Servicing Cost Ratio	
	2015/16	2014/15
Water	**19.0%**	18.4%
Wastewater	**24.1%**	24.2%
Stormwater	**14.9%**	11.8%
Combined	**21.3%**	21.0%

The cumulative Operating Surplus of $2.9 million at the beginning of the fiscal year has grown to $8.3 million with the year-to-date profit of $5.3 million at September 30, 2015.

Consolidated Income Statement - Page 2

Consolidated operating revenue of $66.7 million is $1.1 million (1.6%) greater than revenue reported for the same year-to-date period last year. Consolidated operating expenses of $46.4 million are $1.6 million (3.3%) lower than the same period last year.

Summarized Consolidated Operating Results				
	Actual YTD 2015/16 '000	Actual YTD 2014/15 '000	$ Change	% Change
Operating Revenue	**$66,713**	$65,637	$1,076	1.6%
Operating Expenses	**$46,437**	$48,019	($1,582)	-3.3%
Operating Profit (Loss)	**$20,276**	$17,618	$2,658	15.1%
Non Operating Revenue	**$1,555**	$1,441	$115	8.0%
Non Operating Expenditure	**$16,487**	$15,964	$522	3.3%
Net Surplus (Deficit)	**$5,345**	$3,095	$2,251	72.7%

On May 1, 2015 the base rates for Water increased between 1% and 8.3% depending on meter size. The monthly charge for small residential meters increased from $12.00 to $13.00 which was the greatest percentage increase; the changes in the monthly charge for larger meters were larger amounts but a smaller percentage increase. There is no change in the base rates for Wastewater.

The Water Consumption rate increased 15.6% to $0.845 per cubic meter, while the Wastewater discharge rate decreased 1.2% to $1.638 per cubic meter. The combined effect is a 3.9% increase in volumetric rates. The increase in the volumetric rates is expected to be somewhat offset by a decrease in water consumption, which is budgeted at 3.0%.

New Stormwater rates were not requested and remain at $0.149 per square meter of impervious area or $33.39 per residential property. A summary of the Volumetric and Base Charges follows:

Summary of Rate Changes				
	Effective May 1/15	Effective April 1/14	$ Change	% Change
Volumetric Charges (per m3)				
Water	**0.845**	0.731	0.114	15.6%
Wastewater	**1.638**	1.658	- 0.020	-1.2%
Combined	**2.483**	2.389	0.094	3.9%
Base Charges (per year)				
Water	**Varies by meter size**		Varies	1.0%-8.3%
Wastewater	**Varies by meter size**		No Change	0.0%
Stormwater - Residential	**33.39**	33.39	No Change	0.0%
Stormwater - HRM ROW	**41.00**	39.00	2.00	5.1%

The NSUARB also approved increases for Private Fire Protection, Bulk Water and other charges. The Public Fire Protection paid by HRM has decreased by $1.1 million to $8.0 million. The rate structure for Stormwater Service will be reviewed in a public hearing before the NSUARB in February, 2016.

The Net Profit for the year is $5.3 million, an improvement of $2.3 million from the same time in the prior year. The budget for the year, approved at the July 30, 2015 Board meeting, was for a loss of $4.4 million. The positive year-to-date results reflect the normal low level of expenses early in the fiscal year as projects are initiated, as well as the delayed initiation of activities due to the labour disruption. Reduced payroll expenses during the period of the labour disruption were offset by additional costs incurred to maintain operations. Some departments saw a reduction in overall expenses as unionized employees were not working and/or non-union employees were reassigned to other areas. Others departments incurred greater costs through the combination of reassigned staff and allocations of labour disruption management costs.

The following table shows operating results for each service.

Year to Date Operating Results by Service		
	2015/16	2014/15
	'000	'000
Water	**$1,085**	$430
Wastewater	**$2,965**	$1,779
Stormwater	**$1,295**	$885
Net Surplus (Deficit)	**$5,345**	$3,095

Results for the year to date have been reviewed in conjunction with plans for the remainder of the year. An update to the Forecast reflects the change from the budgeted loss of $4.4 million to a loss of $1.4 million, a total change of $3.0 million. Reduced costs are anticipated in all Services.

Water Operations - Page 3

Water Operations show a profit of $1.1 million, compared to a profit of $0.4 million for the previous year at this time. Metered Sales revenue is up $1.7 million (8.5%). Year-to-date billed consumption is down 4.0% compared to the prior year. On a 12 month rolling basis, billed consumption is down 4.9%. Factoring in the accrued balance and seasonal variations, consumption is only 0.5% below the expected total for the first six months of the year.

Metered Sales Revenue consists of consumption and base charge components. Water consumption revenue is up 10.7% over the prior year, which reflects the increase in the water rate and the decline in consumption. Base Charge revenue is up 6.3%, reflecting the rate increase and a small increase in customers.

There is a reduction in Fire Protection revenue as the NSUARB lowered the annual charge that is paid by HRM. Total Water Operating revenue is up $1.3 million to $26.6 million.

Operating Expenses have increased by $0.2 million (1.2%) to $18.5 million. Water Supply & Treatment, Transmission & Distribution, and Customer Service show the greatest increases over the prior year. The increases are largely attributable to reassigned staff and allocation of costs incurred during the labour disruption. Financial Revenue and Expenses are higher than the previous year, reflecting higher levels of debt and cash balances.

Forecast results for Water Operations show a greater loss than budget. The revenue forecast shows a decline in Customer Late Pay charges reflecting the actual allocation of this revenue between services. A correction to the calculation of Private Fire Protection resulted in lowering this item by $0.4 million. An increase to the Long Term Debt Interest expense of $0.4 million also reflects a correction of the allocation of costs between services. An improvement in Transmission and Distribution costs of $0.5 million offset the other reductions.

Wastewater Operations - Page 4

Wastewater Operations show a profit of $3.0 million, compared to a profit of $1.8 million for the previous year at this time. Wastewater revenue has decreased $0.6 million over the prior year, with Metered Sales accounting for the decrease.

Wastewater Metered Sales consists of a volumetric discharge component and a base charge component. For most customers, the discharge component is based on the metered water consumption, and the volumes and revenue reflect the decline in water consumption. The discharge rate decreased 1.2% as of May 2015, after increasing 28.9% the previous year. The billed discharge volume to date has declined 4.0%, while on a rolling 12 month basis, the billed discharge volume has declined 3.9%. Factoring in the accrued balance and seasonal variations, consumption is 1.2% below the expected total for the first six months of the year. Base charge rates have not increased but base charge revenue is ahead of budget. Other revenue categories are showing mixed results with some categories ahead of budget and others behind.

Operating expenses have decreased $1.6 million (6.0%) as compared to the previous year. Most categories are below the prior year-to-date actuals and current year budget. Wastewater Treatment Plant costs are down $0.9 million.

Financial Revenue is up slightly compared to the prior year. Financial Expenses are on par with the prior year and slightly below budget.

Updates to the forecast indicate a significant improvement from a budgeted loss of $2.9 million to a loss of $0.5 million. There is an improvement in Customer Late Pay charge revenue, reductions in Wastewater Collection and Wastewater Treatment expenses, and reductions in Long Term Debt Interest and Principal expenses.

Stormwater Operations - Page 5

Stormwater Operations show a profit of $1.3 million, an improvement over the profit of $0.9 million for the same period last year. Stormwater Revenue is up $0.4 million from the prior

year. Operating expenses are down $0.2 million over the prior year with Stormwater Collection costs accounting for most of the change.

Financial Expenses are up $0.2 million (35.7%) as a result of debt costs associated with Stormwater capital projects being charged directly to the Stormwater Service. Financial Expenses for Stormwater will continue to grow as further infrastructure upgrades are put into service.

The Forecast for Stormwater is for a profit of $1.2 million, an improvement resulting from higher Stormwater Site Generated revenue and slightly lower expenses, offset by slightly higher Long Term Debt Interest and Principal expense.

Regulated and Unregulated Operations - Page 6

Activities regulated by the NSUARB show a profit of $4.9 million, ahead of the $2.8 million profit for the same period last year. The improvement is attributable to increased revenues of $1.1 million with the rate increase that took effect in May. Operating Expenses have decreased by $1.4 million over the prior year and Financial Expenses increased $0.5 million.

Unregulated activities show a profit of $0.5 million, an increase from the profit of $0.3 million for the prior year. Unregulated revenue is down slightly from the prior year. An improvement in Unregulated Wastewater Treatment expenses is a result of lower costs at the De-watering Facility attributable to Unregulated Activities.

Results by Activity		
	2015/16	2014/15
	'000	'000
Regulated Activities	**$4,872**	$2,801
Unregulated Activities	**$473**	$294
Net Surplus (Deficit)	**$5,345**	$3,095

ATTACHMENT

Unaudited Operating Results for the six (6) months ended September 30, 2015
Unaudited Operating Results for the five (5) months ended August 31, 2015

HALIFAX WATER
UNAUDITED BALANCE SHEET
AS OF SEPTEMBER 30, 2015

	2015 '000	2014 '000
ASSETS		
Cash	$28,376	$20,807
Amounts Receivable		
Customers & Contractual	$31,039	$28,133
Halifax Regional Municipality	$13,638	$14,264
Materials & Supplies	$1,106	$1,403
Prepaid Expenses	$393	$272
	$74,551	$64,880
Regulatory Asset	$3,692	$3,868
Plant in Service - Water	$567,439	$547,055
Plant in Service - Wastewater/Stormwater	$761,776	$746,614
Less: Accumulated Depreciation - Water	$155,988	$146,688
Accumulated Depreciation - Wastewater/Stormwater	$174,279	$152,388
	$1,002,641	$998,461
Assets Under Construction	$59,313	$35,244
	$1,061,954	$1,033,705
Unamortized Debt Discount & Issue Expense	$1,021	$982
	$1,137,526	**$1,099,568**
LIABILITIES & CAPITAL		
Trade	$10,423	$13,020
Interest on Long Term Debt	$2,040	$2,020
Halifax Regional Municipality	$5,479	$4,094
Contractor & Customer Deposits	$195	$199
Unearned Revenue	$7,452	$7,620
	$25,589	$26,953
Accrued Post-Retirement Benefits	$604	$617
Accrued Pre-Retirement Benefit	$3,247	$3,035
Deferred Pension Liability	$12,339	$11,614
Special Purpose Reserves not allocated to projects	$5,477	$13,318
Regional Development Charge	$7,202	$750
Long Term Debt-Water	$64,953	$60,524
Long Term Debt-Wastewater/Stormwater	$153,888	$150,991
Total Liabilities	$273,300	$267,803
Capital Surplus	$829,619	$813,885
Committed Reserves	$13,946	$6,365
Operating Surplus used to Fund Capital	$12,380	$12,380
Operating Surplus	$2,936	(3,959)
Excess (Deficiency) of Revenue over Expenditure - Consolidated	$5,345	$3,095
Total Capital & Surplus	$864,226	$831,765
	$1,137,526	**$1,099,568**

HALIFAX WATER
UNAUDITED INCOME STATEMENT - CONSOLIDATED
APRIL 1/15 - SEPTEMBER 30/15 (6 MONTHS)
50.00%

ACTUAL (CURRENT MONTH) THIS YEAR '000	ACTUAL (CURRENT MONTH) LAST YEAR '000	DESCRIPTION	ACTUAL (YEAR TO DATE) THIS YEAR '000	ACTUAL (YEAR TO DATE) LAST YEAR '000	APR 1/15 MAR 31/16 BUDGET* '000	APR 1/15 MAR 31/16 FORECAST '000	% of FORECAST
$11,257	$11,454	**OPERATING REVENUE**	$66,713	$65,637	$129,905	$130,476	51.13%
$7,543	$7,643	**OPERATING EXPENSES**	$46,437	$48,019	$103,614	$100,954	46.00%
$3,713	**$3,811**	**OPERATING PROFIT**	**$20,276**	**$17,618**	**$26,291**	**$29,522**	**68.68%**
		FINANCIAL REVENUE					
$70	$31	INVESTMENT INCOME	$406	$306	$660	$660	61.54%
$167	$167	PNS FUNDING HHSP DEBT	$1,000	$1,000	$2,000	$2,000	50.00%
$22	$31	MISCELLANEOUS	$149	$135	$417	$332	44.92%
$258	**$228**		**$1,555**	**$1,441**	**$3,077**	**$2,992**	**51.98%**
		FINANCIAL EXPENSES					
$693	$727	LONG TERM DEBT INTEREST	$4,388	$4,535	$8,440	$8,815	49.78%
$1,589	$1,514	LONG TERM DEBT PRINCIPAL	$9,745	$9,184	$20,626	$20,346	47.90%
$14	$13	AMORTIZATION DEBT DISCOUNT	$89	$75	$172	$197	45.10%
$377	$362	DIVIDEND/GRANT IN LIEU OF TAXES	$2,264	$2,170	$4,579	$4,528	50.00%
$2,672	**$2,615**		**$16,487**	**$15,964**	**$33,818**	**$33,887**	**48.65%**
$1,299	**$1,424**	**NET PROFIT (LOSS) AVAILABLE FOR CAPITAL EXPENDITURES**	**$5,345**	**$3,095**	**($4,449)**	**($1,373)**	**489.39%**

HALIFAX WATER
UNAUDITED INCOME STATEMENT - WATER OPERATIONS
APRIL 1/15 - SEPTEMBER 30/15 (6 MONTHS)
50.00%

ACTUAL (CURRENT MONTH) THIS YEAR '000	ACTUAL (CURRENT MONTH) LAST YEAR '000	DESCRIPTION	ACTUAL (YEAR TO DATE) THIS YEAR '000	ACTUAL (YEAR TO DATE) LAST YEAR '000	APR 1/15 MAR 31/16 BUDGET* '000	APR 1/15 MAR 31/16 FORECAST '000	% of FORECAST
		REVENUE					
$3,684	$3,468	METERED SALES	$21,893	$20,171	$42,743	$42,743	51.22%
$669	$746	FIRE PROTECTION	$4,016	$4,476	$8,032	$8,032	50.00%
$61	$51	PRIVATE FIRE PROTECTION SERVICES	$325	$274	$1,069	$654	49.66%
$32	$34	BULK WATER STATIONS	$172	$198	$309	$309	55.84%
$15	$16	CUSTOMER LATE PAY./COLLECTION FEES	$97	$87	$343	$195	49.69%
$12	$13	MISCELLANEOUS	$64	$69	$150	$150	42.71%
$4,474	**$4,327**		**$26,567**	**$25,275**	**$52,646**	**$52,083**	**51.01%**
		EXPENSES					
$620	$511	WATER SUPPLY & TREATMENT	$3,640	$3,335	$8,134	$8,131	44.76%
$418	$656	TRANSMISSION & DISTRIBUTION	$4,103	$3,808	$9,155	$8,645	47.46%
$69	$56	SMALL SYSTEMS (inc. Contract Systems)	$518	$499	$792	$791	65.46%
$55	$62	SCADA, CONTROL & PUMPING	$321	$377	$806	$806	39.78%
$238	$211	ENGINEERING & INFORMATION SERVICES	$1,612	$1,737	$3,809	$3,729	43.23%
$18	$66	ENVIRONMENTAL SERVICES	$244	$329	$628	$635	38.38%
$155	$159	CUSTOMER SERVICE	$1,134	$991	$2,227	$2,225	50.97%
$492	$502	ADMINISTRATION & PENSION	$3,152	$3,033	$6,089	$6,071	51.92%
$630	$695	DEPRECIATION	$3,779	$4,173	$8,573	$8,573	44.08%
$2,695	**$2,920**		**$18,502**	**$18,281**	**$40,213**	**$39,607**	**46.71%**
$1,779	**$1,407**	**OPERATING PROFIT**	**$8,065**	**$6,994**	**$12,433**	**$12,476**	**64.64%**
		FINANCIAL REVENUE					
$35	$16	INVESTMENT INCOME	$204	$153	$330	$330	61.97%
$21	$25	MISCELLANEOUS	$125	$99	$344	$259	48.13%
$56	**$41**		**$329**	**$252**	**$674**	**$589**	**55.87%**
		FINANCIAL EXPENSES					
$200	$203	LONG TERM DEBT INTEREST	$1,256	$1,245	$2,108	$2,508	50.07%
$607	$553	LONG TERM DEBT PRINCIPAL	$3,746	$3,362	$7,969	$7,969	47.00%
$6	$7	AMORTIZATION DEBT DISCOUNT	$43	$39	$97	$97	44.61%
$377	$362	DIVIDEND/GRANT IN LIEU OF TAXES	$2,264	$2,170	$4,579	$4,528	50.00%
$1,191	**$1,124**		**$7,309**	**$6,816**	**$14,753**	**$15,102**	**48.40%**
$644	**$323**	**NET PROFIT (LOSS) AVAILABLE FOR CAPITAL EXPENDITURES**	**$1,085**	**$430**	**($1,646)**	**($2,036)**	**153.30%**

HALIFAX WATER
UNAUDITED INCOME STATEMENT - WASTEWATER OPERATIONS
APRIL 1/15 - SEPTEMBER 30/15 (6 MONTHS)
50.00%

ACTUAL (CURRENT MONTH) THIS YEAR '000	ACTUAL (CURRENT MONTH) LAST YEAR '000	DESCRIPTION	ACTUAL (YEAR TO DATE) THIS YEAR '000	ACTUAL (YEAR TO DATE) LAST YEAR '000	APR 1/15 MAR 31/16 BUDGET* '000	APR 1/15 MAR 31/16 FORECAST '000	% of FORECAST
		REVENUE					
$5,715	$6,133	METERED SALES	$33,826	$34,418	$65,505	$65,505	51.64%
$10	$10	WASTEWATER OVERSTRENGTH AGREEMENTS	$71	$80	$174	$174	40.83%
$33	$24	LEACHATE	$121	$148	$379	$379	31.83%
$0	$7	CONTRACT REVENUE	$52	$39	$86	$86	60.50%
$17	$17	DEWATERING FACILITY/SLUDGE LAGOON	$90	$105	$210	$210	42.80%
$17	$19	AIRLINE EFFLUENT	$32	$40	$78	$78	41.12%
$69	$61	SEPTAGE TIPPING FEES	$365	$368	$800	$800	45.65%
$20	$21	CUSTOMER LATE PAY./COLLECTION FEES	$140	$108	$210	$285	49.22%
$10	$8	MISCELLANEOUS	$65	$68	$121	$121	53.73%
$5,892	**$6,301**		**$34,762**	**$35,376**	**$67,562**	**$67,637**	**51.39%**
		EXPENSES					
$733	$714	WASTEWATER COLLECTION	$4,624	$4,809	$9,717	$9,167	50.44%
$1,643	$1,484	WASTEWATER TREATMENT PLANTS	$8,200	$9,133	$18,640	$17,792	46.09%
$78	$71	SMALL SYSTEMS	$476	$472	$1,136	$1,123	42.41%
$44	$64	DEWATERING FACILITY/ SLUDGE MGM'T	$143	$289	$767	$405	35.16%
$0	$14	BIOSOLIDS TREATMENT	$50	$24	$101	$101	49.79%
$29	$21	LEACHATE CONTRACT	$105	$129	$328	$320	32.81%
$85	$72	SCADA, CONTROL & PUMPING	$464	$500	$1,191	$1,191	38.95%
$204	$181	ENGINEERING & INFORMATION SERVICES	$1,349	$1,346	$3,493	$3,427	39.37%
$73	$120	ENVIRONMENTAL SERVICES	$527	$649	$1,343	$1,377	38.25%
$128	$125	CUSTOMER SERVICE	$939	$790	$1,844	$1,842	50.95%
$411	$390	ADMINISTRATION & PENSION	$2,614	$2,410	$5,042	$5,027	52.00%
$862	$946	DEPRECIATION	$5,155	$5,674	$11,674	$11,674	44.16%
$4,289	**$4,201**		**$24,646**	**$26,226**	**$55,277**	**$53,448**	**46.11%**
$1,603	**$2,100**	**OPERATING PROFIT**	**$10,116**	**$9,149**	**$12,285**	**$14,189**	**71.29%**
		FINANCIAL REVENUE					
$35	$15	INVESTMENT INCOME	$202	$153	$330	$330	61.12%
$167	$167	PNS FUNDING HHSP DEBT	$1,000	$1,000	$2,000	$2,000	50.00%
$1	$6	MISCELLANEOUS	$24	$36	$73	$73	33.47%
$203	**$187**		**$1,226**	**$1,188**	**$2,403**	**$2,403**	**51.03%**
		FINANCIAL EXPENSES					
$449	$490	LONG TERM DEBT INTEREST	$2,856	$3,074	$5,798	$5,738	49.78%
$896	$899	LONG TERM DEBT PRINCIPAL	$5,478	$5,449	$11,747	$11,292	48.51%
$7	$6	AMORTIZATION DEBT DISCOUNT	$42	$35	$66	$91	46.10%
$1,352	**$1,396**		**$8,377**	**$8,558**	**$17,612**	**$17,122**	**48.93%**
$454	**$891**	**NET PROFIT (LOSS) AVAILABLE FOR CAPITAL EXPENDITURES**	**$2,965**	**$1,779**	**($2,924)**	**($530)**	**659.20%**

HALIFAX WATER
UNAUDITED INCOME STATEMENT - STORMWATER OPERATIONS
APRIL 1/15 - SEPTEMBER 30/15 (6 MONTHS)
50.00%

ACTUAL (CURRENT MONTH) THIS YEAR '000	ACTUAL (CURRENT MONTH) LAST YEAR '000	DESCRIPTION	ACTUAL (YEAR TO DATE) THIS YEAR '000	ACTUAL (YEAR TO DATE) LAST YEAR '000	APR 1/15 MAR 31/16 BUDGET* '000	APR 1/15 MAR 31/16 FORECAST '000	% of FORECAST
		REVENUE					
$552	$496	STORMWATER SITE GENERATED SERVICE	$3,365	$2,984	$5,715	$6,715	50.12%
$323	$323	STORMWATER RIGHT OF WAY SERVICE	$1,941	$1,941	$3,881	$3,881	50.00%
$5	$1	CUSTOMER LATE PAY./COLLECTION FEES	$36	$6	$10	$69	52.15%
$10	$6	MISCELLANEOUS	$42	$56	$91	$91	46.36%
$891	**$826**		**$5,384**	**$4,987**	**$9,697**	**$10,756**	**50.06%**
		EXPENSES					
$342	$287	STORMWATER COLLECTION	$1,916	$2,025	$5,017	$4,772	40.16%
$3	$3	SCADA, CONTROL & PUMPING	$16	$17	$28	$28	56.87%
$33	$37	ENGINEERING & INFORMATION SERVICES	$219	$275	$568	$558	39.37%
$59	$50	ENVIRONMENTAL SERVICES	$332	$298	$825	$859	38.61%
$21	$26	CUSTOMER SERVICE	$153	$162	$300	$300	50.95%
$67	$80	ADMINISTRATION & PENSION	$425	$493	$820	$818	52.00%
$35	$40	DEPRECIATION	$228	$241	$565	$565	40.26%
$559	**$522**		**$3,289**	**$3,511**	**$8,123**	**$7,899**	**41.63%**
$332	**$304**	**OPERATING PROFIT**	**$2,095**	**$1,475**	**$1,573**	**$2,857**	**73.35%**
		FINANCIAL EXPENSES					
$44	$34	LONG TERM DEBT INTEREST	$276	$216	$534	$569	48.53%
$85	$61	LONG TERM DEBT PRINCIPAL	$521	$373	$910	$1,085	48.02%
$1	$0	AMORTIZATION DEBT DISCOUNT	$3	$1	$9	$9	39.82%
$130	**$95**		**$801**	**$590**	**$1,453**	**$1,663**	48.15%
$202	**$209**	**NET PROFIT (LOSS) AVAILABLE FOR CAPITAL EXPENDITURES**	**$1,295**	**$885**	**$120**	**$1,194**	**108.45%**

HALIFAX WATER
UNAUDITED INCOME STATEMENT - REGULATED AND UNREGULATED OPERATIONS
APRIL 1/15 - SEPTEMBER 30/15 (6 MONTHS)
50.00%

DESCRIPTION	ACTUAL (YEAR TO DATE) THIS YEAR	ACTUAL (YEAR TO DATE) LAST YEAR	APR 1/15 MAR 31/16 BUDGET*	APR 1/15 MAR 31/16 FORECAST	% of FORECAST
REGULATED ACTIVITIES					
REVENUE					
METERED SALES	$59,085	$57,573	$113,963	$114,963	51.39%
FIRE PROTECTION	$4,016	$4,476	$8,032	$8,032	50.00%
PRIVATE FIRE PROTECTION	$325	$274	$1,069	$654	49.66%
STORMWATER SERVICE	$1,941	$1,941	$3,881	$3,881	50.00%
OTHER OPERATING REVENUE	$677	$662	$1,386	$1,372	49.33%
	$66,043	**$64,926**	**$128,331**	**$128,902**	**51.23%**
EXPENSES					
WATER SUPPLY & TREATMENT	$3,640	$3,335	$8,134	$8,131	44.76%
TRANSMISSION & DISTRIBUTION	$4,103	$3,808	$9,155	$8,645	47.46%
WASTEWATER & STORMWATER COLLECTION	$6,540	$6,820	$14,734	$13,939	46.92%
WASTEWATER TREATMENT PLANTS	$8,200	$9,133	$18,640	$17,792	46.09%
SMALL SYSTEMS	$992	$964	$1,913	$1,899	52.24%
SCADA, CONTROL & PUMPING	$800	$895	$2,025	$2,025	39.53%
ENGINEERING & INFORMATION SERVICES	$3,181	$3,359	$7,870	$7,714	41.23%
ENVIRONMENTAL SERVICES	$1,102	$1,276	$2,796	$2,871	38.39%
CUSTOMER SERVICE	$2,208	$1,924	$4,337	$4,332	50.97%
ADMINISTRATION & PENSION	$6,180	$5,918	$11,931	$11,896	51.95%
DEPRECIATION	$9,159	$10,045	$20,812	$20,812	44.01%
	$46,105	**$47,476**	**$102,347**	**$100,056**	**46.08%**
FINANCIAL REVENUE					
INVESTMENT INCOME	$406	$306	$660	$660	61.54%
MISCELLANEOUS	$1,015	$1,009	$2,082	$2,082	48.75%
	$1,421	**$1,315**	**$2,742**	**$2,742**	**51.83%**
FINANCIAL EXPENSES					
LONG TERM DEBT INTEREST	$4,388	$4,535	$8,440	$8,815	49.78%
LONG TERM DEBT PRINCIPAL	$9,745	$9,184	$20,626	$20,346	47.90%
AMORTIZATION DEBT DISCOUNT	$89	$75	$172	$197	45.10%
DIVIDEND/GRANT IN LIEU OF TAXES	$2,264	$2,170	$4,579	$4,528	50.00%
	$16,487	**$15,964**	**$33,818**	**$33,887**	**48.65%**
NET PROFIT (LOSS) AVAILABLE FOR CAPITAL EXPENDITURES	**$4,872**	**$2,801**	**($5,092)**	**($2,300)**	**311.83%**
UNREGULATED ACTIVITIES					
REVENUE					
SEPTAGE TIPPING FEES	$365	$368	$800	$800	45.65%
LEACHATE	$121	$148	$379	$379	31.83%
CONTRACT REVENUE	$52	$39	$86	$86	60.50%
DEWATERING	$90	$105	$210	$210	42.80%
AIRLINE EFFLUENT	$32	$40	$78	$78	41.12%
ENERGY PROJECTS	$12	$0	$115	$30	41.01%
MISCELLANEOUS	$11	$10	$21	$21	50.98%
	$683	**$711**	**$1,689**	**$1,604**	**42.57%**
EXPENSES					
WATER SUPPLY & TREATMENT	$2	$6	$15	$15	13.84%
WASTEWATER TREATMENT	$297	$457	$1,196	$827	35.98%
ENERGY PROJECTS	$0	$0	$9	$9	0.00%
SPONSORSHIPS & DONATIONS	$29	$37	$56	$56	52.29%
DEPRECIATION	$3	$43	$0	$0	0.00%
	$331	**$543**	**$1,276**	**$906**	**36.57%**
FINANCIAL REVENUE					
MISCELLANEOUS	$122	$126	$229	$229	53.17%
	$122	**$126**	**$229**	**$229**	**53.17%**
NET PROFIT (LOSS) AVAILABLE FOR CAPITAL EXPENDITURES	**$473**	**$294**	**$642**	**$927**	**51.06%**
NET PROFIT (LOSS) AVAILABLE FOR TOTAL CAPITAL EXPENDITURES (REG & UNREG)	**$5,345**	**$3,095**	**($4,449)**	**($1,373)**	**489.39%**

HALIFAX WATER
UNAUDITED BALANCE SHEET
AS OF AUGUST 31, 2015

	2015 '000	2014 '000
ASSETS		
Cash	$33,403	$30,294
Amounts Receivable		
Customers & Contractual	$32,007	$27,098
Halifax Regional Municipality	$14,205	$14,107
Materials & Supplies	$1,178	$1,275
Prepaid Expenses	$360	$370
	$81,153	$73,143
Regulatory Asset	$3,708	$3,884
Plant in Service - Water	$567,439	$547,055
Plant in Service - Wastewater/Stormwater	$761,740	$746,611
Less: Accumulated Depreciation - Water	$155,175	$145,960
Accumulated Depreciation - Wastewater/Stormwater	$172,552	$151,356
	$1,005,161	$1,000,235
Assets Under Construction	$54,819	$30,914
	$1,059,980	$1,031,148
Unamortized Debt Discount & Issue Expense	$1,034	$995
	$1,142,167	**$1,105,286**
LIABILITIES & CAPITAL		
Trade	$12,614	$13,905
Interest on Long Term Debt	$2,927	$3,041
Halifax Regional Municipality	$4,935	$5,136
Contractor & Customer Deposits	$204	$205
Unearned Revenue	$6,733	$8,887
	$27,413	$31,173
Accrued Post-Retirement Benefits	$604	$617
Accrued Pre-Retirement Benefit	$3,229	$2,999
Deferred Pension Liability	$12,082	$11,384
Special Purpose Reserves not allocated to projects	$5,477	$13,318
Regional Development Charge	$6,888	$634
Long Term Debt-Water	$64,953	$60,524
Long Term Debt-Wastewater/Stormwater	$159,388	$156,491
Total Liabilities	$280,035	$277,140
Capital Surplus	$829,797	$811,690
Committed Reserves	$13,946	$6,365
Operating Surplus used to Fund Capital	$12,380	$12,380
Operating Surplus	$1,963	(3,959)
Excess (Deficiency) of Revenue over Expenditure - Consolidated	$4,046	$1,671
Total Capital & Surplus	$862,132	$828,147
	$1,142,167	**$1,105,286**

HALIFAX WATER
UNAUDITED INCOME STATEMENT - CONSOLIDATED
APRIL 1/15 - AUGUST 31/15 (5 MONTHS)
41.67%

ACTUAL (CURRENT MONTH) THIS YEAR '000	ACTUAL (CURRENT MONTH) LAST YEAR '000	DESCRIPTION	ACTUAL (YEAR TO DATE) THIS YEAR '000	ACTUAL (YEAR TO DATE) LAST YEAR '000	APR 1/15 MAR 31/16 BUDGET* '000	APR 1/15 MAR 31/16 FORECAST '000	% of FORECAST
$11,848	$11,405	**OPERATING REVENUE**	$55,457	$54,183	$129,905	$130,476	42.50%
$6,957	$7,506	**OPERATING EXPENSES**	$38,894	$40,376	$103,614	$102,112	38.09%
$4,890	**$3,899**	**OPERATING PROFIT**	**$16,563**	**$13,807**	**$26,291**	**$28,364**	**58.39%**
		FINANCIAL REVENUE					
$66	$59	INVESTMENT INCOME	$336	$275	$660	$660	50.98%
$167	$167	PNS FUNDING HHSP DEBT	$833	$833	$2,000	$2,000	41.67%
$16	$20	MISCELLANEOUS	$127	$104	$417	$332	38.35%
$249	**$246**		**$1,297**	**$1,213**	**$3,077**	**$2,992**	**43.35%**
		FINANCIAL EXPENSES					
$738	$771	LONG TERM DEBT INTEREST	$3,696	$3,808	$8,440	$8,440	43.79%
$1,641	$1,564	LONG TERM DEBT PRINCIPAL	$8,157	$7,670	$20,626	$20,626	39.54%
$15	$13	AMORTIZATION DEBT DISCOUNT	$75	$63	$172	$172	43.62%
$377	$362	DIVIDEND/GRANT IN LIEU OF TAXES	$1,887	$1,808	$4,579	$4,528	41.67%
$2,772	**$2,710**		**$13,814**	**$13,349**	**$33,818**	**$33,767**	**40.91%**
$2,368	**$1,436**	**NET PROFIT (LOSS) AVAILABLE FOR CAPITAL EXPENDITURES**	**$4,046**	**$1,671**	**($4,449)**	**($2,411)**	**267.79%**

HALIFAX WATER
UNAUDITED INCOME STATEMENT - WATER OPERATIONS
APRIL 1/15 - AUGUST 31/15 (5 MONTHS)
41.67%

ACTUAL (CURRENT MONTH) THIS YEAR '000	ACTUAL (CURRENT MONTH) LAST YEAR '000	DESCRIPTION	ACTUAL (YEAR TO DATE) THIS YEAR '000	ACTUAL (YEAR TO DATE) LAST YEAR '000	APR 1/15 MAR 31/16 BUDGET* '000	APR 1/15 MAR 31/16 FORECAST '000	% of FORECAST
		REVENUE					
$4,028	$3,529	METERED SALES	$18,209	$16,703	$42,743	$42,743	42.60%
$669	$746	FIRE PROTECTION	$3,347	$3,730	$8,032	$8,032	41.67%
$54	$43	PRIVATE FIRE PROTECTION SERVICES	$264	$223	$1,069	$654	40.36%
$38	$51	BULK WATER STATIONS	$140	$164	$309	$309	45.41%
$23	$16	CUSTOMER LATE PAY./COLLECTION FEES	$82	$71	$343	$195	42.15%
$11	$13	MISCELLANEOUS	$52	$56	$150	$150	34.41%
$4,823	**$4,399**		**$22,094**	**$20,948**	**$52,646**	**$52,083**	**42.42%**
		EXPENSES					
$459	$609	WATER SUPPLY & TREATMENT	$3,020	$2,823	$8,134	$8,131	37.13%
$574	$574	TRANSMISSION & DISTRIBUTION	$3,685	$3,152	$9,155	$8,671	42.50%
$74	$65	SMALL SYSTEMS (inc. Contract Systems)	$449	$442	$792	$791	56.75%
$60	$53	SCADA, CONTROL & PUMPING	$266	$315	$806	$806	33.00%
$292	$284	ENGINEERING & INFORMATION SERVICES	$1,374	$1,526	$3,809	$3,789	36.27%
$51	$41	ENVIRONMENTAL SERVICES	$226	$262	$628	$629	35.92%
$177	$156	CUSTOMER SERVICE	$979	$832	$2,227	$2,227	43.96%
$521	$450	ADMINISTRATION & PENSION	$2,660	$2,531	$6,089	$6,081	43.74%
$630	$695	DEPRECIATION	$3,149	$3,477	$8,573	$8,573	36.73%
$2,837	**$2,928**		**$15,807**	**$15,361**	**$40,213**	**$39,698**	**39.82%**
$1,986	**$1,471**	**OPERATING PROFIT**	**$6,286**	**$5,587**	**$12,433**	**$12,386**	**50.75%**
		FINANCIAL REVENUE					
$34	$30	INVESTMENT INCOME	$170	$137	$330	$330	51.40%
$11	$14	MISCELLANEOUS	$104	$74	$344	$259	40.15%
$46	**$44**		**$274**	**$212**	**$674**	**$589**	**46.45%**
		FINANCIAL EXPENSES					
$207	$208	LONG TERM DEBT INTEREST	$1,056	$1,042	$2,108	$2,108	50.08%
$627	$569	LONG TERM DEBT PRINCIPAL	$3,139	$2,808	$7,969	$7,969	39.38%
$7	$7	AMORTIZATION DEBT DISCOUNT	$37	$33	$97	$97	38.18%
$377	$362	DIVIDEND/GRANT IN LIEU OF TAXES	$1,887	$1,808	$4,579	$4,528	41.67%
$1,219	**$1,146**		**$6,118**	**$5,692**	**$14,753**	**$14,702**	**41.61%**
$813	**$369**	**NET PROFIT (LOSS) AVAILABLE FOR CAPITAL EXPENDITURES**	**$442**	**$107**	**($1,646)**	**($1,727)**	**125.58%**

HALIFAX WATER
UNAUDITED INCOME STATEMENT - WASTEWATER OPERATIONS
APRIL 1/15 - AUGUST 31/15 (5 MONTHS)
41.67%

ACTUAL (CURRENT MONTH) THIS YEAR '000	ACTUAL (CURRENT MONTH) LAST YEAR '000	DESCRIPTION	ACTUAL (YEAR TO DATE) THIS YEAR '000	ACTUAL (YEAR TO DATE) LAST YEAR '000	APR 1/15 MAR 31/16 BUDGET* '000	APR 1/15 MAR 31/16 FORECAST '000	% of FORECAST
		REVENUE					
$5,972	$5,996	METERED SALES	$28,111	$28,285	$65,505	$65,505	42.91%
$13	$16	WASTEWATER OVERSTRENGTH AGREEMENTS	$61	$70	$174	$174	35.00%
$24	$26	LEACHATE	$88	$124	$379	$379	23.13%
$7	$5	CONTRACT REVENUE	$52	$32	$86	$86	60.08%
$2	$17	DEWATERING FACILITY/SLUDGE LAGOON	$72	$87	$210	$210	34.47%
$0	$0	AIRLINE EFFLUENT	$15	$21	$78	$78	19.75%
$61	$69	SEPTAGE TIPPING FEES	$297	$307	$800	$800	37.06%
$31	$19	CUSTOMER LATE PAY./COLLECTION FEES	$120	$87	$210	$285	42.22%
$10	$17	MISCELLANEOUS	$54	$60	$121	$121	45.12%
$6,120	**$6,166**		**$28,870**	**$29,075**	**$67,562**	**$67,637**	**42.68%**
		EXPENSES					
$634	$709	WASTEWATER COLLECTION	$3,890	$4,095	$9,717	$9,476	41.06%
$953	$1,396	WASTEWATER TREATMENT PLANTS	$6,558	$7,648	$18,640	$18,235	35.96%
$82	$79	SMALL SYSTEMS	$398	$401	$1,136	$1,127	35.31%
$2	$45	DEWATERING FACILITY/ SLUDGE MGM'T	$99	$225	$767	$604	16.31%
$12	$2	BIOSOLIDS TREATMENT	$50	$11	$101	$101	49.71%
$21	$23	LEACHATE CONTRACT	$76	$108	$328	$320	23.84%
$80	$73	SCADA, CONTROL & PUMPING	$379	$428	$1,191	$1,191	31.85%
$232	$212	ENGINEERING & INFORMATION SERVICES	$1,146	$1,165	$3,493	$3,477	32.95%
$104	$89	ENVIRONMENTAL SERVICES	$454	$529	$1,343	$1,348	33.64%
$147	$124	CUSTOMER SERVICE	$811	$665	$1,844	$1,844	43.95%
$431	$360	ADMINISTRATION & PENSION	$2,203	$2,021	$5,042	$5,035	43.76%
$846	$946	DEPRECIATION	$4,293	$4,728	$11,674	$11,674	36.78%
$3,543	**$4,057**		**$20,357**	**$22,025**	**$55,277**	**$54,433**	**37.40%**
$2,577	**$2,110**	**OPERATING PROFIT**	**$8,513**	**$7,050**	**$12,285**	**$13,204**	**64.47%**
		FINANCIAL REVENUE					
$32	$30	INVESTMENT INCOME	$167	$138	$330	$330	50.56%
$167	$167	PNS FUNDING HHSP DEBT	$833	$833	$2,000	$2,000	41.67%
$5	$6	MISCELLANEOUS	$23	$30	$73	$73	31.93%
$203	**$202**		**$1,023**	**$1,001**	**$2,403**	**$2,403**	**42.59%**
		FINANCIAL EXPENSES					
$484	$526	LONG TERM DEBT INTEREST	$2,408	$2,584	$5,798	$5,798	41.52%
$926	$932	LONG TERM DEBT PRINCIPAL	$4,582	$4,550	$11,747	$11,747	39.01%
$7	$6	AMORTIZATION DEBT DISCOUNT	$35	$29	$66	$66	52.87%
$1,417	**$1,464**		**$7,025**	**$7,162**	**$17,612**	**$17,612**	**39.89%**
$1,363	**$848**	**NET PROFIT (LOSS) AVAILABLE FOR CAPITAL EXPENDITURES**	**$2,511**	**$888**	**($2,924)**	**($2,005)**	**225.26%**

HALIFAX WATER
UNAUDITED INCOME STATEMENT - STORMWATER OPERATIONS
APRIL 1/15 - AUGUST 31/15 (5 MONTHS)
41.67%

ACTUAL (CURRENT MONTH) THIS YEAR '000	ACTUAL (CURRENT MONTH) LAST YEAR '000	DESCRIPTION	ACTUAL (YEAR TO DATE) THIS YEAR '000	ACTUAL (YEAR TO DATE) LAST YEAR '000	APR 1/15 MAR 31/16 BUDGET* '000	APR 1/15 MAR 31/16 FORECAST '000	% of FORECAST
		REVENUE					
$566	$499	STORMWATER SITE GENERATED SERVICE	$2,813	$2,488	$5,715	$6,715	41.90%
$323	$323	STORMWATER RIGHT OF WAY SERVICE	$1,617	$1,617	$3,881	$3,881	41.67%
$8	$1	CUSTOMER LATE PAY./COLLECTION FEES	$31	$5	$10	$69	44.53%
$7	$16	MISCELLANEOUS	$32	$50	$91	$91	35.26%
$905	**$840**		**$4,493**	**$4,161**	**$9,697**	**$10,756**	**41.77%**
		EXPENSES					
$338	$293	STORMWATER COLLECTION	$1,574	$1,738	$5,017	$4,874	32.30%
$3	$3	SCADA, CONTROL & PUMPING	$13	$15	$28	$28	46.96%
$38	$43	ENGINEERING & INFORMATION SERVICES	$186	$238	$568	$566	32.95%
$64	$44	ENVIRONMENTAL SERVICES	$273	$249	$825	$830	32.87%
$24	$25	CUSTOMER SERVICE	$132	$136	$300	$300	43.95%
$70	$74	ADMINISTRATION & PENSION	$358	$413	$820	$819	43.76%
$41	$40	DEPRECIATION	$193	$201	$565	$565	34.07%
$577	**$522**		**$2,730**	**$2,990**	**$8,123**	**$7,982**	**34.20%**
$328	**$318**	**OPERATING PROFIT**	**$1,764**	**$1,171**	**$1,573**	**$2,774**	**63.58%**
		FINANCIAL EXPENSES					
$47	$37	LONG TERM DEBT INTEREST	$233	$182	$534	$534	43.55%
$88	$63	LONG TERM DEBT PRINCIPAL	$436	$312	$910	$910	47.87%
$1	$0	AMORTIZATION DEBT DISCOUNT	$3	$1	$9	$9	33.19%
$136	**$100**		**$671**	**$495**	**$1,453**	**$1,453**	46.19%
$192	**$218**	**NET PROFIT (LOSS) AVAILABLE FOR CAPITAL EXPENDITURES**	**$1,092**	**$676**	**$120**	**$1,321**	**82.70%**

HALIFAX WATER
UNAUDITED INCOME STATEMENT - REGULATED AND UNREGULATED OPERATIONS
APRIL 1/15 - AUGUST 31/15 (5 MONTHS)
41.67%

DESCRIPTION	ACTUAL (YEAR TO DATE) THIS YEAR	ACTUAL (YEAR TO DATE) LAST YEAR	APR 1/15 MAR 31/16 BUDGET*	APR 1/15 MAR 31/16 FORECAST	% of FORECAST
REGULATED ACTIVITIES					
REVENUE					
METERED SALES	$49,133	$47,476	$113,963	$114,963	42.74%
FIRE PROTECTION	$3,347	$3,730	$8,032	$8,032	41.67%
PRIVATE FIRE PROTECTION	$264	$223	$1,069	$654	40.36%
STORMWATER SERVICE	$1,617	$1,617	$3,881	$3,881	41.67%
OTHER OPERATING REVENUE	$565	$556	$1,386	$1,372	41.20%
	$54,926	**$53,603**	**$128,331**	**$128,902**	**42.61%**
EXPENSES					
WATER SUPPLY & TREATMENT	$3,020	$2,823	$8,134	$8,131	37.13%
TRANSMISSION & DISTRIBUTION	$3,685	$3,152	$9,155	$8,671	42.50%
WASTEWATER & STORMWATER COLLECTION	$5,459	$5,820	$14,734	$14,350	38.04%
WASTEWATER TREATMENT PLANTS	$6,558	$7,648	$18,640	$18,235	35.96%
SMALL SYSTEMS	$845	$839	$1,913	$1,902	44.44%
SCADA, CONTROL & PUMPING	$658	$758	$2,025	$2,025	32.52%
ENGINEERING & INFORMATION SERVICES	$2,706	$2,929	$7,870	$7,832	34.55%
ENVIRONMENTAL SERVICES	$952	$1,040	$2,796	$2,807	33.92%
CUSTOMER SERVICE	$1,907	$1,620	$4,337	$4,337	43.98%
ADMINISTRATION & PENSION	$5,219	$4,961	$11,931	$11,914	43.81%
DEPRECIATION	$7,633	$8,385	$20,812	$20,812	36.68%
	$38,643	**$39,978**	**$102,347**	**$101,016**	**38.25%**
FINANCIAL REVENUE					
INVESTMENT INCOME	$336	$275	$660	$660	50.98%
MISCELLANEOUS	$864	$861	$2,082	$2,082	41.50%
	$1,200	**$1,136**	**$2,742**	**$2,742**	**43.78%**
FINANCIAL EXPENSES					
LONG TERM DEBT INTEREST	$3,696	$3,808	$8,440	$8,440	43.79%
LONG TERM DEBT PRINCIPAL	$8,157	$7,670	$20,626	$20,626	39.54%
AMORTIZATION DEBT DISCOUNT	$75	$63	$172	$172	43.62%
DIVIDEND/GRANT IN LIEU OF TAXES	$1,887	$1,808	$4,579	$4,528	41.67%
	$13,814	**$13,349**	**$33,818**	**$33,767**	**40.91%**
NET PROFIT (LOSS) AVAILABLE FOR CAPITAL EXPENDITURES	**$3,669**	**$1,412**	**($5,092)**	**($3,140)**	**216.87%**
UNREGULATED ACTIVITIES					
REVENUE					
SEPTAGE TIPPING FEES	$297	$307	$800	$800	37.06%
LEACHATE	$88	$124	$379	$379	23.13%
CONTRACT REVENUE	$52	$32	$86	$86	60.08%
DEWATERING	$72	$87	$210	$210	34.47%
AIRLINE EFFLUENT	$15	$21	$78	$78	19.75%
ENERGY PROJECTS	$14	$0	$115	$30	46.55%
MISCELLANEOUS	$7	$7	$21	$21	33.32%
	$545	**$580**	**$1,689**	**$1,604**	**33.95%**
EXPENSES					
WATER SUPPLY & TREATMENT	$1	$4	$15	$15	8.12%
WASTEWATER TREATMENT	$231	$356	$1,196	$1,025	22.52%
ENERGY PROJECTS	$0	$0	$9	$9	0.00%
SPONSORSHIPS & DONATIONS	$17	$16	$56	$56	29.94%
DEPRECIATION	$2	$22	$0	$0	0.00%
	$251	**$398**	**$1,276**	**$1,105**	**22.69%**
FINANCIAL REVENUE					
MISCELLANEOUS	$83	$77	$229	$229	36.07%
	$83	**$77**	**$229**	**$229**	**36.07%**
NET PROFIT (LOSS) AVAILABLE FOR CAPITAL EXPENDITURES	**$377**	**$259**	**$642**	**$728**	**51.70%**
NET PROFIT (LOSS) AVAILABLE FOR TOTAL CAPITAL EXPENDITURES (REG & UNREG)	**$4,046**	**$1,671**	**($4,449)**	**($2,411)**	**267.79%**

Halifax Water
Halifax Regional Water Commission

ITEM # 5.1
HRWC Board
October 29, 2015

TO: Ray Ritcey, BComm, MBA, CPA, CGA, Chair and Members of the Halifax Regional Water Commission Board

SUBMITTED BY: _____
Jamie Hannam, P. Eng.
Director, Engineering & Information Services

APPROVED: _____
Carl Yates M.A.Sc., P. Eng., General Manager

DATE: October 5, 2015

SUBJECT: **2015/16 SCADA Master Plan Implementation Program**

ORIGIN

2015/16 Water & Wastewater Capital Budget.

RECOMMENDATION

The HRWC Board approve the 2015/16 SCADA Master Plan Implementation Program, at an estimated cost of $500,000.

BACKGROUND

Through a Master Plan completed in 2010, HRWC evaluated the existing Supervisory Control and Data Acquisition (SCADA) Systems and established a framework for a unified, modern, and scalable SCADA System.

The SCADA Master Plan Final Report outlined fourteen short-term and five long-term implementation projects including design and construction of a high speed secure SCADA communications system and cyber upgrades to be completed over five years.

Several of the outlined projects have either been completed or are in progress, including the selection of standard Human Machine Interface (HMI) platforms (Project S5), and implementation of the SCADA Wide Area Network (WAN) (Project L2). Halifax Water's Technical Services staff have re-evaluated the phasing and methodology for several of the projects outlined in the Master Plan document.

This re-evaluation will allow for the implementation of the SCADA Master Plan in a shorter timeframe and with cost savings compared to estimates in the Master Plan document. This project is a continuation of Projects L3 & L4, as outlined in the Master Plan document.

DISCUSSION

Projects (L3 and L4) include the continued construction and installation of Remote Terminal Units (RTUs) to replace existing Surfline 9009 RTUs at 50 remote sites. The new RTUs will be equipped with Radio Frequency (RF) units and Programmable Logic Controllers (PLCs) as defined by the SCADA Master Plan. Upgrades to the approximately 100 remaining remote sites will follow in subsequent years. The current project includes the upgrade of the SCADA System at 18 wastewater pumping stations and the replacement of 20 pole mount Surfline 9015 RTUs. The 18 wastewater pumping stations will be equipped with new RF units and PLCs to accommodate additional sanitary sewer overflow (SSO) monitoring equipment. The 20 pole mount RTUs will be recovered and replaced with new PLCs. The recovered Surfline 9015 RTUs will be converted to pump controllers and reused.

Funding in the amount of $700,000 was approved earlier this year from the 2014/15 Capital budget. The current funding request for $500,000 from the 2015/16 Capital Budget represents the continuation of that work.

BUDGET IMPLICATIONS

Funding in the amount of $500,000 is available within the 2015/16 Capital Budget under "*Corporate Projects – SCADA Master Plan Implementation Program*" with a 50/50 split between the Water and Wastewater Budget.

The proposed expenditure meets the "No Regrets – Unavoidable Needs" approach of the 2012 Integrated Resource Plan. The proposed work meets the NR-UN criteria of "*Firm regulatory requirement, required to ensure infrastructure system integrity and safety and directly supports the implementation of the Wet Weather Management program*". The program meets these criteria since upgrading the remote sites SCADA systems is necessary for overall SCADA systems security, as well as improved data acquisition, system controls and regulatory monitoring.

ALTERNATIVES

There are no recommended alternatives.

ATTACHMENT

N/A

Report Prepared By:

Tom Gorman, P. Eng. Manager, Water Infrastructure-Engineering
902-490-4176

Financial Reviewed By:

Cathie O'Toole, MBA, CPA, CGA, Director of Finance and Customer Service, 902-490-3572

Halifax Water
Halifax Regional Water Commission

ITEM #6
HRWC Board
October 29, 2015

TO: Ray Ritcey, BComm, MBA, CPA/CGA, Chair and Members of the Halifax Regional Water Commission Board

SUBMITTED BY: Cathie O'Toole, MBA, CPA, CGA Director of Finance & Customer Service

APPROVED: Carl Yates M.A.Sc., P.Eng., General Manager

DATE: October 22, 2015

SUBJECT: **Stormwater Rate Design Hearing**

ORIGIN

2015 Halifax Water General Rate Hearing (M06540)

RECOMMENDATION

It is recommended that the Halifax Water Board:

1. Approve the submission to the Nova Scotia Utility and Review Board (NSUARB) to amend the Stormwater section of the Cost of Service Manual.

BACKGROUND

Stormwater issues were added to the "Issues List" during the 2015 rate hearing to increase water and wastewater rates. HRWC requested that stormwater issues be severed from the hearing however the NSUARB refused this request. HRWC eventually secured support from intervenors to address stormwater issues in a separate hearing in the fall of 2015.

DISCUSSION

HRWC is taking several steps to improve delivery of stormwater service and communication with its customers as a result of observations made since implementation of the first stormwater charges, feedback from the exemption review process, and

community engagement. HRWC conducted community engagement meetings September 14 – 17, 2015. HRWC has also received recommendations for ways to improve service from the utility's consultant for stormwater rate design.

The first major initiative involves centralizing all calls for stormwater service at HRWC, rather than having them go through the municipality's 311 Centre. As part of this initiative the utility is implementing a Customer Relationship Management (CRM) system that will help promote accountability in tracking and closing service requests, and providing information back to customers. The second major improvement will come with implementation of a Computerized Maintenance Management System (CMMS); that will enable better management and operational tracking of repair and maintenance activities.

HRWC is considering taking a more proactive approach to potential applications for exemption from stormwater charges, and is also enhancing information available on HRWC's website to include more graphics, to illustrate how stormwater service is received and the components of a stormwater system are.

Finally, HRWC is examining delivery of stormwater service to ensure it has greater organizational focus, and a core team of staff with the necessary specialized expertise.

A summary of the proposed Cost of Service/Rate Design related changes are provided below:

1. HRWC proposes a broader approach to stormwater service to align with industry practice elsewhere in North America. HRWC is responsible for the stormwater systems located in and associated with all of the HRM streets within the Service Boundary. All of the owners of properties and the users of properties located within the Boundary benefit from HRWC's stormwater system through their ability to access their property using HRM streets which are drained by HRWC's stormwater system. Stormwater management within the street network helps enable safe transportation of people and goods, and provision of services. HRWC proposes to charge properties within the stormwater boundary to better reflect the use and benefit enjoyed by the various properties in the stormwater service area, and in recognition that most of the properties within the Boundary receive one or more of the following services from HRWC:

- Stormwater from the property enters into HRWC's SW system.
- Stormwater from upgrade lands is intercepted by and directed around the property by a HRWC stormwater system.
- The property is accessed directly by a driveway which crosses over an HRWC culvert

This broader approach will enhance equity of the charge, understandability and will provide administrative simplicity. It will also align with best practice. It will reduce the number of detailed investigations of specific drainage patterns associated with individual properties. These investigations have consumed significant resources over the past two

years, and will increase the administrative costs of the stormwater service if not contained.

2. HRWC proposes to use the term "Site Related Flow Charge" to refer to the charge for the services and benefits the customer is receiving including any or all of stormwater flows being intercepted or diverted from a property, access to a property over an HRWC owned culvert, and management of stormwater from a property that enters any part of an HRWC stormwater system.

3. The municipality would be billed for the impervious area in the street right of way consistent with the current Cost of Service approach. It should be noted that billing the municipality for the impervious area in the street network does not align with common practice, creates confusion for customers, and is difficult to communicate. Additionally, it creates a risk that the municipality may choose to distribute the costs in a manner which is less equitable than would occur in a regulated utility environment.

4. HRWC proposes that properties will be exempt from the Stormwater Charge if:

- The Chargeable Impervious Area on the property is less than 50 square meters. Other stormwater utilities commonly have a minimum billing threshold at this level. Impervious area of less than 50 square metres is not usually a residential property or commercial building but is typically a small relic foundation or small pad often related to or owned by another (often contiguous) parcel. In any case, such small impervious areas are nearly invisible to the drainage system and costly to administer compared to the revenue generated.
- The properties were previously exempted and do not meet the stated stormwater service criteria. Many of these properties are large, undeveloped and with no or little man-made impervious area and do not meet any of the three stated stormwater service criteria. These properties would continue to be exempt until such time as their condition changes such that the criteria for service are met.

5. In a future hearing to adjust stormwater rates, HRWC proposes to amend the "Adjustment of Bills" section 11 of the HRWC Regulations to permit adjustment of bills if upon review from the Notice of Objection process it is determined the billing determinant of chargeable impervious area is inaccurate or yields an inequitable result. For example, if a natural rock outcropping, water surface of a watercourse, man-made pond or swimming pool, or temporary or infrequent impervious surface is found. Two examples of temporary or infrequent impervious surfaces are plastic sheeting and frozen ground. The current "Adjustment of Bills" section of the regulations was written with Water and Wastewater service in mind.

6. HRWC proposes that impervious area associated with specific pits, quarries and refineries which were previously exempted because they had "stormwater management facilities" on the property, would now be included in billable impervious area. These properties will be treated like any other property, meaning that each will be considered to be exempt or not based upon the specific circumstances on or near the property.

7. HRWC proposes that owners of Non-Residential Properties shall pay a Site Related Flow Charge based on a rate per m^2 of Chargeable Impervious Area on the Property. If a part of a property is located outside HRWC's Stormwater Service Boundary, that part of the property located outside the Boundary is exempt from the charge. As Non-Residential Customers are billed on the basis of actual impervious area and the properties in question are often large, this mechanism will enhance equity.

8. HRWC proposes that owners of Residential Properties shall pay a Site Related Flow Charge which shall be based on the average Chargeable Impervious Area for Residential Properties [subject to possible tiering of Residential Properties]. The full charge is required to be paid, even if a part of the property is located outside the Commission's Stormwater Service Boundary. As residential properties are generally smaller, and are not charged on the basis of the actual impervious area, billing on the basis of an average or a tier based upon "Equivalent Residential Units" provides sufficient equity in a cost effective manner.

9. HRWC proposes to bill in increments of $10m^2$ rather than billing based on $1m^2$ of impervious area. This aligns with industry best practice, reduces the impact of any small measurement errors, and removes the illusion of precision associated with billing in a $1m^2$ increment. Impervious are would be rounded to the nearest $10m^2$ increment.

10. HRWC proposes to implement a tiered rate structure for the "Site Related Flow Charge" for Residential properties. This would mean both Residential and Non-Residential properties with less impervious area would pay less than properties with more impervious area. The residential average would be eliminated. The tiered rate structure would be based upon an Equivalent Residential Unit, or "ERU". This concept is very similar to how "Equivalent Meters" are used in water and wastewater cost of service.

11. HRWC proposes to implement a credit system for non-residential (ICI) properties with stormwater Best Management Practices (BMPs) like retention ponds that help manage peak flows. The impacts of a credit system would be reflected in future operating budgets and revenue requirements. The majority of stormwater utilities have a credit system.

12. HRWC proposes to bill properties within the Stormwater Service Boundary pursuant to item 1), and provide a credit program for "Non-Related Flow" for non-residential customers if the stormwater from the property does not reach an HRWC system, and they are only receiving the benefit of upstream protection (stormwater interception) or a culvert at the end of their driveway.

13. HRWC proposes to amend the (Notice of Objection) process to reflect the revised definition of service criteria. HRWC will be adding a self-assessment tool for customer through the website to enable them to determine if they are receiving service. This may reduce the volume of Notice of Objections as customers would have a better sense of whether there are strong grounds for a Notice of Objection.

14. HRWC proposes to include funds in future operating budgets and revenue requirements to conduct research in partnership with non-profit groups regarding effectiveness of green infrastructure in cold climates as an ancillary tool for the stormwater system in Halifax. Green infrastructure is believed to provide a benefit and perform well in 1 in 5 year rain events.

The stormwater rate design consultant engaged by HRWC made other recommendations for future consideration. The full report will be available in the Application, and is attached to this report for your convenience as Attachment 2.

BUDGET IMPLICATIONS

There are no budget implications at this time as HRWC is not proposing any adjustment to the rates. There may be longer term implications to both revenues and expenses from the Decision that will ultimately be issued with respect to this matter.

ALTERNATIVES

1. The HRWC Board could reject the recommendations in this report; and provide alternate direction to staff.

ATTACHMENTS

Attachment 1 - Executive Summary – Stormwater Cost of Service submission
Attachment 2 – Halifax Stormwater Program and Funding Memo

Report Prepared by: 
Cathie O'Toole, MBA, CPA, CGA Director of Finance & Customer Service

NOVA SCOTIA UTILITY AND REVIEW BOARD

IN THE MATTER OF: The Public Utilities Act

- and -

IN THE MATTER OF: An Application by the Halifax Regional Water Commission for an Order approving revisions to the Cost of Service Manual for Stormwater Service.

OCTOBER 2015

Contents

NOTICE OF APPLICATION

NOVA SCOTIA UTILITY AND REVIEW BOARD

IN THE MATTER OF: THE PUBLIC UTILITIES ACT

-and-

IN THE MATTER OF: AN APPLICATION BY THE HALIFAX REGIONAL WATER COMMISSION FOR AN ORDER APPROVING REVISIONS TO THE COST OF SERVICE MANUAL AND RATE DESIGN FOR STORWMATER SERVICE

TO: THE NOVA SCOTIA UTILITY AND REVIEW BOARD

The Applicant hereby applies to the Board for an Order:

(a) To approve changes to the Cost of Service Manual for stormwater

(b) To approve changes to the rate design for stormwater rates to become effective following a future hearing to adjust rates

The Applicant hereby submits the following particulars in support of this Application:

1. The Halifax Regional Water Commission ("HRWC") is a body corporate, incorporated under the *Halifax Regional Water Commission Act*, S.N.S. 2007, c.55, as amended, (the "HRWC Act") and has its head office and chief place of business at 450 Cowie Hill Road, Halifax, Halifax Regional Municipality, Province of Nova Scotia.

2. HRWC is a public utility regulated under the *Public Utilities Act,* R.S.N.S. 1989, c.380, as amended, (the "Public Utilities Act") and has responsibility for the supply of municipal water and fire protection services, municipal wastewater services and municipal stormwater services throughout the Halifax Regional Municipality ("HRM").

3. In May 2011, HRWC applied to the Board for approval of the Cost of Service for Water, Wastewater and Stormwater Service. In January 2012 the NSUARB approved the Cost of Service and directed that a Cost of Service Manual be developed. The Manual was submitted to the NSUARB in October 2012 as part of a Rate Application.

4. On January 9, 2013 HRWC submitted a two year rate application to increase rates for Water, Wastewater and Stormwater Services effective July 1, 2013, and April 1, 2014. This was the first Rate Application based on the new Cost of Service manual and proposing separate rates for Stormwater Service.

5. The Board in its decision of June 24, 2013 (M05463 2013 NSUARB 127) approved separate rates for stormwater effective July 1, 2013, and an increase in those rates April 1, 2014.

6. After two years of implementation and experience administering the stormwater rates, HRWC has conducted a review of the current Cost of Service and Rate Design Methodology for stormwater service including a comparison to industry norms and best practice, with a view to enhancing equity and improving administration of the charge. Based on the results of this review, HRWC is proposing modifications to the Cost of Service Manual and rate design as more fully described in this Application.

7. HRWC's current rates for stormwater service are based on the 2014/15 test year. To ensure proper comparison of changes, and customer impacts, the alternative cost of service options are presented based on the 2014/15 test year and compared to the current rates for stormwater service. The Cost of Service Study supporting the current rates is attached in Section 5.

8. HRWC requests the approval of the Board for its recommended Cost of Service and associated Rate Design as described in this Application. If changes are approved, HRWC would apply to adjust the rates in a future application.

9. Included in this Application is the following information:

Section 1 -	Executive Summary and description of proposed changes
Section 2 -	Best Practice review of current Stormwater Cost of Service
Section 3 -	Proposed COS Manual Section for Stormwater with explanations
Section 4 -	Sample Cost of Service Study based on 2014/15 revenue requirements
Section 5 -	Summary of feedback from Community Engagement meetings
Section 6 -	Background information – Five Year Operating and Capital Budgets for Stormwater Service, and Operating Procedures

10. HRWC is represented by:

John C. MacPherson, Q.C.
McInnes Cooper
Purdy's Wharf Tower II
P.O. Box 730
1300-1969 Upper Water Street
Halifax, N.S. B3J 2V1
Phone: (902) 425-6500
Facsimile: (902) 425-6350
Email: john.macpherson@mcinnescooper.com

11. Contact information for HRWC in respect of this application is as follows:

Cathie O'Toole MBA, CPA, CGA
Director of Finance & Customer Service/Chief Financial Officer
Halifax Regional Water Commission
PO Box 8388 Station A
450 Cowie Hill Road
HALIFAX NS B3K 5M1
Phone: (902) 490-6208
Fax: (902) 490-4749
E-mail: cathie.o'toole@halifaxwater.ca

Filed at Halifax, Nova Scotia this 30th day of October, 2015.

Cathie O'Toole, CGA, MBA
Director of Finance and Customer Service

Overview

HRWC is applying for approval of changes to the stormwater section of the Cost of Service Manual that will guide future rate design and regulations regarding stormwater service. Most of the changes are administrative in nature and designed to improve equity, and ease administration. HRWC views adjustment of rates for stormwater as a two-step process – the first being a public hearing to consider the Cost of Service and Rate Design issues, and the second being an application to adjust the rates to conform with the resulting direction from this hearing.

Application

HRWC is a regulated utility pursuant to the *Public Utilities Act* and has provided potable water and fire protection services to the residents of the former City of Halifax since 1945. Following municipal amalgamation in 1996 these services have been provided to the urban core and satellite systems of the Halifax Regional Municipality (HRM).

On August 1 2007, the municipal wastewater and stormwater facilities were transferred by HRM to HRWC and as a result of this transfer these services became regulated under the *Public Utilities Act.* The current rate structure and rules and regulations were approved by the Nova Scotia Utility and Review Board (Board) following a rate application and public hearing in 2013 (NSUARB-W-HRWC-R-13 /2013 NSUARB 127) and became effective July 1, 2013. ("2013 Decision")

HRM transferred the operation of the Aerotech/Airport water system to HRWC on April 1, 2006. The August 1 2007 transfer of municipal wastewater and stormwater facilities from HRM included the Aerotech/Airport wastewater facilities. The stormwater service boundary was established by HRM Council as part of the 2007 Transfer Agreement and aligns generally with the Urban Core.The Board approved consolidation of the Aerotech/Airport system with the Urban Core effective April 1, 2015 in a Supplemental Decision in matter number M05463 dated October 31, 2014 and Order dated November 3, 2014. HRWC does not provide stormwater service to the Aerotech/Airport system.

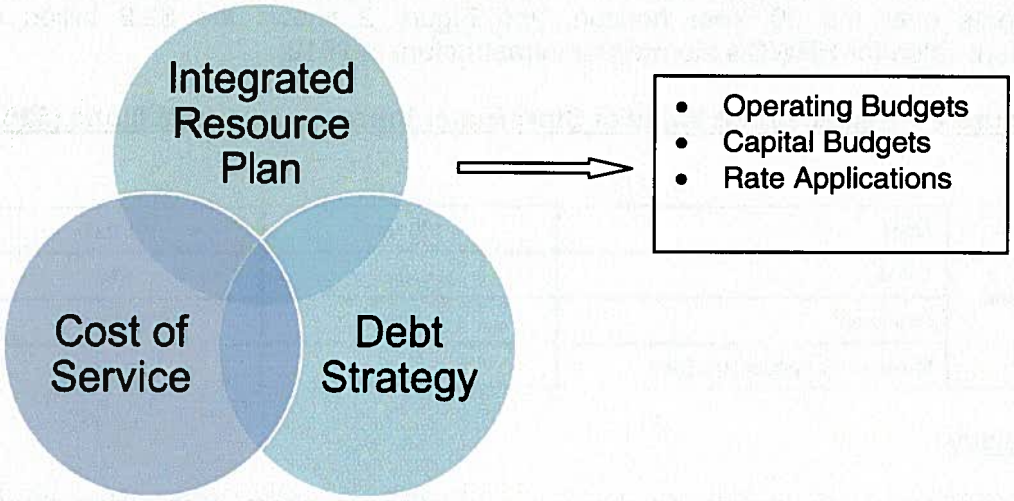
Background to this Application

The provision of stormwater service and the current business plan for stormwater service, are guided by three strategic documents HRWC developed under the direction of the NSUARB.

The Integrated Resource Plan, and Cost of Service (COS) Manual were filed with the Board on October 31, 2012, and the Debt Study was filed as part of the Rate Application filed on January 9, 2013.

Figure 1 below, illustrates the relationship of these strategies to the Operating and Capital Budgets, and the rates.

Figure 1 – Sustainability Framework



Cost of Service

HRWC's current Cost of Service Manual is based on established methodologies from the American Water Works Association (AWWA) and the Water Environment Federation (WEF) in the context of the local and operational characteristics prevalent for HRWC. The guidance available from WEF now includes a special publication called "User-Fee-Funded Stormwater Programs" which was published in 2013.

The COS Manual was developed through engagement and consultation with interested parties, including prior rate application interveners and the Board, and is based on cost allocation processes outlined in industry standard manuals of practice.

The COS Manual was approved in the June 24, 2013 Decision regarding M05463 [2013 NSUARB 127] with amendments as suggested by the Board Consultant Mr. Whelan and the Consumer Advocate's consultant Mr. Rubin. The Board also recognized the COS Manual as a living document that should be updated with any available and relevant information and data. The COS Manual has been updated to reflect feedback received during the last rate hearing, and current data, and was approved in August 2015.

Integrated Resource Plan

In response to the Board's decision of December 2010, HRWC undertook a project to develop an Integrated Resource Plan (IRP). The IRP involved developing a comprehensive long-term planning framework and conducting scenario analysis to identify and prioritize future capital and operational programs needed to deliver water, wastewater, and stormwater services cost effectively to meet a defined level of service. The long-term capital-investment requirements also considered environmental, social, and financial risks and constraints, and examined both supply-side and demand-side management options and challenges. The IRP was completed and submitted to the Board on October 31, 2012. The resulting IRP provides a long-term plan

outlining the revenue requirements to support the capital investments needed and informs HRWC on future rate applications.

The IRP identifies a net present value of $108 Million (2012 dollars) in stormwater expenditure requirements over the 30 Year horizon, and Figure 2 shows the $2.2 billion estimated replacement value for HRWC's stormwater infrastructure in 2012.

Figure 2 – Replacement Value of Stormwater Infrastructure in Millions ($2012)

Stormwater	Pipes	790 km	$1,232
	Culverts	8 km	$15
	Structures	29	$1,044
	Stormwater System Sub-Total		$2,291

Debt Strategy

The debt strategy was developed through evaluation of alternatives using three general principles:

1. Rate stability and affordability
2. HRWC's long-term financial sustainability
3. Intergenerational equity

The debt strategy report concluded that appropriate financial performance ratios for HRWC to utilize include:

1. Target Debt Service Ratio of 35%
2. Target Debt/Equity Ratio of 40%/60%

The two targets provide benchmarks for HRWC's capital financing strategy when considering future use of debt.

The report prepared by HRWC's stormwater rate design consultant in Section 2 contains benchmarking information that specifically examines how HRWC's rates compare to other stormwater utilities.

Importance of Stormwater Service Customer Focused Service Delivery

HRWC recognizes the importance of providing an appropriate level of Stormwater Service. Stormwater Service generates the least revenue of the three services offered by HRWC(8.4% of revenues last year), and the service is not as mature as the delivery of water service or wastewater service. Stormwater Service and its associated rates are not well understood by residents of the Halifax municipality and have a complex history. With a distinct charge for stormwater services implemented in 2013 to enhance fairness and equity, interface with customers has increased. The existence of two charges for stormwater service (Site-Generated Flow Charge and ROW charge), levied by two different organizations but collected on the utility's bill also created additional customer confusion. HRWC conducted a series of Community Engagement meetings in September 2015 which confirmed these impressions.

During the public meetings one message that was conveyed was the potential consequences of not providing adequate stormwater services at an appropriate level. The risks of ***not*** providing an appropriate level of stormwater service include:

- Higher costs to repair public infrastructure such as roads, sidewalks, etc.
- Private/public property damage
- Watercourse contamination through wastewater system overload
- Increased costs of the wastewater system
- Public safety and transportation being negatively impacted by management of stormwater in the public street right of way
- Economic activity and the delivery of goods and services being negatively impacted by transportation

Customer Focused Service Delivery

HRWC is taking several steps to improve delivery of stormwater service and communication with its customers as a result of observations made since implementation of the first stormwater charges, feedback from the exemption review process, and community engagement. It has also received recommendations for ways to improve service from the utility's consultant for stormwater rate design.

The first major initiative involves centralizing all calls for stormwater service at HRWC, rather than having them go through the municipality's 311 Centre. As part of this initiative the utility is implementing a Customer Relationship Management (CRM) system, that will help promote accountability in tracking and closing service requests, and providing information back to customers. The second major improvement will come with implementation of a Computerized Maintenance Management System (CMMS); that will enable better management and operational tracking of repair and maintenance activities.

HRWC is considering taking a more proactive approach to potential applications for exemption from stormwater charges.

HRWC is enhancing information available on HRWC's website to include more graphics, to illustrate how stormwater service is received and the components of a stormwater system are.

Finally, HRWC is examining delivery of stormwater service to ensure it has greater organizational focus, and a core team of staff with the necessary specialized expertise.

Implementation of Credit Program

A stormwater utility credit is an ongoing reduction in a property's stormwater user fee given for certain qualifying activities. Credits tend to be given for two broad categories of private action: (1) a property owner takes some private and ongoing action that reduces its actual use of, or impact on, the downstream stormwater system to a level below that which would be reflected in the physical parcel measurement that determines the user fee; or (2) a property owner executed some activity, operates some program, or performs some function that, in an ongoing way, reduces the overall cost of the stormwater program for the local government, and thus obtains some, fee paid back in the form of a credit.

It should be noted that while there are all kinds of credits offered by stormwater utilities, best practice dictates that credits offered must pair with or match design requirements or standards

or other aspects of HRWC's stormwater program that causes it to expend revenue. For example, if HRWC operates no floodplain program and, thus, spends none of its revenue on such a program then offering credit for private floodplain activities would not fit one of the two overall categories above.

That said, HRWC can anticipate future program needs or private actions that do provide an overall community benefit and encourage such actions with one-time incentives or other inducements. An example might be the construction of various water quality or Green Infrastructure practices to reduce runoff pollution or volume. There is no current program requiring such practices, and little or no expenditure in that area. However, there may be a desire on the part of HRWC to partner with others in encouraging such practices on a voluntary or exploratory basis.

The current rate structure does not have a provision to consider credits. HRWC is proposing a credit system that allows non-residential customers to reduce their bill by undertaking site improvements to reduce the volume and/or peak rate of stormwater flow from their property using detention or storage.

Typically, credits are available to a customer that is paying a rate based on their amount of impervious surface, and when there is a cost savings to the service provider as a result of the site based stormwater management. Another consideration when implementing a credit system is whether the site based stormwater system improves water quality, where there is a mandate to achieve stormwater quality discharges by the local regulator. At this point, stormwater ponds owned by HRWC are intended to manage quantity as opposed to quality.

Presently, non-residential customers, which includes such land uses as Multi Unit, Industrial, Commercial and Institutional (MICI) and others, are subject to a rate based on their impervious area, whereas residential customers are subject to a flat fee determined on the average impervious area per lot.

<u>Current Design Considerations</u>:

HRWC design specifications require the designer to size the stormwater system for the 1 in 5 year storm event. In the design assumptions, peak flows from non-residential flows are not used in sizing a system. Since the publication of the HRM design standard in 1999, a MICI property has had a requirement to retain peak runoff flows on their property. There is no requirement for residential properties to retain flows on their property, and in sizing the stormwater collection system, a blended runoff coefficient for the residential properties is used, reflective of a partial impervious and pervious area.

Within the past four years, NSE requires that stormwater post development flows be balanced with pre development flows for piped systems within the service boundary. In order to achieve this, the developer may need to provide stormwater management infrastructure such as storage devices, ponds, oversized pipes or others. These storage systems become an asset of HRWC to own and maintain.

In evaluating whether a credit program should be considered the cost implications to HRWC associated with owning site based stormwater management systems need to be considered.

1) Capital Costs: The design and installation of stormwater infrastructure required to service a new development is the responsibility of the benefitting land owner. Currently, HRM's Subdivision Bylaw and HRWC's Design and Construction Standards, require a developer to install the required stormwater infrastructure to manage the flows generated from their development. If site based stormwater management was to be factored into the design of a storm system, allowing for the new public infrastructure to become smaller, the cost benefit would be to the developer, not to the Utility.

2) Operations & Maintenance: Regular maintenance activities related to cleaning of pipes or stormwater storage ponds owned by HRWC is not reduced by that infrastructure being smaller as a result of site based stormwater management.

3) Asset Renewal: HRWC is responsible to replace stormwater infrastructure at the end of its service life. The asset is depreciated in anticipation it will be replaced with one of similar size. Depreciation on contributed capital assets such as the stormwater infrastructure in new developments is currently not included in HRWC's rates for stormwater service. Therefore, initiatives which reduce the size of the assets and therefore the depreciation expense, does not result in any savings within the revenue requirements.

4) Impact of peak storm flows: Non-residential properties that have on site based management systems are better suited to manage peak run off flows from high intensity or long duration storm events. The ability to mitigate peak runoffs may provide a benefit to the service provider by mitigating or reducing the risk of surcharging or overflows in downstream systems. As a result, HRWC may not have to respond to as many risk areas and could focus on areas where site based stormwater management has not been implemented. This would reduce risk of non-compliance incidents (i.e. overflows) for combined sewer areas and potential flooding of streets and or private property. This is not currently measureable by HRWC as storm events would have to be modeled in all areas. The fact that a property is discharging peak flow amounts that are less than its impervious area would dictate means that it has taken private resources to reduce its apparent impervious area with respect to peak flow discharge. The basis for a credit, is therefore in recognition that a property discharges reduced peak flows.

There is no easily measured direct cost benefit to HRWC in considering stormwater credits. However, it is proposed to implement stormwater credits for non-residential customers to allow for a mechanism for those customers to manage their bill; and in recognition there is some operational benefit to the utility and to the community if properties discharge reduced peak flows. In addition, as the regulations are currently written, the non-residential customers pay for all of their impervious area regardless on the amount that is tributary to the HRWC system. For example a property may only have 10% of its impervious area draining to the HRWC storms system, however, the customer has to pay for the full 100%. Allowing for a credit program, adjustments can be made to fairly allocate costs based on the impervious area tributary to the stormwater system.

Administration

A substantial amount of staff time has been spent in managing exemption requests. Stormwater utilities that have credit systems typically incorporate 4 – 5% of revenues funding a credit system. For modeling purposes HRWC is assuming 3% of revenues would be used to fund a credit program; as the program is proposed for non-residential customers only, and not all non-residential customers would be eligible or would apply. For ease of administration, it is proposed that customers applying for a stormwater credit be required to submit a document

certifying what measures have been installed on a property and that they have been maintained.

Currently, non-residential developments are required (as per HRWC design specifications) to submit an engineer stamped record drawing, certifying that the site development occurred as per the design drawing which demonstrated balancing of pre and post flows. This information can be used in the administration of a credit for these properties. This information may not be available for some customers, in which case the customer will be required to develop the information to adequately assess the request for a credit.

The flat rate per m^2 currently used to bill non-residential customers would be more equitable if a credit system exists to recognize and reduce the bills of non-residential properties reducing their peak flows. It is not proposed to establish a credit program for residential customers, as HRWC is proposing other changes to enhance equity for residential customers (a tiered residential rate) that will be more effective to administer than a credit program for residential customers.

It would be difficult for HRWC to establish a credit program for residential properties. Residential properties within the central service boundary (properties receiving central wastewater service) are required to submit a Lot Grading Certificate (LGC) to confirm that the property was graded in conformance with the overall subdivision grading plan. This process is not managed by HRWC. HRM is currently amending their Lot Grading Bylaw a (LGB) and about to commence a Stormwater Management Bylaw. Being considered between both documents is the expansion of the LGB to the unserviced (rural communities) and site specific stormwater management features on individual properties and an associated incentive program. HRM staff is proposing to work closely with HRWC in reviewing our current Stormwater rate structure, and whether incentives could be administered by either of our agencies.

Five Year Business Plan

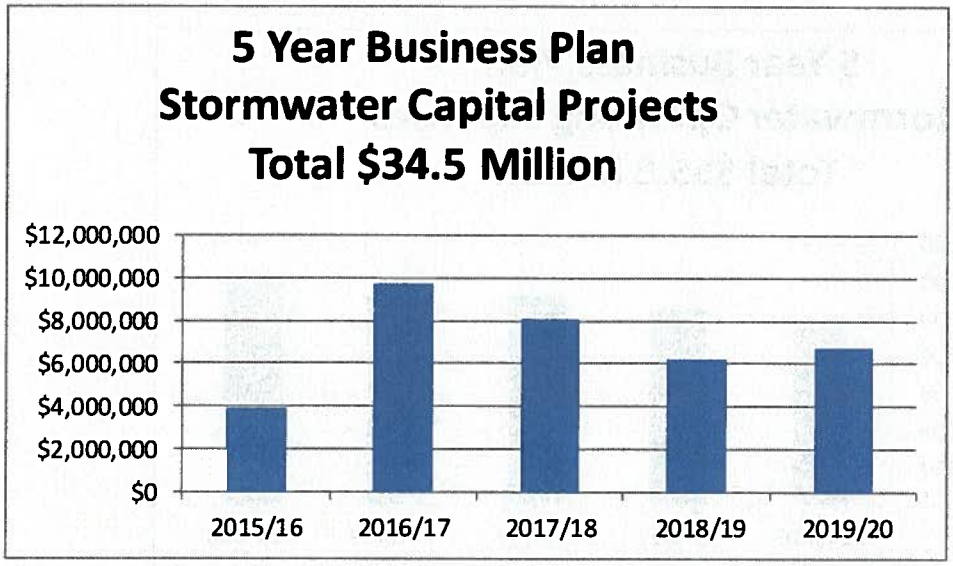
HRWC develops five-year business plans, which are generally updated every two years[t]. The five-year business plan (2015/16 to 2019/20) contains Operating and Capital Budgets for stormwater service as shown in Section 6, and summarized in Figure 3 below. The 5 Year Business Plan indicates that HRWC will spend $55.6 million operating the stormwater system, and spend $34.5 million on capital projects.

Stormwater Capital Budget

Last year, $1.6 million in stormwater projects were completed, and $4.3 million in stormwater projects were initiated. Over the next five years, HRWC plans to spend $34.5 million on stormwater capital projects. This is an increase over the level of capital spending on stormwater in the past; however it is not at the level recommended by the Integrated Resource Plan.

The capital projects include pipes, construction of deep storm sewers, replacement of culverts, and capital projects for stormwater structures such as retention ponds and berms.

Figure 3 – 5 Year Capital - Stormwater



The majority of stormwater capital projects are financed by debt. Unlike water and wastewater, where there is a significant amount of depreciation funded through the rates and used to fund capital projects, the majority of the stormwater assets have no depreciable value on HRWC's financial statements, or are assets which were contributed. Currently, HRWC does not include depreciation on contributed assets within the revenue requirements, although it is permitted in the NSUARB Accounting and Reporting Handbook. HRWC will propose phasing in depreciation on contributed assets and/or capital funding from operating in future stormwater rate applications as a way to increase the capital funding to a level which will sustain the stormwater system.

Expenses

HRWC's 5-Year Operating Budget is shown on an accrual basis, which provides better information for decision making and aligns with accounting standards. As indicated in Figure 4, the 5 Year Business Plan indicates the utility will spend $55.6 million operating the stormwater system.

Figure 4 – Operating Expenses - Stormwater

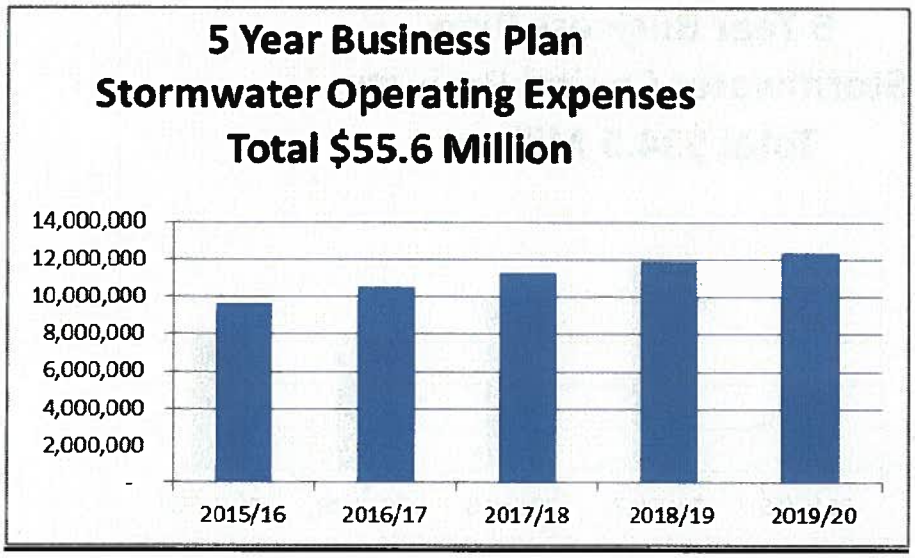


Figure 5 shows the historic results from the past four fiscal years, as well as the budget and projection for the current fiscal year. There was a significant operating surplus in 2014/15 due to the fact that revenues were budgeted conservatively given the number of pending exemption appeals, and due to the severity of the winter operating expenses were low as a lot of planned activity with respect to maintenance could not occur.

Any accumulated operating surplus for stormwater service can be used to fund future capital and could be reflected in future stormwater rate applications as a funding source for capital.

Figure 5 – Actual Financial Results and 2015/16 Budget & Projection

Financial Summary Information Stormwater						
					Budget	Projection
	2011/12	2012/13	2013/14	2014/15	2015/16	2015/16
Operating Revenue	$5,429	$5,853	$8,541	$11,054	$9,697	$10,756
Operating Expenses						
Excluding Depreciation	$6,277	$5,731	$6,401	$6,373	$7,558	$7,417
Depreciation	$0	$0	$310	$412	$565	$565
	$6,277	$5,731	$6,711	$6,785	$8,123	$7,982
Profit/(Loss) from Operations	($848)	$122	$1,830	$4,269	$1,574	$2,774
Non Operating Revenue	$0	$0	$0	$0	$0	$0
Non Operating Expenditures (Existing Debt Servicing)						
Principal	$587	$585	$653	$848	$910	$910
Interest	$412	$383	$394	$479	$543	$543
	$999	$968	$1,047	$1,327	$1,453	$1,453
Net Operating Surplus (Deficit)	($1,847)	($846)	$783	$2,942	$121	$1,321

Revenues

The majority of HRWC's revenues come from rate-regulated activities, and for stormwater, 100% of revenues come from rate-regulated activities. Site-generated flow charges are 60%, and the ROW charge is 40% of revenues, respectively. Revenue has been difficult to budget since the inception of these rates with no historic trends to help project increases in impervious area, the nature of new properties (non-residential versus residential) is unpredictable, and the number of exemptions is difficult to quantify.

Exemption Appeals

Currently there are 1,195 properties within the stormwater service boundary which have been exempted from the site-generated stormwater charge, through the appeal (Notice of Objection) process. There are also another 740 to be reviewed, and from this there may be additional exemptions. Properties adjacent to and similar to those exempted that have not filed a Notice of Objection will be proactively reviewed by HRWC and exemptions granted if applicable. Following the initial implementation of stormwater charges, there were numerous requests for exemption reviews. The experience gained from this process has helped inform HRWC's view of how to improve the current approach. HRWC is proposing to adopt a best practiced based definition of stormwater service that will provide more clarity to customers regarding what stormwater service entails, and which may reduce the number of appeals. It is estimated the cost of administering the current appeals through the Notice of Objection process is in excess of $835,000. Aside from the financial cost, the current process and volume of appeals has operationally impacted the utility as other initiatives and programs have been impacted by the time spent by staff on stormwater appeals.

Impervious Area

Satellite imagery has been refreshed to provide data from early May 2014 – leaf off conditions. As a result, the billable impervious area has increased as noted in Figure 6. HRWC is not billing based on the refreshed impervious area, as rates would have to be adjusted first to reflect any changes in the COS approach and the new impervious area; otherwise there would be an over collection of revenue. Updated impervious area data is included in the proposed changes to the SW Cost of Service Manual in Section 3. The stormwater service boundary is explained within the Manual, and illustrated with a map. When the new impervious area is reflected, the increased revenue as a result of the increase in billable impervious area will be partially offset by creation of a credit program.

Figure 6 – Impervious Area

	2012 Data (basis for current rates)	"Leaf Off" 2014 Data	% Increase
Roads (HRM Right of Way)	18,724,398	24,886,745	33% increase
Billable Impervious Area	42,916,896	57,598,851	34% increase
Total Billable Impervious Area	61,641,294	82,485,596	34% increase

Based on the updated data, there are currently 88,151 residential and 6,379 non-residential (MICI - Multi-unit, Industrial, Commercial, Institutional) parcels being billed.

	Number of Parcels	Total Impervious Area	Total Area
Parcels that can be billed within the Stormwater Boundary	97,950	58,146,684	293,065,603
Residential Parcels	91,459	26,351,234	194,596,099
Less - Customer - Exempt (Appealed) - Residential	726	361,052	5,372,830
Residential Parcels without appeals	90,733	25,990,182	189,223,269
Less - parcels under 50 sq mt of impervious area - Residential	2,582	42,591	4,316,185
Residential Parcels being billed	88,151	25,947,591	184,907,084
Non-residential Parels	6,491	31,795,450	98,469,504
Less - Customer - Exempt (Appealed) - Non-residential	19	140,665	577,562
Non-residential Parcels without appeals	6,472	31,654,786	97,891,942
Less - parcels under 50 sq mt of impervious area - Non-residential	93	1,694	102,153
Non-residential Parcels being billed	6,379	31,653,092	97,789,789

Summary of Proposed Changes

1. HRWC proposes a broader approach to stormwater service to align with industry practice elsewhere in North America. HRWC is responsible for the stormwater systems located in and associated with all of the HRM streets within the Service Boundary. All of the owners of properties and the users of properties located within the Boundary benefit from HRWC's stormwater system through their ability to access their property using HRM streets which are drained by HRWC's stormwater system. Stormwater management within the street network helps enable safe transportation of people and goods, and provision of services. HRWC proposes to charge properties within the stormwater boundary to better reflect the use and benefit enjoyed by the various properties in the stormwater service area, and in recognition that most of the properties within the Boundary receive one or more of the following services from HRWC:

    - Stormwater from the property enters into HRWC's SW system.
    - Stormwater from upgrade lands is intercepted by and directed around the property by a HRWC stormwater system.
    - The property is accessed directly by a driveway which crosses over an HRWC culvert

This broader approach will enhance equity of the charge, understandability and will provide administrative simplicity. It will also align with best practice. It will reduce the number of detailed investigations of specific drainage patterns associated with individual properties. These investigations have consumed significant resources over the past two years, and will increase the administrative costs of the stormwater service if not contained.

2. HRWC proposes to use the term "Site Related Flow Charge" to refer to the charge for the services and benefits the customer is receiving including any or all of stormwater flows being intercepted or diverted from a property, access to a property over an HRWC owned culvert, and management of stormwater from a property that enters any part of an HRWC stormwater system.

3. The municipality would be billed for the impervious area in the street right of way consistent with the current Cost of Service approach. It should be noted that billing the municipality for the impervious area in the street network does not align with common practice, creates confusion for customers, and is difficult to communicate. Additionally, it creates a risk that the municipality may choose to distribute the costs in a manner which is less equitable than would occur in a regulated utility environment.

4. HRWC proposes that properties will be exempt from the Stormwater Charge if:
   - The Chargeable Impervious Area on the property is less than 50 square meters. Other stormwater utilities commonly have a minimum billing threshold at this level. Impervious area of less than 50 square metres is not usually a residential property or commercial building but is typically a small relic foundation or small pad often related to or owned by another (often contiguous) parcel. In any case, such small impervious areas are nearly invisible to the drainage system and costly to administer compared to the revenue generated.
   - The property has been previously proactively exempted by HRWC prior to the implementation of the first stormwater rates, and does not meet the stated stormwater service criteria. Many of these properties are large, undeveloped and with no or little man-made impervious area and do not meet any of the three stated stormwater service criteria. These properties would continue to be exempt until such time as their condition changes such that the criteria for service are met.

5. In a future hearing to adjust stormwater rates, HRWC proposes to amend the "Adjustment of Bills" section 11 of the HRWC Regulations to permit adjustment of bills if upon review from the Notice of Objection process it is determined the billing determinant of chargeable impervious area is inaccurate or yields and inequitable result. For example, if a natural rock outcropping, water surface of a watercourse, man-made pond or swimming pool, or temporary or infrequent impervious surface is found. Two examples of temporary or infrequent impervious surfaces are plastic sheeting and frozen ground. The current "Adjustment of Bills" section of the regulations was written with Water and Wastewater service in mind.

6. HRWC proposes that impervious area associated with specific pits, quarries and refineries which were previously exempted because they had "stormwater management facilities" on the property, would now be included in billable impervious area. These properties will be treated like any other property, meaning that each will be considered to be exempt or not based upon the specific circumstances on or near the property.

7. HRWC proposes that owners of Non-Residential Properties shall pay a Site Related Flow Charge based on a rate per m^2 of Chargeable Impervious Area on the Property. If a part of a property is located outside HRWC's Stormwater Service Boundary, that part of the property located outside the Boundary is exempt from the charge. As Non-Residential Customers are

billed on the basis of actual impervious area and the properties in question are often large, this mechanism will enhance equity.

8. HRWC proposes that owners of Residential Properties shall pay a Site Related Flow Charge which shall be based on the average Chargeable Impervious Area for Residential Properties [subject to possible tiering of Residential Properties]. The full charge is required to be paid, even if a part of the property is located outside the Commission's Stormwater Service Boundary. As residential properties are generally smaller, and are not charged on the basis of the actual impervious area, billing on the basis of an average or a tier based upon "Equivalent Residential Units" provides sufficient equity in cost effective manner.

9. HRWC proposes to bill in increments of $10m^2$ rather than billing based on $1m^2$ of impervious area. This aligns with industry best practice, reduces the impact of any small measurement errors, and removes the illusion of precision associated with billing in a $1m^2$ increment. Impervious are would be rounded to the nearest $10m^2$ increment.

10. HRWC proposes to implement a tiered rate structure for the "Site Related Flow Charge" for Residential properties. This would mean both Residential and Non-Residential properties with less impervious area would pay less than properties with more impervious area. The residential average would be eliminated. The tiered rate structure would be based upon an Equivalent Residential Unit[1] , or "ERU". This concept is very similar to how "Equivalent Metres" are used in water and wastewater cost of service.

11. HRWC proposes to implement a credit system for non-residential (ICI) properties with stormwater Best Management Practices (BMPs) like retention ponds that help manage peak flows. The impacts of a credit system would be reflected in future operating budgets and revenue requirements. The majority of stormwater utilities have a credit system.[2]

12. HRWC proposes to bill properties within the Stormwater Service Boundary pursuant to item 1), and provide a credit program for "Non-Related Flow" for non-residential customers for the stormwater from the property that does not reach an HRWC system, and they are only receiving the benefit of upstream protection (stormwater interception) or a culvert at the end of their driveway.

13. HRWC proposes to amend the (Notice of Objection) process to reflect the revised definition of service criteria. HRWC will be adding a self-assessment tool for customer to the website to enable them to determine if they are receiving service. This may reduce the volume of Notice of Objections as customers would have a better sense of whether there are strong grounds for a Notice of Objection.

14. HRWC proposes to include funds in future operating budgets and revenue requirements to conduct research in partnership with non-profit groups regarding effectiveness of green infrastructure in cold climates as an ancillary tool for the stormwater system in Halifax. Green infrastructure is believed to provide a benefit and perform well in 1 in 5 year rain events.

[1] Application Section 2 – AMEC Foster Wheeler HRWC Stormwater Program and Funding Memo page 7.
[2] Black and Vetch 2014 Stormwater Utility Survey

The stormwater rate design consultant engaged by HRWC made other recommendations for future consideration. The full report is in Section 2 of this Application.

Stormwater Cost of Service and Charges

HRWC considered alternative methods of designing rates for stormwater service. They were prepared using the 2014/15 revenue requirement and the updated data for impervious area and satellite imagery for illustrative purposes. For presentation purposes, HRWC has included rates prepared using the status quo approach, and two other options, as noted below.

Status Quo (Site Generated Flow Charge + ROW charge)[3]

Option 1 – Tiered Site Related Stormwater Charge for residential (Increasing block rate structure) + non-residential charge based on actual impervious area + ROW charge [4]

Option 2 – One Tiered Site Related Stormwater Charge for residential and non-residential (Increasing block rate structure) based on impervious area + ROW charge

Option 3 – One Stormwater Charge billed based on impervious area

Status Quo Option

The status quo option is HRWC's current approach reflected with updated impervious area data. One of the significant challenges with respect to the Status Quo Option is the administrative cost associated with defining which properties receive stormwater service, and also in investigating and responding to Notices of Objection and, sometimes, to Complaints to the Board. We have estimated that the cost to date related to the administration of the Notice of Objection process alone is approximately $835,000. The primary reason for these costs is the complexity of the definition of service, which in turn is a reflection of HRWC's efforts to make the Stormwater Charge as equitable as possible.

The administration of the some of the options provided above by HRWC, particularly implementation of credits will increase the complexity and the administrative costs, but it is hoped that this will be offset by a reduction in administration and costs associated with the current Notice of Objection process; and will result in enhanced equity. Administrative costs are borne by the customer base and it is therefore appropriate that HRWC provide an option for the Board to consider which has much lower administrative costs than the options provided above. This consideration is reflected in Option 3.

[3] To be levied by HRM on tax bills effective April 1, 2016

Option 1 - Tiered Site Related Stormwater Charge for residential (Increasing block rate structure) + non-residential charge based on actual impervious area + ROW charge

HRWC is proposing Option 1 as the recommended option because:

1. It enhances equity. For both residential and non-residential, properties pay in accordance with the amount of impervious area.

2. The three part service criteria will result in more properties paying something, and align more strongly with cost causation, as there are currently properties that are receiving some service that are not paying stormwater charges.

3. It will be easier to explain to customers on a go forward basis. The municipality will be billed for the impervious area in the street right of way, and will recoup this cost from taxable properties directly on the tax bill effective April 1, 2016. Only the Site Related Flow Storwmater charge would appear on Halifax Water bills.

4. Non-residential customers would have an opportunity to reduce or manage their bills through the introduction of a credit system.

The table below provides information on the distribution of properties within the proposed tiers. The tiers are based on an Equivalent Residential Unit (ERU) of 295 m2. The ERU is calculated based on the impervious area associated with residential properties divided by the number of parcels. The ERU is 31.6% higher than the current residential average of 224 m2. This is due to the use of "leaf off" data and corresponds with the overall increase in impervious area.

Figure 7 – Equivalent Residential Unit and Tiering

Equivalent Residential Unit	295	Sq M.

ERU Tiers (% of ERU)	Impervious Area (Low end)	Impervious Area (High end)	Rate
0% - 25%	-	50	0%
26% - 75%	51	223	50%
76% - 125%	224	369	100%
126% - 275%	370	811	200%
276% - Or Greater	812		300%

Residential Tier	Number of Parcels	Impervious area
Tier 1 - (0-50)	2,669	44,372
Less Exempted (Appeal)	87	1,781
Tier 1 - Total	2,582	42,590
Tier 2 - (51-223)	51,742	8,183,102
Less Exempted (Appeal)	146	19,730
Tier 2 - Total	51,596	8,163,372
Tier 3 - (224 - 369)	23,499	6,515,370
Less Exempted (Appeal)	154	45,581
Tier 3 - Total	23,345	6,469,789
Tier 4 - (370 - 811)	10,794	5,519,064
Less Exempted (Appeal)	236	128,527
Tier 4 - Total	10,558	5,390,537
Tier 5 - (812 - greater)	2,755	6,089,326
Less Exempted (Appeal)	103	165,433
Tier 5 - Total	2,652	5,923,893
Total	90,733	25,990,182

Option 2 - One Tiered Site Related Stormwater Charge for residential and non-residental (Increasing block rate structure) based on impervious area + ROW charge

This scenario is the same as Option 1, however it adds tiering and an increasing block rate structure for non-residential properties also. The distribution of non-residential properties within tiers is shown below. HRWC is not recommending this option because it is believed that it does not result in an improved structure from the perspective of equity. HRWC is currently billing these properties on the basis of actual impervious area; and proposes to implement a credit system for non-residential properties that manage or detain peak flows as an equity enhancement. In the event a credit system is not approved, HRWC is not opposed to non-residential tiering.

Figure 8 – Non-Residential Tiering

Non-Residential Tier	Number of Parcels	Impervious area
Tier 1 - (0-50)	93	1,694
Less Exempted (Appeal)	-	-
Tier 1 - Total	93	1,694
Tier 2 - (51-223)	640	97,581
Less Exempted (Appeal)	-	-
Tier 2 - Total	640	97,581
Tier 3 - (224 - 369)	757	222,366
Less Exempted (Appeal)	-	-
Tier 3 - Total	757	222,366
Tier 4 - (370 - 811)	1,114	616,057
Less Exempted (Appeal)	4	1,985
Tier 4 - Total	1,110	614,072
Tier 5 - (812 - greater)	3,887	30,857,752
Less Exempted (Appeal)	15	138,680
Tier 5 - Total	3,872	30,719,072
Total	6,472	31,654,785

Option 3 - One Stormwater Charge based on impervious area -

HRWC has developed an Option 3, which provides a broader approach to billing for stormwater service to align with industry practice elsewhere, which will involve significantly lower administration costs. Under Option 3 there would be one Stormwater Charge replacing the current two- part charge, which will be consistent with industry best practice, and enhance understandability and administrative simplicity. The Stormwater Charge rate would be determined by dividing the estimated annual revenue by the Chargeable Impervious Area on the properties within the Stormwater Service Boundary which are required to pay the Charge. The impervious area within the street right of way would not be utilized in the development of the Stormwater Charge rate, nor would HRM as owner of the HRM streets be billed the Stormwater Charge for the impervious area within the HRM street right of way.

All properties within the Stormwater Service Boundary which have a Chargeable Impervious Area greater than 50 m2 would be billed the Stormwater Charge, and the only feature which is subject to a Notice of Objection would be the Chargeable Impervious Area. The process for filing and responding to a Notice of Objection is consistent with that in the current Regulations.

The other features proposed for the other options will be the same for Option 3, namely: the billing approach for residential and non-residential properties (including tiering), the credit process for non-residential properties, and billing in increments of 10 m2.

Within Option 3 HRWC would bill all properties within the Stormwater Service Boundary (with greater than 50 m2 of Chargeable Impervious Area) because all of the properties within the Boundary receive one or more of the three services from HRWC, as indicated on page 16.

The Option 3 approach is much simpler than the other identified options, including the status quo, in that the identification of the properties to be billed is much more straight-forward. Also, the only variable for each property, other than the credits, is the Chargeable Impervious Area, and so the Notice of Objection process will also be much simpler. For these reasons, the administrative costs related to Option 3 will concurrently be much less.

Option 3 has the additional benefit of being more easily understood by the property owners and customers, as compared to the status quo and the other options developed by HRWC. The drawback to Option 3 is that elimination of a ROW charge on a per parcel basis shifts a significant cost to the larger non-residential customers if it is levied on the basis of impervious area. This may be justified from a user-pay perspective however, as most non-residential customers would utilize the road network more than a residential customer and derive a greater benefit from the safe transportotion of people, goods and services.

HRWC is not recommending Option 3 at this time, because 1) the NSUARB has already provided direction with respect to the ROW related stormwater charge, and 2) the municipality has investigated significant time and effort determining how to collect the ROW portion of the current stormwater charges, and consultation with the municipality would be required regarding any future changes.

638 Figure 9 shows the calculation of the charges under these options. The current charges are $0.149 per m^2 of impervious area, plus a $39 per property ROW charge.

640 Figure 10 shows the calculation of the charges under Option 1, as well as the revenue test to demonstrate the charges would generate the current revenue requirement.

642

Figure 11 shows the calculation of the charges currently in place.

644

Figure 9 – Alternative Approaches

Alternatives (*without an allowance for exemptions, credits and incentives*)

Alternative #1: **A tiered Site Related Flow (SRF) charge for residential customers, with the Right-of-Way (ROW) charge continuing to be levied directly to the HRM.**

Alternative #2: **One "new" Stormwater Charge consisting of both the SRF and ROW components and billed based on impervious area associated with residential and ICI customers. Residential customers would be billed under a new tiered rate.**

Alternative #3: **One "new" Stormwater Charge" encompassing the total revenue requirement allocated to residential and ICI customers, based on the impervious area. There would be no separate ROW charge levied by the HRM, and residential customers would be billed based on the equivalent residential unit.**

Calculation of Charges:

Status Quo

Site Related Flow = Revenue Requirement / Impervious Area (Residential & ICI) — *($6,332,640 / 57,600,683 sq. meters)*

Alternative #1

			% of ERU		Threshold (sq. meters)	Rate Adjustment
Tier 1	*Site Related Flow Charge x Rate Adjustment*	*($0.110 x 0%)*	0%	25%	< 50	0%
Tier 2	*Site Related Flow Charge x Rate Adjustment*	*($0.110 x 50%)*	26%	75%	223	50%
Tier 3	*Site Related Flow Charge x Rate Adjustment*	*($0.110 x 100%)*	76%	125%	369	100%
Tier 4	*Site Related Flow Charge x Rate Adjustment*	*($0.110 x 200%)*	126%	275%	811	200%
Tier 5	*Site Related Flow Charge x Rate Adjustment*	*($0.110 x 300%)*	276%	or greater		300%

Calculation of a "new" Stormwater Charge

Alternative #2

			% of ERU		Threshold (sq. meters)	Rate Adjustment
Tier 1	*Site Related Flow Charge x Rate Adjustment*	*($0.110 x 0%)*	0%	25%	< 50	0%
Tier 2	*Site Related Flow Charge x Rate Adjustment*	*($0.110 x 50%)*	26%	75%	223	50%
Tier 3	*Site Related Flow Charge x Rate Adjustment*	*($0.110 x 100%)*	76%	125%	369	100%
Tier 4	*Site Related Flow Charge x Rate Adjustment*	*($0.110 x 200%)*	126%	275%	811	200%
Tier 5	*Site Related Flow Charge x Rate Adjustment*	*($0.110 x 300%)*	276%	or greater		300%

Alternative #3

Stormwater Charge = Total Revenue Requirement / Impervious Area (Residential & ICI only) — *($10,287,756 / 57,600,683 sq. meters)*

Calculation of Residential Charge under each Alternative:		
Status Quo Approach		
	(Site Related Flow Charge x Avg Impervious Area) + Street Right-of-Way Charge (HRM)	*($0.110 x 294 sq. meters) + $41.78*
Alternative #1		
Tier 1	*(Site Related Flow Charge x ERU) + Street Right-of-Way Charge (HRM)*	*($0.000 x 294 sq. meters) + $41.78*
Tier 2	*(Site Related Flow Charge x ERU) + Street Right-of-Way Charge (HRM)*	*($0.055 x 294 sq. meters) + $41.78*
Tier 3	*(Site Related Flow Charge x ERU) + Street Right-of-Way Charge (HRM)*	*($0.110 x 294 sq. meters) + $41.78*
Tier 4	*(Site Related Flow Charge x ERU) + Street Right-of-Way Charge (HRM)*	*($0.220 x 294 sq. meters) + $41.78*
Tier 5	*(Site Related Flow Charge x ERU) + Street Right-of-Way Charge (HRM)*	*($0.330 x 294 sq. meters) + $41.78*
Alternative #2		
Tier 1	*(Site Related Flow Charge x ERU) + Street Right-of-Way Charge (HRM)*	*($0.000 x 294 sq. meters) + $41.78*
Tier 2	*(Site Related Flow Charge x ERU) + Street Right-of-Way Charge (HRM)*	*($0.055 x 294 sq. meters) + $41.78*
Tier 3	*(Site Related Flow Charge x ERU) + Street Right-of-Way Charge (HRM)*	*($0.110 x 294 sq. meters) + $41.78*
Tier 4	*(Site Related Flow Charge x ERU) + Street Right-of-Way Charge (HRM)*	*($0.220 x 294 sq. meters) + $41.78*
Tier 5	*(Site Related Flow Charge x ERU) + Street Right-of-Way Charge (HRM)*	*($0.330 x 294 sq. meters) + $41.78*
Alternative #3		
	Stormwater Charge x ERU	*($0.179 x 294 sq. meters)*
Current		
	(Site Related Flow Charge x Avg Impervious Area) + Street Right-of-Way Charge (HRM)	*($0.149 x 224 sq. meters) + $39.00*

Figure 10 – Calculation of Charges Option 1

Halifax Regional Water Commission
Sample Stormwater Charges - Option #1
2014/15

A. Revenue Requirement per the Sample Rate Study:

Street Right of Way (3)	$3,955,118
Site Related Flow (3)	$6,332,640
Total Revenue Requirement	*$10,287,758*

B. Calculated Rates per billing unit:

	Site Generated Flow
Billing determinations	
Impervious Area (1)	
ICI Customers	
- Site Related Flow	31,653,092
	31,653,092
Residential Customers	
- Site Related Flow	25,947,591
	25,947,591
Total Rate Base (1)	57,600,683
Rate per billing unit (Revenue Requirement / Rate Base)	*$0.110*

C. Calculated Annual Charges for Residential Customers:

		Average Impervious Area (1)(2)	Rate per Billing Unit(s)	Rate Adjustment	COSA Tiered Rate	Adjusted Tiered Rate	Standard Charge (rounded)
Site Generated Flow only							
Tier 1	*< 50 sq m*	294	$0.110	0.00%	$0.000	$0.000	*$0.00*
Tier 2	*51 - 223 sq m*	294	$0.110	50.00%	$0.055	$0.062	*$18.00*
Tier 3	*224 - 369 sq m*	294	$0.110	100.00%	$0.110	$0.122	*$36.00*
Tier 4	*370 - 811 sq m*	294	$0.110	200.00%	$0.220	$0.241	*$71.00*
Tier 5	*812 sq m +*	294	$0.110	300.00%	$0.330	$0.424	*$125.00*

D. Reconciliation of Revenue Requirement:

	Impervious Area (1)	# of Parcels	Rate per Billing Unit(s)	Revenue Requirement
Street Right of Way				$3,955,118
Site Generated Flow				
ICI	31,653,092		$0.110	$3,479,952
Residential				
Tier 1		2,582	$0.00	$0
Tier 2		51,596	$18.00	$928,728
Tier 3		23,345	$36.00	$840,420
Tier 4		10,558	$71.00	$749,618
Tier 5		2,652	$125.00	$331,500
Total Revenue Requirement				*$10,285,336*

Notes:

(1) *Impervious area has been measured using satellite imagery. The measurement unit is in square meters.*

(2) *(a) Impervious area for residential customers receiving service* — *25,947,591*
(b) Number of residential parcels receiving service — *88,151*
Average Impervious Area = [(a) / (b)] = — *294*

(3) *The Revenue Requirement per the Rate Application has been revised accordingly to reflect adjustments in the Billing Determinations. The revised ratios for the system wide determinations are 31.1% and 68.9% for Street Right-of-Way and Impervious Area respectively.*

(4) *All information contained therein is data known to HRWC. No reliance has been placed on any unknown data or data from external sources which cannot be validated with any certainty.*

Figure 11 – Calculation of Current Charges

Halifax Regional Water Commission
Compliance Filing - Revised Stormwater Charges
2014/15

A. Revenue Requirement per the Rate Application:

Street Right of Way (3)	$3,881,408
Site Generated Flow (3)	$6,406,348
Total Revenue Requirement	*$10,287,756*

B. Calculated Rates per billing unit:

	Site Generated Flow
Billing determinations	
Impervious Area (1)	
ICI Customers	
- Site Generated Flow	22,681,794
	22,681,794
Residential Customers	
- Site Generated Flow	20,235,102
	20,235,102
Total Rate Base (1)	42,916,896
Rate per billing unit (Revenue Requirement / Rate Base)	*$0.149*

C. Calculated Annual Charges for Residential Customers:

	Average Impervious Area (1)(2)	Rate per Billing Unit(s)	Standard Charge
Site Generated Flow only	224	$0.149	*$33.39*

D. Reconciliation of Revenue Requirement:

	Impervious Area (1)	# of Parcels	Rate per Billing Unit(s)	Revenue Requirement
Street Right of Way				$3,881,408
Site Generated Flow				
ICI	22,681,794		$0.149	$3,385,787
Residential		90,460	$33.39	$3,020,561
Total Revenue Requirement				*$10,287,756*

Notes:

(1) *Impervious area has been measured using satellite imagery. The measurement unit is in square meters.*

(2) *(a) Impervious area for residential customers receiving service* 20,235,102
(b) Number of residential parcels receiving service 90,460
Average Impervious Area = [(a) / (b)] = 224

(3) *The Rates Study has been revised accordingly to reflect adjustments in the Billing Determinations. The revised ratios for the system wide determinations are 30.4% and 69.6% for Street Right-of-Way and Impervious Area respectively.*

(4) *All information contained therein is data known to HRWC. No reliance has been placed on any unknown data or data from external sources which cannot be validated with any certainty.*

Orders Sought

646

(a) To approve changes to the Cost of Service Manual for stormwater

648

(b) To approve changes to the rate design for stormwater rates to become
650 **effective pending a future hearing to adjust rates**

Halifax Water
Halifax Regional Water Commission

amec foster wheeler

Technical Memorandum
Stormwater Rate Structure: Initial Analysis and Recommendations
Date: 10/21/15

Executive Summary

The purpose of this memorandum is to frame the discussion and make preliminary recommendations concerning the Halifax Regional Water Commission (HRWC) reconsideration of certain aspects of the stormwater rate structure as directed by the Nova Scotia Utility and Review Board (NSUARB). The focus is on several key issues with other topics covered in brief. Background effort in development of this memorandum included review of documents provided by HRWC staff and two days of concentrated meetings.

A framework for understanding the legal background and structure of stormwater utilities is briefly developed with a focus on the issues pertinent to HRWC. Basic legal principles derived from court cases and best practices inform and bound our decisions are discussed. Stormwater utility rate structures consist of a basic rate methodology, rate modifiers or class exemptions and secondary funding mechanisms.

Issues thought to be immediately pertinent to the upcoming rate design hearing are: exemptions, credits, and data clean up. Seven specific recommendations are made to help resolve and reform the exemption policy and process. They revolve around redefinition of who qualifies for exemptions, uniform application of the right-of-way charge, streamlining the application and review process, charging a refundable application fee, and a recommendation to more proactively identify exemptions under the new definitions and try to resolve quickly.

Stormwater credits are seen as a necessary component of a stormwater rate structure for both legal and programmatic reasons. They normally have little revenue reduction impact, but generate great goodwill and a sense of fairness. They also tend to encourage important stormwater detention and other structures to be kept in a well maintained condition to continue receiving the credit. Perhaps 40-60% of the fee might be open to credits. There is also interest in partnering with non-profits to encourage the use of Green Infrastructure on a pilot or "learning" basis.

There were a number of data clean up issues discussed, and it is clear HRWC has a good handle on what must be done. Issues for potential future consideration include residential tiering, urban vs. rural program operations, and several rate structure "tweaks". None of these were considered pressing but should be reconsidered should the rate structure be changed in the future.

Finally long term program growth strategy was discussed with the idea that, as a significant participant, HRWC needs to take a proactive role with other entities in dealing with storm and surface water more broadly. Customers will continue to expect services from HRWC beyond the current "system thinking." It is recommended that HRWC take the long view of the water resources in the region and its current and ultimate role in their proper protection and management; and do so through the development of a comprehensive business plan for stormwater/surface water management as part of being a "water resources agency".

Purpose and Overview

The purpose of this memorandum is to frame the discussion and make preliminary recommendations concerning the Halifax Regional Water Commission (HRWC) reconsideration of certain aspects of the stormwater rate structure as directed by the Nova Scotia Utility and Review Board (NSUARB). The eventual intent is to file an updated stormwater section to the latest Cost-of-Service Manual[1] during the Rate Design process in the Fall/Winter of 2015/2016.

In this memorandum, we will first cover a framework and set of best practices for stormwater utilities. We will then apply some of these to the current and future HRWC situation.

The process used in the development of this memorandum consisted of: (1) reviewing the current stormwater rate structure and supporting documents; (2) engaging in detailed discussions with staff concerning mutual thoughts and concerns about its application and implementation; and, (3) developing analysis and recommendations with reference to best practices elsewhere – with particular attention paid to entities in the United States that most resemble HRWC's structure wherein it has responsibility for all three of the key water resource functions: water, wastewater, and stormwater. Many of the organizations that have adopted this three-fold responsibility are larger than HRWC.

While a significant list of concerns or ideas was generated in the first two steps, many of them are best reserved for future phases in the natural maturation of the local stormwater program. It was decided to include them in this memorandum for the sake of completeness, and to provide insights and direction for possible future program and rate structure changes.

Complete details of the filing, rate structure, and other information can be found in the Cost-of-Service manual and will not be repeated herein except as necessary to frame an issue or idea. Please refer to that document for necessary background information.

Best Practices in the United States

In this section we will lay out a framework for consideration of the stormwater rate structure (not the allocation procedure) and review a suite of best practices with focus on those that may be applicable to HRWC now or in the future.

Overview

The development of stormwater user fees, and the supporting legal structures and administration, has grown in the United States since the early 1970's. Figure 1 shows the general pattern of stormwater utility locations in the United States. There may be on the order of 1,500 such entities in existence today. In many places the establishment of a stormwater user fee is very commonplace and "cutting corners" in process and documentation is also common.

While some sort of uniformity of understanding has been attained in many aspects of the practice, it should be understood that unique circumstances, the time in which the original utility

[1] Halifax Regional Water Commission, "Water, Wastewater and Stormwater Cost-of-Service Manual" July 2015.

was developed, and state or local laws also play into the final form and function of each individual stormwater "utility". Because some particular approach is used often does not always mean it is a "best" practice – just a common one.

In addition, the largest stormwater utilities, often those that are part of a wastewater organization, have greater variability than the many smaller utilities to reflect the unique set of circumstances for each. That said, HRWC can learn from best practices, common practices, and mistakes made in the United States.

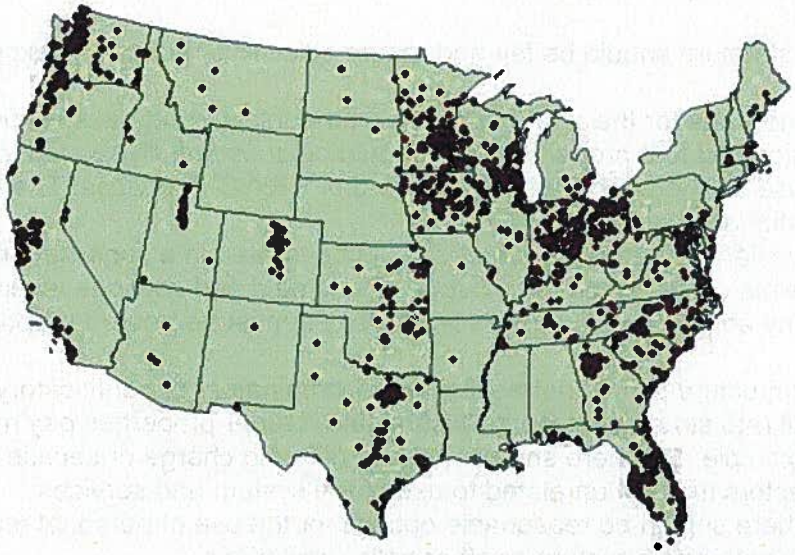


Figure 1. Stormwater Utilities in the United States, 2014
Source: Western Kentucky University Stormwater Utility Survey, 2014.

Legal Framework

Legal issues fall into two broad categories: issues dealing with the management of the stormwater program itself, and issues dealing with the utility rate structure and administration. The first type of issues have to do with such things as: nuisance law and municipal liability, municipal liability for approvals of development, long-term maintenance responsibility, extent and level of service policies, flood protection, mismatches in authority versus understood responsibility, and water quality compliance. Appendix A provides a summary of the key court cases on which these generalizations are based.

The second category can be divided into authority issues (considered here to be generally resolved) and rate structure issues. Several documents have been developed to discuss legal issues and to provide a framework within which stormwater utilities can presume to safely operate (though courts have been known to go off script!).[2]

[2] National Association of Flood and Stormwater Management Agencies, "Guidance for Municipal Stormwater Funding", 2006.
National Association of Clean Water Agencies, "Navigating Litigation Floodwaters: Legal Considerations for Funding Municipal Stormwater Programs", 2014

Several "common themes" emerge in the various court cases: tax or special assessment vs. fee, voluntary service and opt out provisions, cost of service relationships, benefit versus use ideas, governmental and other exemptions, and capital improvement applicability. In our practice when we develop a rate structure we keep seven key things in mind:

1. The purpose and exclusive use of the fee must be to regulate the specific activities of a subset of the general populace who make use of the stormwater service or system.

2. The total revenue generated must be a close approximation of the utility's cost of service, including reserves, etc.

3. The rate structure should be fair and reasonable. This normally is expressed in three ways:
   - The basis for the rate (basic rate methodology) and the specific costs allocated to a property owner should be substantially related to a parcel's "use" of the stormwater system and of HRWC's services. There should be a rational nexus between the two.
   - Similarly situated properties should be treated in a consistent manner in terms of the relationship between fees paid and services received.
   - Any applicable differences in properties must be treated proportionately.

4. The rate structure should not be illegally discriminatory or confiscatory.
   - All rate structures legally discriminate. Larger properties pay more, for example. But there should not be a differing charge or service level based on factors that are unrelated to use of the system and services.
   - There should be reasonable options for the use of personal real property despite rate structure or other policy limitations.

5. There should be a reasonable "opt out" provision by which a property owner can voluntarily take personal actions to reduce their stormwater bill. This is normally handled by a credits program and backed by an appeals process.

6. Regardless of an expressed or observed need, the program components and rate reflected by those components should stay within HRWC's authority as defined by law and interlocal agreements. HRWC's authority is defined by the HRWC Act and the HRWC Rules and Regulations as approved by the Nova Scotia Utility and Review Board (NSUARB).

7. Proper procedures must be followed in establishing and changing the rate in terms of public hearings, voting, etc.

It should be noted in number three that there is a confusion in the courts concerning "use of" and "benefit from" a stormwater program or system and whether that use or benefit must be direct or can also be indirect.

American Public Works Association, "Financing Stormwater Facilities: a Utility Approach", 1991

There are four general ways municipalities obtain revenue: taxes, exactions, assessments and service charges. A user fee is the last of these. The third of these, assessments, must calculate a "direct and special benefit" for the assessment to be both determined and legal. A service charge, on the other hand, has no such requirement to tie specific benefit to a specific parcel or property. It simply must show the above seven characteristics.

Where this distinction between "benefit from" and "use of" the system or services is confused for a user fee and the courts state that and "benefit" comes into play then the question of how direct the benefit needs to be is important. Indirect benefit as well as specific benefit are often counted as "use" of the system and services; as stated in the NACWA report:[3]

> *"There is a trend in case law upholding stormwater charges as user fees even if the benefit is indirect or immeasurable for those upon which the fee is imposed." p. 5*

Reference to the case law supporting this idea can be found in the referenced publication which is available at the HRWC office in digital form.

Typical Utility Framework

To assist in later discussion the "typical" utility framework will be laid out here. The rate structure developed for a particular utility is divided into three modules:

1. Basic Rate Methodology;
2. Modification Factors and Class Exemptions, which can be applied to any of the rate concepts to enhance equity, reduce costs, and meet other objectives; and
3. Secondary Funding Methods that can be adopted in concert with the service charges.

1. Basic Rate Methodology

The basic rate methodology defines the basis for the rate that users will be paying. The three main impacts on surface water of urban development are increases in: peak flow, volume of discharge, and amount of pollution. Most other impacts can fit into these three basic categories. The variable most positively associated with increases in peak flow, volume of discharge, and amount of pollution is the conversion of pervious areas to impervious areas. Accommodating the runoff that occurs when a pervious area that typically absorbs rainwater is converted to impervious area requires investment in the public drainage system – both to convey stormwater runoff and to protect downstream property owners from this flow increase. This investment is typically done by some combination of the private property, the system owner/operator, or another public entity. Therefore, it is appropriate to use some measurement of impervious area or surrogate in the rate methodologies. While impervious area does not directly account for all of the stormwater program costs, urbanization of land as reflected in intensity of development is, by far, the best measure of cost causation and provides a court-tested rational nexus for the fee amount on any property. In various surveys it has been found that about 75-80% of all stormwater utilities use this method.[4]

---

[3] National Association of Clean Water Agencies, "Navigating Litigation Floodwaters: Legal Considerations for Funding Municipal Stormwater Programs", 2014 p. 5

[4] 2014 Stormwater Utility Survey, Black & Veatch

There are additional ways to configure the rate methodology to emphasize certain other impacts or recognize the benefits of certain kinds of development practices. Many of these considerations can also be handled with a stormwater crediting or secondary funding method, but some factors can also be handled in the makeup of the basic rate methodology itself. The three most common other methods are:

- Gross parcel area in addition to impervious area;
- Charges based on an intensity of development factor times the gross area – so that the same amount of imperviousness would be charged less if it were located on a larger lot with more green space; and
- Billing on the basis of an estimate of total runoff through the use of a land use weighted runoff factor such as the Natural Resource Conservation Service (NRCS) Curve Number.

Gross parcel area is important if total runoff versus increase in runoff is of concern. This was the situation in the court case in St. Louis wherein the courts said that impervious area was not sufficient to reflect the fees charged and that gross area must be used. 20% of all utilities use gross and impervious area.

If the preservation of green space is a key concern, then the intensity approach encourages such land conservation through a reduced fee. There is engineering backing for such an approach, especially when pollution or discharge volume come into play in program cost causation. 16% of all utilities use this approach.

Of note is that the first two approaches treat open space in opposite ways. In the first it results in a fee increase, in the second a decrease.

The third method, wherein the total runoff is calculated based on the total site characteristics, is important if the actual impacts of all land use choices and pre-development conditions is considered important. In that case the conversion, for example of forest to field, results in an increased user fee because the volume of runoff from a field is far greater than that of a forest even though neither has any impervious area. Only a handful of utilities, typically in a couple localities, use this approach because it is complex to administer.

Halifax uses the impervious area methodology derived from raster recognition techniques applied to multi-spectral aerial photography.

2. Rate Modifiers or Class Exemptions

Rate modifiers or class exemptions are the second component of the rate structure. These are policies that change the user fee charged to certain classes or types of properties. They are designed to appropriately increase simplicity or enhance equity.

2015 SESWA Utility survey, Southeast Stormwater Assoc.

The most common modifiers include: unit of charge, simplified residential charges, credits, fixed cost per account, area/service/impact specific surcharges, and declining rates for larger impervious areas for the peak flow component of the charge only.

The most common exemptions include: government buildings or properties, impervious areas beneath a certain threshold, roadways, runways and taxiways, certain communally used properties such as cemeteries or parks, elderly or economically disadvantaged, non-profits, and those who do not "use" the system or services.

Because of the problems, legal inconsistencies and cost of program administration it is recommended that such modifiers and exemptions be kept to a minimum and introduced only when they actually increase simplicity or enhance equity in a manner seen as necessary for the utility and local milieu.

Modifier: Unit of Charge

With impervious area established as the fee basis, the stormwater management program must choose a unit of impervious area measurement as the unit basis on which to charge customers. Like other utility charges, such as water and power, the stormwater utility charge should have a base unit. For example, in the case of electric utilities, the base unit is kilowatt hours. For the stormwater utility, the base unit is a measure of impervious area.

Very small units (such as per square metre of impervious area) will result in frequent billing errors due to the inexact nature of the parcel and impervious feature data, and the inexact registration of these geographic data sources with each other. Very large units of measure (such as per 1,000 square metres of impervious area) do not sufficiently differentiate charges among customers with disparate amounts of impervious area.

In order to strike the proper balance of accuracy and fairness in charges, the Equivalent Residential Unit (ERU) is an ideal unit for the fee basis. The ERU is the impervious area of the representative residential structure. Such a unit is intuitively understood, is of about the right size, and reduces errors. By using the ERU, properties with significantly similar impervious areas (such as neighbors in similar homes within a subdivision) will be charged identical charges, and slight errors associated with inexactness in the underlying data sources will be eliminated.

Utilities typically round to the nearest whole ERU or use a "roundup" feature. The justification for the roundup is that the utility is billing "classes" of ratepayers and some non-residential property that has, for example, 3.3 ERUs is in the class that pays 4 ERUs.

As the fee increases, some utilities have simply chosen a suitable size that balances ease of measurement and management of impervious changes and the emotional shock value of a fee increase. For example, in the United States a "fee per 100 square feet of impervious area" (or other similar unit) is common.

Halifax uses a single square meter as the current unit of charge, rounding to the nearest whole unit.

Modifier: Simplified Residential Charges

An important variable in the rate structure is the basis for residential charges and for the equivalent or representative residential unit billing amount. The following options for single-family residential (SFR) properties exist along a continuum:

- A single flat rate charge for residences. In general, charging a single flat rate for all single family residential properties can be seen as inequitable, because there may be a large difference in the amount of impervious area on the smallest homes in the community when compared to the largest homes in the community. If the fee is small or the "fixed" portion of the fee is considerable, then a single flat rate charge is simply overlooked.

  However, the overall level of equity of the service fee may not be diminished if a single flat rate is charged to most residences, while especially large residences (for instance, those with greater than 10,000 square feet of impervious area) are charged not as single family residences, but rather as commercial properties.

- A tiered structure. This option might enhance the equity compared to a flat rate, since smaller homes would pay a lower rate. A tiered structure increases the cost and complexity of setting up the rate structure slightly. Often digitizing of each residential structure can be avoided through use of the tax data file and suitable regression equations fit to the local data.

- Individually-determined charges. While equity would be enhanced by this option, costs are increased exponentially. The possibilities for error on a per account basis are also increased through this methodology.

It is desirable to simplify the residential billing as both a cost saving measure and a way to simplify the explanation of the fee. The courts have allowed all three methods above. To enhance equity among SFR ratepayers, more advanced stormwater utilities often use a tiered rate structure instead of a single flat rate. However, in a recent survey[5] 67% of all stormwater utilities use a uniform flat fee, 28% use tiers and 6% calculate individual charges. Of those with tiers 14% have two tiers, 41% three tiers, and 45% have more than that. It should be noted that in our experience among larger utilities the use of a uniform flat fee is uncommon, particularly among those with fees above $4.00 per month where the apparent inequities of such a system become more visible. It is more of an expedient for small utilities with smaller fees and little data.

Halifax currently uses a single flat rate for residential properties regardless of size divided into site generated runoff and a fixed allocation for the right of way impervious area billed by HRWC on behalf of the City of Halifax. The site generated runoff charge set for the 2014/2015 period at 0.149 cents per square meter annually multiplied by the average parcel size of 224 square meters of impervious area leading to an annual fee of $33.39. The right of way charge is $39.00 per paying parcel (increased to $41.00 per all parcels in 2016) leading to a total residential annual fee of $72.39 or about $6.03 per month.

[5] 2014 Stormwater Utility Survey, Black & Veatch

Modifier: Stormwater Credits

Stormwater credits can be granted to increase equity and to provide incentives to implement an overall community stormwater management objective. Credits are currently seen as necessary to meet the requirements for voluntary ability to reduce the charge. A credit is an ongoing reduction in a property's calculated stormwater fee for:

- ongoing activities on the property that reduce the use of the public stormwater system or services; or
- ongoing activities on the property that reduce HRWC's actual cost of service.

Stormwater programs vary considerably in the amount of the user fees that they make eligible for crediting. The extent or generosity of the credit could include consideration of which stormwater program costs can actually be reduced by the qualifying activities for which users can receive credits or how the impacts of shared impervious area (roads) is distributed among all rate payers. Common stormwater credits include: detention, retention, or best management practices (BMPs); private maintenance credit for larger properties; education credit; green design credit; and NPDES permit credit for industries.

In 2013 Halifax Water conducted a study of stormwater crediting to gage the types and amounts of credits as well as a basis for offering credits within normal rate structures.[6] Ten cities were choses as models including several in Canada.

More detail on the basis for credits in the United States and a number of examples can be found here: http://72.3.251.71/SW/Editorial/Stormwater_Utility_User_Fee_Credits_32.aspx

Halifax currently offers no credits.

Modifier: Fixed Cost per Account

A fixed cost per account is a flat base rate that is charged for each account regardless of the size of the parcel or the amount of impervious area on the parcel. A stormwater management program could incur certain expenses that may not be directly related to the amount of runoff generated by individual properties or the level of service that is provided to them (e.g. customer service, GIS, billing). These expenses are similar to those incurred by a water or wastewater utility and fall into three main categories:

- Administrative expenses such as administrative overhead, general financial management, and indirect costs allocated to the utility from HRWC.
- Billing related costs such as postage, customer service costs, and database maintenance.
- Non-directly-attributable general stormwater program costs such as master planning, system inventory, some parts of permit compliance that are unrelated to parcel characteristics, and water quality or other education programs.

Most stormwater utilities simply allocate stormwater program costs across the rate base, while others segregate them and bill them as a fixed cost per account. Some of these costs are difficult to allocate specifically to individual properties or classes of properties, and may be

[6] Campbell, Craig, "Development of a Stormwater Credits Program at Halifax Water", 2013

allocated on a per-person surrogate basis (e.g., education, general planning, or customer service) or on a per-account basis (e.g., postage, database upkeep). For example, it costs the same to send a bill to a residence as to a shopping center. Charging a fixed cost per account is not an additional charge but simply a different way of allocating the total cost of the program.

It should be noted that shifting to a fixed cost per account will shift costs away from non-residential properties and toward residential properties, slightly raising residential charges to generate the same amount of overall revenue.

HRWC does not charge a fixed cost per account in stormwater but does have a fixed cost in water and wastewater reflecting a measure of billing and customer service costs.

Modifier: Surcharges or Charge Reductions

This approach recognizes that some locations are inherently more expensive to serve per unit or require a differing level of or type service. Floodplain areas are the sole recipients of a suite of services designed to protect them and may be charged more. Certain commercial or industrial users have higher levels of pollution in their runoff and may be charged a "strength of runoff" surcharge by industrial class code (for example). Others are:

- inside or outside an area served by combined sewers,
- by watershed,
- based on variable capital construction or permit cost needs,
- based on intensity of development,
- based on location with respect to a regulated floodplain,
- located in an urban blight or special development district,
- based on the character of the construction within an area (e.g., a neighborhood that employs sustainable green designs throughout),
- based on an area's need for special services,
- based on some special characteristic of the property which can be tied to use of the system such as being an urban hotspot, etc., or,
- urban services versus rural service districts.

Currently not applicable to HRWC.

Modifier: Declining Block Rates

The idea behind this rate modifier is that the peak rate of runoff per unit of impervious area is not a linear function of area but declines as the area grows. The Rational Method is normally used to develop such a reduction approach because it reflects well the non-linear rainfall intensity change with area. While it can be complex to apply (what if a stream bisects a large parcel?) it has been used to reduce somewhat the fee for the largest non-residential parcels – for example in the Northeast Ohio Regional Sewer District (NEORSD).

Currently not applicable to HRWC.

Exemption: Government Property

Some utilities exempt government property reasoning that it is more equitable to allocate the cost charged to government buildings as a portion of the total cost of the overall stormwater

program to all ratepayers of the stormwater program rather than passing it along in property taxes. In reality, raising taxes for stormwater charges or finding the money is often difficult (schools for example) and it is expedient to make this exemption. In some cases the initial shift from tax based funding to a user fee frees up significant tax funds (the "peace dividend") and these funds are allocated to the government's share (often including roadways) to handle the funding problem.

It should be noted that if local governmental buildings are exempted then all governmental buildings should be (similar treatment of similar properties). In the United States Federal facilities of all types have been directed to pay legally constituted stormwater user fees by Congress.

Also, there can be problems when a non-public building looks identical to a public one. For example, a public school is exempted but not the similar private school next door.

Currently not applicable to HRWC.

Exemption: Threshold Limits

In this case it is recognized that very small impervious areas have little or no impact on runoff and that the cost of data collection and maintenance is not worthwhile. So rather than maintain an appearance of undue accuracy without the reality of it, small impervious areas (and small impervious area increases) are exempted. The first of these is generally in the 40-60 square meter range. The second is normally handled within the ERU or other unit sized billing unit increment as discussed above.

HRWC has recently transitioned to a ten square meter exemption threshold. This is being applied as encountered but will be uniformly applied at the new rate inception. There may be about 700 residential properties and 1,100 non-residential properties this applies to.

Exemption: Roadways/Runways

Like the government building exemption, the exemption of public roadways (and sometimes public airport runways and taxiways because they are "public transportation surfaces") is often a choice of convenience or expediency. And like that exemption, if local roadways are exempted all roadways should be exempted.

Sometimes (the State of Vermont for example), the roadway charge is simply reduced to some lesser amount reasoning that much of the paved surface is actually a stormwater conveyance structure.

The allocation of the roadway cost is also of concern because it is often nearly a third of the total impervious area on average. The idea is that those that use the roadway system (and its supporting drainage) should pay for it. Most communities simply reason (if they reason at all) that impervious area on a parcel correlates well with the use of the roadway system. For non-residential properties the larger the building footprint or larger the parking lot the more use of the system is made to support the business – shipping, warehouse storage, customer parking, etc. This is true for all types of non-residential structures except for high rise apartments or condominiums with underground parking. For residential properties most homeowners have a

car, and the larger the home typically the more cars. Not perfect, but sufficient rational nexus exists to support it and it may appear to be fairer than a simple fixed cost per account approach.

In most cases of exemption, reallocation on another basis it is simply not addressed.

Utilities that pay the roadway charge without reallocation simply do so out of taxes. This is often an approach to reduce the fee, typically, by about a third while retaining the existing program support from the tax base by charging the City for its roads. This also allows charges to be made for Provincial or National roadways.

HRWC currently allocates the total roadway impervious charge to the city of Halifax who has allocated it equally on a per account basis of $41.00 annually. As mentioned above, the approach will change in 2016 wherein the right of way charge will be billed on the tax bill thus exempting all tax exempt properties but will include all properties within the stormwater service area regardless of whether they claim an exemption from the site generated flow charge. The revenue difference is estimated to be insignificant.

Exemption: Certain Common Use Properties

Some local governments exempt certain common public (or quasi-public) properties, the charging of which might bankrupt them. Common in this category are parks and cemeteries (public and private but open to the public) if the park is freely used by all and the roadway charge would be seen as excessive.

Currently not applicable to HRWC.

Exemption: Non-profits, Elderly, Income Disadvantaged, Military, etc.

There are a plethora of categories of "specialty" exemption for a variety of reasons. In no case is the reason correlated to use of the system or services of the stormwater utility. In some cases (e.g. Texas) state law allows the non-profit exemption. In other cases it is simply taken and has not been challenged in court. Treating such properties in a manner that is different from physically similar properties can be problematic – the rain falls on the just and the unjust. Some utilities often partner with a non-profit who administers the income disadvantaged program out of other local funds or a fund set aside for such purposes within the user fee structure.

Currently not applicable to HRWC.

Exemption: Non-Use of the Stormwater System or Services

This exemption may be one of the more difficult to parse out. As mentioned before, direct use or benefit is not always required by the courts to allow a charge to be made. Depending on the actual program components and their relative cost a case can be made that all properties benefit from safe roads, safe channel flow, flood protection upstream from them, access to roadways across culverts, clean water, educated citizens, etc.

Precedence within water and wastewater charges can often be applied to stormwater within the same entity. So, for example, availability charges may apply. Also, there is no need to determine how much of the system is used just as there is no need to show how much of the wastewater system is used.

Often only a partial exemption is applied – or the crediting mechanism is used to reduce charges.

HRWC currently exempts those properties that are not users of (do not discharge through) the defined HRWC stormwater system. This exemption process has caused numerous issues discussed below. In the future the right of way charge will be billed on the tax bill and all taxable properties within the stormwater service area will be charged. Note that this will then exempt those tax exempt properties. The charge will be $42 annually.

3. SECONDARY FUNDING METHODS

Secondary funding methods are employed to enhance the revenue stream of HRWC and to increase equity by shifting costs for specific services or service levels to those requiring the services. There are a large number of secondary funding methods employed by local governments. Because such methods are not the focus of this effort only a brief description will be given here and no further analysis.

Besides the methods described in the sub-sections below, the following secondary funding methods also exist in the United States:

- Non-monetary methods of obtaining value (e.g., proffers of property, other exactions, transfer of development rights, etc.);
- Grants or other state and federal money;
- Bonding, state revolving fund (SRF) loans, or other means of acquiring capital through bonding and loans; and,
- Public-private partnerships which can allow for shared costs and risks in development projects, and sometimes ongoing operation.

In HRWC's instance, the following primary funding mechanisms are capital funding through depreciation (basically collecting fee revenues as depreciation in a form of pay-as-you-go funding), and through debentures. The following secondary funding mechanisms exist.

- Deep storm sewer cost sharing from the municipality
- Federal/Provincial infrastructure funding (on an application driven basis)

Plan Review, Inspection, and Other Special Service Fees

A variety of special fees can be integrated with periodic general service fees in a stormwater rate methodology. The most common are plan review and inspection fees associated with new development projects. There may be any number of administrative service or special activity fees (e.g., laboratory testing, BMP inspection, special maintenance, etc.).

HRWC currently employs plan review and inspection fees, and a culvert inspection fee.

Special Charges

Special charges (often called surcharges) can be levied when the service type or level, or the demand placed on the system, is measurable for a certain group of ratepayers that is above that of normal rate payers. For example, some homeowner groups maintain their own detention

ponds. Some, for a surcharge, may request that HRWC provide such maintenance should such a program be instituted.

Some cities or even neighborhoods may request a higher level of service for system inspection or clean out, or may require it based on excess trash build up, etc. HRWC may offer special services (e.g., street sweeping) or higher levels of service (e.g., pre-storm inspection or larger sized pipes) for a surcharge. In some communities urban hot spots require additional inspections and pay a surcharge. In others, floodplain residents pay extra as the beneficiaries of floodplain management activities.

There may also be a surcharge on other utility bills, such as a charge to the solid waste enterprise to recover some of the cost to stormwater of that service's target.

Currently not applicable to HRWC.

System Development Charges

The basic purpose of a system development charge is to equalize the financial participation in capital investments among ratepayers served by systems at different points in time. Similar but more complex funding methods known as plant investment fees, connection fees, and capital recovery fees are widely used for water and wastewater and by private utilities. The need for this type of one-time charge is dictated by the fact that the physical life of most capital improvements is substantially longer than the period during which they are funded or even the longevity of people. In addition, modern urban Canada is a highly mobile society, which makes it difficult to equitably distribute the capital cost of infrastructure among those who use the systems over time.

HRWC currently has Regional Development Charges (RDC) to fund new growth related infrastructure, but there is no RDC component for stormwater at this time, as there are no identified regional infrastructure capital requirements for stormwater driven by growth. Stormwater infrastructure for conveyance is more local in nature and funded by developments at the time of construction.

In-Lieu of Construction Fees

In-lieu of construction fees allow developers to participate in the cost of regional stormwater facilities rather than requiring that each development include on-site stormwater detention systems. For example, if a regional stormwater system were available for the use of a specific property, then that property developer or owner would pay a fee for the use of that facility.

Currently not applicable to HRWC.

Impact Fees

Impact fees are relatively uncommon in stormwater management because of the limitations inherent in their definition and use in most places. They are charged to a developer to bring a generally adequate system or service up to an improved level of service in the face of increasing demand. They cannot be used to improve an inadequate system (making up for past sins) and they normally have a sunset provision that requires HRWC to have other funding sources to accomplish the construction in a timely manner.

Currently not applicable to HRWC.

Developer Extension/Latecomer Fees

Developers are often required to extend sewers, roads, and stormwater systems, and to oversize the improvements to accommodate future growth. In a sense, the first developers into an area may be subsidizing later developers who connect to or are served by improvements they build. Developer extension/latecomer fees would not be used to generate revenue for the stormwater program, but rather to offer an incentive for private developers to install adequate, often oversized, stormwater systems as growth occurs. This funding method provides a mechanism whereby private developers in outlying areas can be reimbursed (at least partially) by future developers for improving regional stormwater systems.

Currently not applicable to HRWC.

Special (or Benefit) Assessment Districts

A special assessment district is an area where a special value-based tax assessment is imposed because of a public project that benefits the owners in the defined area. The character of a special assessment district is that the level of the assessment must be both based on a direct estimate of benefit received and must be special to the district and not enjoyed by the populace generally. They are often used for local construction projects and sometimes carry a long-term maintenance fee provision. Often bonds are sold to construct the project paid back by the assessment. A special case of this is a tax increment district. Tax increment bonds, which differ slightly from special assessment bonds, are local tax exempt bonds issued for special assessment or improvement districts where the benefit from the project being financed is specifically manifested through higher property values. The tax increment financing, termed TIF, generates revenue for bond repayment from the incremental change in property values caused by the financed improvement.

HRWC does not have the legislative authority to levy taxes. The municipality however, can levy local improvement charges or area rates on HRWC's behalf. HRWC does have the ability to establish "Capital Cost Contributions" CCC's, to fund new infrastructure within Master Plan Areas.

Fines and Penalties

Violators of federal, state or local laws and regulations are frequently subject to the payment of monetary fines and penalties. Many of these violators also are subject to court adjudication. The amount of fines or penalties generally is outlined in statutes and ordinances, but the actual sum imposed (at least for federal and state violations) typically results from specific administrative or judicial decisions, and may only occur after repeated violation on the part of offenders.

HRWC does have the authority to issue Summary Offense Tickets (SOTS).

Stormwater Billing

This analysis did not delve into the development and implementation of the database, billing system and master account file maintenance, and stormwater customer service. Halifax has a

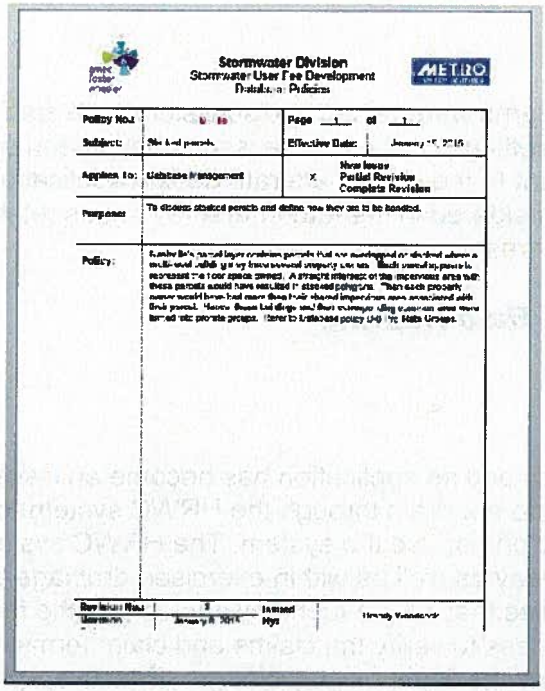
mature billing system for water and sewer and the processes used for those purposes support stormwater. However, certain best practices in the United States may be worthy of mentioning.

Stormwater billing is sometimes just as different from wastewater as stormwater programs are from wastewater programs. There are myriad policies on how to handle special situations. Best practices involve a deliberate discussion/decision process for each key area that is documented and part of training for billing and customer service personnel.

For example, Table 1 was considered the starter list of things to consider in one utility set up several years ago. Figure 2 is an example of the billing and related policy book and format that was created to help both document policy decisions and procedures, and to serve as an education tool for new employees. Figure 3 demonstrates the produce of an automated .jpg generator system set up to provide customer service with the parcel figures and impervious overlay for every parcel in the system. This allows for quick corrections to be made or customer questions to be resolved without reference to higher level GIS capabilities.

Table 1. Example Billing Related Policy Issues

Cadastral Data Shift	Land Use Classification Inaccuracy
Impervious Surface Data Layers	Land Use Classification
Impervious Surface Definition	Condominium Impervious Area
Prorate Groups	Common Area
Impervious Area Correction	Road versus Driveway
Updating Impervious Area	Excluding Satellite Cities
Duplicate Parcels	Stacked Parcels
Matching Parcels to Meters	Owner Fallback Billing
Agricultural Exemptions	Private roads
New Exemptions	Condo Consolidation
Appeals and Adjustments	Back Billing
Collections and Delinquencies	Water Bill Tie-in
Property Liens	Enforcement Procedural Issues
Resolution Procedures for Discrepancies	Master Account File Development Process and Accuracy
In-Fill Development	Paved Trails and Linear Features
Credit Application and Denial	Refunds
Rounding and Ranges	Customer Service Procedures
Stormwater Only Accounts	Master Account File Maintenance
Consolidated Billing - General	Multiple Owners
Multi-Story Condominiums	Go-Live Process for New Development
Appeals Process	Late Payment Fees



Stormwater Division
Stormwater User Fee Development
Database Policies

Figure 2. Example Customer Service automated .jpg Reference

Figure 3. Automated .jpg Files Generated for Customer Service Reference

Analysis and Recommendations

Overview

A number of issues and concerns were raised in discussions with staff and in review of the documentation. To assist in setting priorities these issues have been divided into three categories: (1) issues pertinent to the immediate rate design application; (2) issues of secondary importance which may be considered in the future; and (3) issues related to long-term and more holistic stormwater and water resources management.

Issues Pertinent to the Rate Hearing

Exemptions

Situation

The current exemptions policy and its application has become an issue of concern. The current policy allows all parcels that do not drain through the HRWC system to be exempt from the stormwater fee because they do not use the system. The HRWC system is defined as pipes and ditches within public right of way as well as within exercised drainage easements. The outcome of this is hundreds of properties that do not feel they should pay the fee and a cumbersome and time consuming appeals process to verify the claims and claim forms. In addition, exempted properties currently do not pay the Right of Way charge. Effective April 1, 2016 the municipality will begin collecting the Right of Way charge on the property tax bill, and properties exempt from the Site Generated Flow charge will no longer be exempt from the Right of Way Charge.[7]

Discussion

There are several related issues:

Use of the System

As mentioned above, direct conveyance use of the public stormwater system can be considered to be a narrow definition of "use". It is considered that a more expansive definition of that term most accurately reflects the actual use many properties make of the HRWC system and services:

- "Use" of the system also includes use of the culvert or other crossing structure for roadway access. HRWC maintains such a culvert and will replace it if it fails. Even one replacement would not be covered by the normal fee for many years.
- "Use" of the system not only includes conveyance of the private stormwater runoff safely away from the property, but also includes the safe conveyance of all upstream runoff that may otherwise flood the property or roadway access. This may also include general flood safety for all citizens as they go about their daily activities.
- Should HRWC take on a wider program function of water quality protection, climate change and resiliency, and other related services, "use" could include water quality protection, recreational opportunities, etc.

[7] All taxable properties within the boundary will pay the $42 per year (starting with the 2016 tax bills). Exempt properties such as churches, schools and hospitals will not pay the new area rate. June 23, 2015 Regional Council report: http://www.halifax.ca/council/agendasc/documents/150623ca81.pdf.

Right of Way Exemption

The Right of Way charge is not applied to exempted properties. This is a break in logic. All parcels that enjoy the benefit of the right of way should participate in the cost of conveying this runoff. That cost is unrelated to location with respect to the right of way. This might also include all properties within the Halifax municipal boundary since it is presumed that all properties make use of the public roadway system. At a minimum, the ROW charge should be charged to all properties within the stormwater service area without regard to any other credits or exemptions.

Exemption Process

Based on staff discussion, the exemption process has been found to be somewhat cumbersome in several ways: (1) the time frame from application to approval or rejection is too long; (2) the application is free, allowing for frivolous applications; (3) there is little education or other information available to would-be applicants to serve as an initial self-screen and educational site; (4) the process is reactive rather than proactive costing both citizens and staff extra time in making a determination that could probably be made in a more efficient, proactive and automated way; and, (5) the exemption is "all or nothing" wherein parcels would qualify for a partial exemption of some of their impervious area.

Recommendations

It is recommended that:

1. A new formal definition of "use" of the system be developed in such a way that it can be applied to individual properties. It should include at least the first two bullets above: upstream stormwater management within a developed area and use of a publicly maintained culvert crossing to access the property.
2. The ROW charge be applied to all properties within the stormwater service area at a minimum. This may already be in planning. If this continues to be levied to the municipality, Regional Council has determined that the charge will be applied to all taxable properties within the stormwater service area boundary effective April 1, 2016. This may create additional confusion for stormwater customers as some properties which were formerly exempt from the ROW charge will be billed for it post April 1, 2016 and some properties currently paying the charge will become exempt. Halifax Water and the municipality should consider development of a joint communication strategy to support the implementation of Regional Council's decision with respect to the ROW Charge.
3. The new definition of use be applied proactively to all properties in a short amount of time and the results be communicated.
4. The application process should have a deadline built into it and exemptions granted conditionally if the deadline is not met by HRWC staff.
5. An educational exemption portal be developed on the HRWC website that allows any user to find their property and look at it with respect to topographic, receiving water, and system drainage information. It should be educational, its use mandatory as an initial screening tool, and include an exemption application process.
6. Given the fact that there will be a pre-screening portal and that HRWC will proactively identify exempted properties, there should be a fee charged for the exemption application sufficient to fully or at least partially cover staff time in application assessment. If the exemption is granted the fee will be refunded in full. If not, the fee shall be retained to partially defray the cost of the exemption service.

7. Though there may be few, there should be an ability to define a partial exemption for those parcels that only partially qualify for such an exemption. This should also be applied to the outer boundary of the stormwater service area allowing those properties whose impervious area is partially outside the stormwater service area to pay a prorated share of the total fee.

Credits

Situation

HRWC does not offer a crediting system at this time. Best practices elsewhere would suggest such a system be put in place, that is simple to administer and easily understood by customers.

Discussion

The current stormwater program is limited to a primary focus on flood conveyance. Minor pressure is being felt by HRWC from non-profits for exploration and possible implementation of a Green Infrastructure (GI) program. HRWC and the city of Halifax require detention for the control of peak flows for certain return periods. There may be a number of non-residential properties that have such a private structure. The condition of such structures is unknown. It is presumed that these structures have some importance to the flood reduction and protection mission of HRWC and thus should be maintained.

Best practice in the United States is to allow for a credit against the user fee for such private actions that bring about a public good. Indeed, as discussed above court precedence would suggest the provision of credits may be seen as part of insuring the "voluntary" nature of a stormwater user fee versus a tax.

The establishment of crediting amounts is not a science but a careful balancing of the actual impact reduction of a structure (i.e. does it "look" less impervious than it actually is); the portion of the stormwater program applicable to the impact reduction in question; and the process by which credits are administered and structured.

Initial back of envelope analysis of the current stormwater program costs indicates that approximately 40-60% of all expenditures go toward flood control or conveyance of peak flows. While it has not been estimated what part of the flood flow increase can be ameliorated by current detention standards, certainly there is some value to the ponds.

Credits rarely have any significant rate impact even when generously applied. Less than 5% of revenue would be a fairly extreme revenue reduction for a comprehensive credit structure. Yet credits create great goodwill and a sense of fairness, especially among the largest rate payers.

The administration of such a program would have as a by-product the assurance that these ponds or other facilities are restored to as-built condition and kept maintained throughout their life. The credit amount is generally sufficient to cover the ongoing routine maintenance cost of such a facility, though there are variations. Key elements of the program would include: a comprehensive credit manual, application forms, web-based education and application processes, initial and ongoing inspection procedures, development and maintenance of a database of private credited structures, and a process for encouraging and enforcing ongoing maintenance.

For non-flood control credits, the current stormwater program applies little or no cost to such a program and thus, a credit per se might not be strictly applicable. However, it is clear that the employment of GI techniques will become part of HRWC's program in the future and that gaining early experience in its use and providing the beginnings of public education might both be seen as desirable objectives in the near term. As such providing some sort of incentive for the use of GI in appropriate settings is a good idea. HRWC does not have the time or staff budget to pilot such an approach. But there are local non-profit groups that may be able to assist HRWC in this. This has been done in several places in the United States and is considered a best practice for the initiation of GI programs – especially for residential customers.

Recommendation

It is recommended that a stormwater crediting program focused on flood reduction through the use of stormwater peak flow detention be established. It is further recommended that HRWC explore a GI partnership with local non-profit organizations with a goal in mind of public education, education of all involved in the successful issue of GI, and application of GI to residential properties or to non-residential properties on a pilot basis.

Data Clean Up

Situation/Discussion

During meetings with HRWC staff, while the data is generally considered good, a number of data-related issues emerged that needed "cleaning up". These included: ponds captured as impervious area, large residential properties actually being non-residential or the impervious areas coded wrongly, owner versus tenant relationships, the treatment of water features, pits and quarries, and a question of the difference between "leaf-off" data versus "leaf-on" data from the latest impervious coverage. Additional data cleanup is being carried out prior to the storm water rate design application.

Recommendation

No specific recommendation is to be made other than best practices in the United States include a significant effort on the front end to insure all data is correct (which never happens 100%), processes and policies are written and in place to assist in decision making and in keeping data current, and tools to enhance customer service abilities are in place where possible. Halifax Water has demonstrated due diligence and best efforts to obtain and maintain accurate data, and on a go forward basis should develop a policy manual as noted above, and adopt an approach that "facts on the ground" outweigh system data, and make data adjustments and corrections as required.

Residential Charge Structure

Situation/Discussion

Currently HRWC charges each residential parcel the same fee: $39.00 ROW charge + $33.39 Site Generated Flow Charge for an annual total of $72.39. On a monthly basis this is: $6.03. The use of a residential average has not been a subject of challenge, and revenues are currently sufficient to cover the projected cost of service so there is no sense of pressure to consider immediately changing the rates. However, best practices elsewhere might indicate ideas to enhance equity while retaining simplicity.

Figure 4 shows the quarterly charge for the typical single family residence for a number of larger USA cities or entities. Assuming Canadian cost of living compared to its dollar is roughly equivalent to that in the United States to its dollar, it can be seen that Halifax's charge (in red) is slightly less than the median of these communities.

Figure 5 shows the distribution of impervious areas for the residential properties in HRWC's database. No attention was paid in this analysis to whether they were considered current customers or not as that will likely change with the new definition of "use" of the system. The horizontal axis is expressed in multiples of the average sample size of 224 square metres for residential properties.

As can be seen the size distribution is a standard "hydrograph" shape with a very long tail on the high side. There are many statistical ways to consider this distribution and the single flat fee paid. The right hand bar includes all properties that are larger than the last size value.

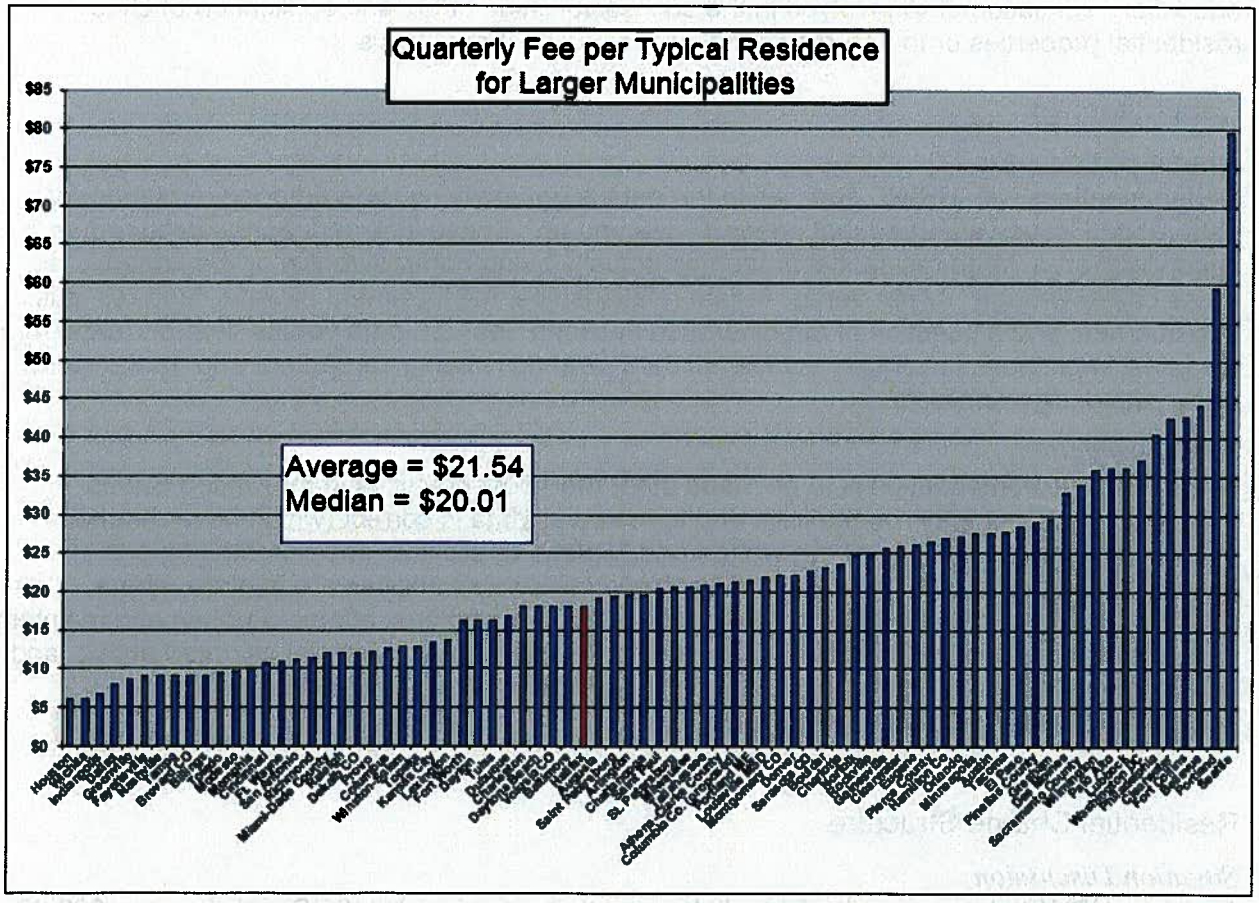


Figure 4. Quarterly Stormwater Fee for Representative Residence

The largest property (doubtful it is really a single residential property) is 580 times the average size. While this is extreme, more than 13% of the properties are more than twice as large as the average size. Over 1,500 properties are five times larger than the average property.

At the other extreme over 9,000 properties are less than half the average size. If we were to calculate the charge based on actual measurement of impervious areas like the non-residential properties 60% of all residential properties would be considered "overcharged". The smallest properties face the largest disparity. 2,500 properties are charged $24.00 or more annually than they would be if they were considered non-residential. It should also be understood that the average residential properties impervious area impacts the system less due to their generally lower impervious percentage – 30% impervious area for the median residential property versus 64% for the median non-residential property.

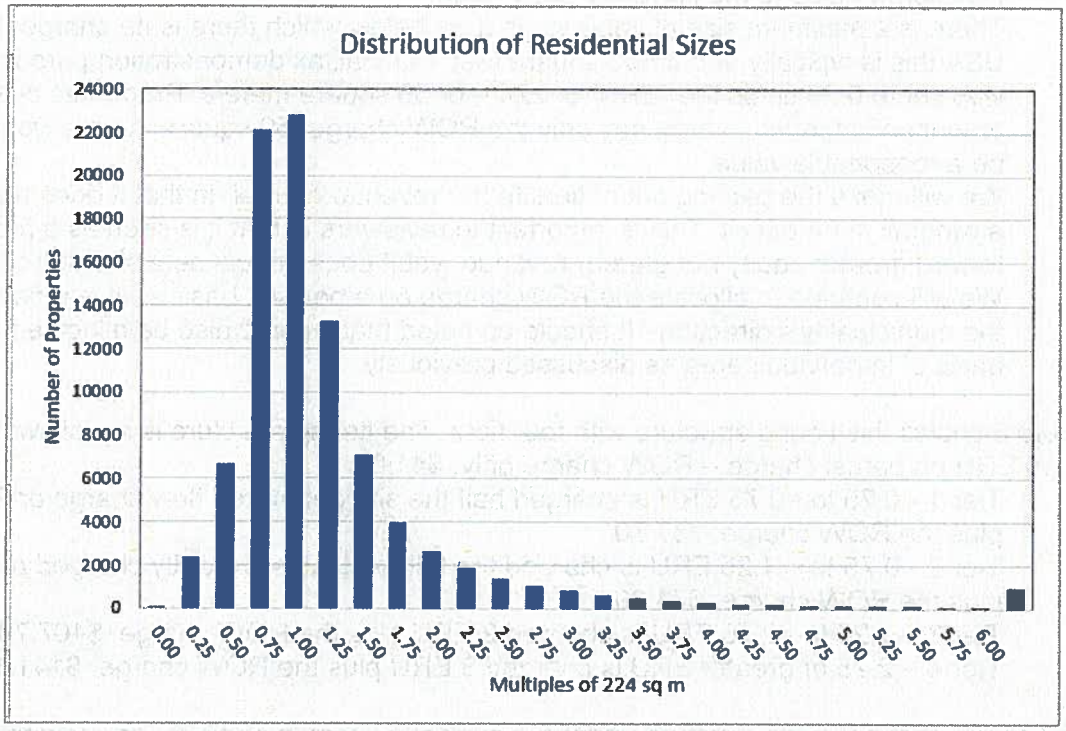


Figure 5. Distribution of Residential Impervious Area Sizes

Another way of considering the charge is to realize that the average annual cost per square meter of imperviousness for the smallest 2,000 properties is $3.75 while the average cost per square meter for the largest 2,000 properties is three cents ($0.03) – 125 times more expensive even though the property itself is probably less impacting because of the low impervious percent.

On the other hand. The average overpayment among all residential properties that would pay less under the non-residential system is $10.55 a year. This may net be seen as significant.

In the United States this kind of consideration has led to the idea of the creation of a tiered system for residential billing. Tiers balance the cost and aggravation of trying to measure each residence and keeping track of all the new driveways, room additions and patios and the sense of equity felt when it is known that the largest homes pay more than the smallest.

How might a revenue neutral tiering system work in Halifax? We will put together several concepts to create tiers, though there are many options in development of a tier structure – this is just one example:

- The square meter billing unit is too small creating the reality that almost every parcel is incorrectly billed. We cannot measure that accurately. So we will establish an "equivalent residential unit" (ERU) of 224 square meters based on the previous sample average. The median size is often used because we are after the "representative" structure. The median of the database is 200 square meters and is sufficiently close to the currently used value.
- There is a minimum size of impervious area below which there is no charge. In the USA this is typically about 500 square feet. For Halifax demonstration purposes it was set to 0.25 times the "ERU" of 224 – or 56 square meters. Properties below this amount of impervious area pay only the ROW charge. 50 square meters would also be a reasonable value.
- We will make the parsing out of tiers to be "revenue neutral" in that it does not create a windfall nor a deficit. This is important to reviewers in that it is seen as a move toward greater equity not greater revenue, yet it does not cause a shortfall either.
- We will continue to allocate the ROW charge on a per unit basis as it is reflective of the municipality's direction. It should be noted that it could also be allocated on the basis of impervious area as discussed previously.

Figure 6 shows this tiering structure with four tiers. The tiering structure is as follows:0 to <0.25 ERU no parcel charge – ROW charge only: $41.00

- Tier 1 - 0.25 to <0.75 ERU is charged half the site generated flow charge or $16.70 plus the ROW charge: $57.70
- Tier 2 - 0.75 to < 1.25 ERU is charged the full fee that is currently charged or $33.39 plus the ROW charge: $74.39
- Tier 3 – 1.25 to <2.75 ERU is charged 2 ERU plus the ROW charge: $107.78
- Tier 4 – 2.75 or greater ERU is charged 3 ERU plus the ROW charge: $141.17

Figure 7 shows that payment structure under the current system, a straight non-residential charge system, and the example tiering structure where each step is the next tier.

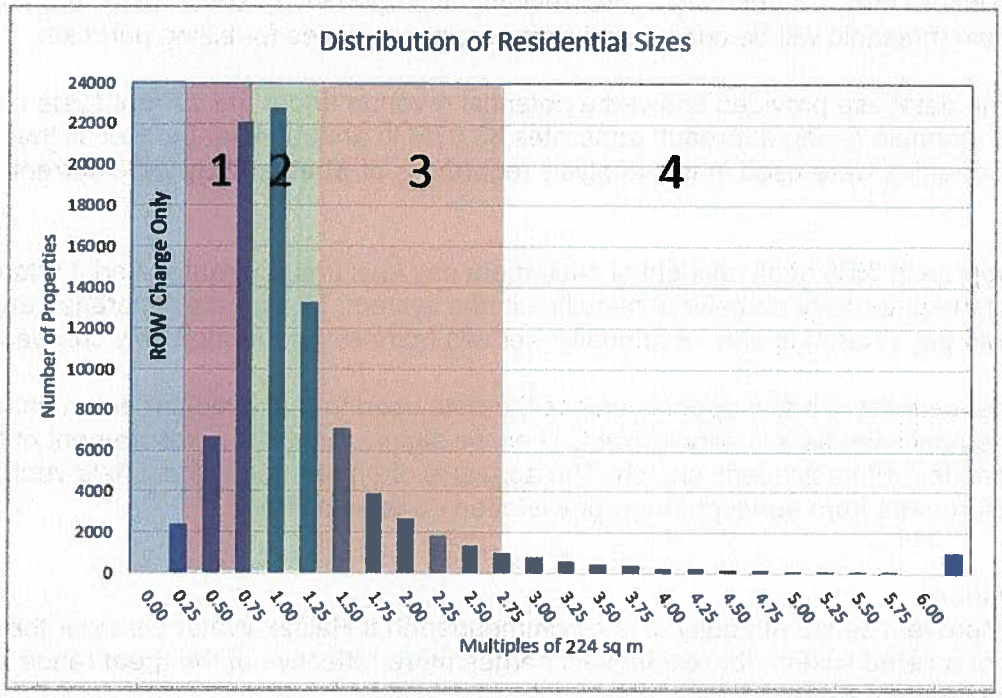


Figure 6 Example Tiering Structure

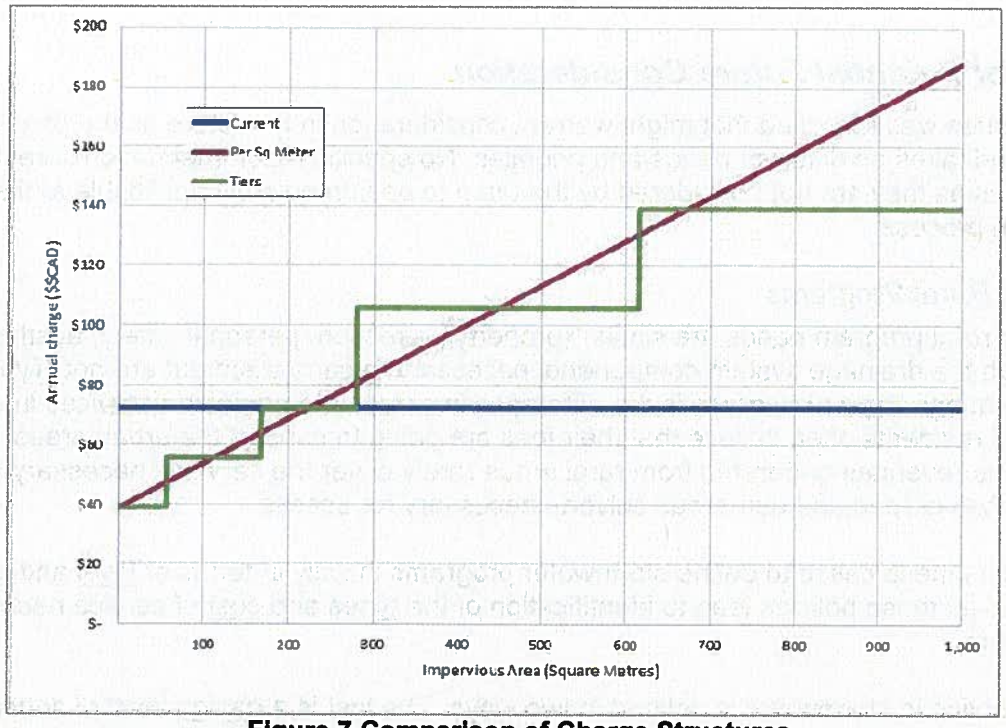


Figure 7 Comparison of Charge Structures

In this example we will not limit the size of the highest tier but will also carefully inspect these properties to insure they are not, in fact, non-residential properties. In some cases properties above a certain threshold will be considered commercial properties for billing purposes

Analysis of the database provided showed a potential revenue under the current system of $6.51M. The example tiering approach generates $6.87M in annual revenue. Recall that all residential properties were used in this analysis regardless of whether they were current customers.

Under this approach 75% of all residential customers pay less than currently. And it addresses virtually all of the potentially perceived inequities in the system. The greatest increase any property would pay (Tier 4) is $66.78 annually – or two more site generated flow charges.

In our experience there are few appeals unless the data used to make the tier determinations at the boundaries between tiers is very inexact. Then we simply require a measurement of the property submitted with a property sketch. The appeal is often granted without field verification, though measurement from aerial photography is often done as a check.

Recommendation

In order to improve a sense of equity, it is recommended that Halifax Water consider the introduction of a tiered system for residential charges more reflective of the great range in residential impervious areas.

Issues for Potential Future Consideration

A set of issues was identified that might warrant consideration in the future as the program matures and takes on different needs and priorities. No specific recommendations are made for these issues as they are not considered by the team to be immediately applicable to the current rate design process.

Urban vs. Rural Programs

Urban and rural program needs are similar (property protection, personal safety, aesthetics, etc.) though the drainage system components necessary to carry them out are not. Typical of a program that has large rural areas is the difference in actual and perceived services in each area. Rural residents often believe that their fees are going to support the urban areas. The reality is that revenues generated from rural areas rarely cover the services necessary along the long stretches of road and numerous culverts necessary for access.

It is helpful in these cases to define stormwater programs initially in terms of level and extent of service and let those policies lead to identification of the types and cost of service necessary to support them.

Level of service in stormwater is defined in two ways. The first is a design level of service. What is the level of protection all properties need to enjoy? For example, it might be that all roads are designed to convey the 5-year storm, collection systems are designed for the 10-year storm,

and occupied structures are designed to be protected from the 25-year storm in collection and the 100-year storm in stream overflow.

The second type of level of service is operational in nature. How well do we maintain the system to function as designed? We may decide that when culverts are more than 40% blocked they will be cleaned; when they bottoms show any rust through they will be scheduled for replacement and so on.

It is important for a number of reasons that whether an area is rural, urban or in transition that comparable levels of service be provided, and that asset management systems administer these policies.

Partnering with the level of service concept is the extent of service idea. The current HRWC extent of service is roadway right-of-way and drainage easements. HRWC is currently facing pressures to move further into the drainage system to solve drainage problems. There is often a difference in whether the move is upstream or downstream. Charlotte, NC for example, made the policy decision (based on several law suits and many complaints) that everywhere that public water flowed in the conveyance system it was a public system. This meant that downstream from every roadway until the flow entered a receiving system or left the jurisdiction there was some sort of public responsibility. When Charlotte looked upstream within solely private property it determined that there was a certain size of system and number of contributors to that system that caused it to be beyond the ability of a single property owner to manage. In those cases the City stepped in to assist.

This definition of the ultimate responsibility was grown into over time with costs being controlled by a clear definition of the types of service that would be offered. So, for example, in private systems the only service was emergency response to flooding situations, with an eventual masterplan to improve the drainage systems as long as all easements were donated by property owners.

It is recommended that HRM and HRWC work with the community and board to develop such a long term level-extent- and type of service plan for its various geographical settings as well as interim service levels and types as it grows into such a program.

Delivery of Stormwater Service

When stormwater utilities are established, it typically takes a number of years to more fully mature the service. The reasons for this are varied but often have to do with establishing an understanding of the system, service levels, policies, and backlog of deferred capital needs. It often has the feel of restoring a very old, very large building.

Through meetings with staff and review of delivery of stormwater operations, it was apparent that delivery of stormwater service and communication to customers regarding delivery of stormwater service could be improved. Halifax Water should develop a summary of the current state of stormwater service delivery, a vision for the "to be" state, and a road map to get to it. A standard approach to triage and respond to service requests, and establishment of service levels and communication protocols that are customer focused would be helpful.

In addition, there are no staff solely dedicated to stormwater service. In other places a lack of focused and dedicated staff with the authority and budget to get things done on a priority basis became one of the principle hindrances to progress and a stumbling block when attempting to improve customer experience. Consideration should be given to whether the organizational structure effectively supports delivery of stormwater service.

An additional barrier to effective stormwater service has to do with the current definition of extent of service. Note the discussion in the previous sub-section on this concept. The current extent of service includes the piped system, right-of-way ditches and structures and those place where an easement exists. This definition allows for the existence of many holes and discontinuities in service. For example, water may run off of a roadway and onto private property. If there is no easement then this flow segment, regardless of the fact that it carries large amounts of public water, is the responsibility of the private property owner. If this were a sewer system it would be unheard of.

For small ditches or other conveyances this may not be seen as a problem. However, the experience in Halifax is that many of the problems with the system occur in just such circumstances. Private property owners have flows imposed on them that are larger than the natural flow levels pre-development.

The best of best practices consider the "public" stormwater system extent of service to include continuously all conveyance systems that carry "public" (i.e. street) runoff. Liability and budget limitations are then balanced by the policies regarding what types of service and under what circumstances they are provided.

An example is Charlotte-Mecklenburg County, NC. Charlotte-Mecklenburg Storm Water Services will fix drainage problems: (1) if the water is coming from a public source such as a street or drainage system, and (2) if the repair serves some public good.Qualifying problems include such things as: flooding in the living space, severe stream bank erosion, blocked creeks, storm drainage pipes or drainage ditches, undersized storm drainage pipes or culverts, and sinkholes over storm drainage pipes. Problems that do not qualify include: yard flooding, drainage problems caused by landscaping, drainage concerns caused by roofing or gutter problems, water that flows from adjoining property, wet areas due to underground springs or wetlands, and water standing in a drainage ditch.

Consideration should be given to exploring discussions with the municipality to pursue legislative changes to expand the mandate to get a mechanism to fix flooding/drainage issues by establishing and equitable funding mechanism, and help private property flooding issues (if they will provide the utility with a free easement).
As most new stormwater infrastructure is built by developers, Halifax Water staff should have opportunity to do inspections of stormwater infrastructure and not accept until it meets required design standards. The municipality should continue to lead the front end of planning for new services and developments however there should be more cooperation and partnership between Halifax Water and the municipality.

Halifax Water Communications Considerations

Over the past years, Halifax Water has not been a part of everyday conversation in Halifax. It's important that customers are informed and feel they have a direct line of communication to the

utility. There is an increasing importance on transparency for all organizations, but specifically for government, crown corporations, or services like utilities that are tax or rate based. Creating a culture of transparency and communication will improve ongoing reputation and improve the position of Halifax Water to communicate with the public in the event of service changes, or an issue or crisis.

There are two aspects to transparency – accessibility and understanding.

At recent open houses a number of people arrived wanting to discuss issues with their personal property. Many had attempted to contact Halifax Water previously, but with little success. The launch of the new direct phone number is an excellent initiative to make Halifax Water more accessible to customers. Promoting this number, and any other methods of contacting the utility would go a long way in helping people feel the utility is there to service the needs of their customers and the community.

Currently, there is not a clear awareness or understanding of how the service works. It is recommended to share not only information about operations today but also the vision for Halifax Water with the broader community looking to the future. How does Halifax Water fit within the municipality? What is the plan for the future? How are things changing? What investments are required in future to maintain or enhance the system? Will future investments be needed to achieve the world-class service in the mission statement?

There are many opportunities to share this information, including but not limited to updated website content and layout, social media strategy, earned media content and coverage, and direct to customer communications.

Rate Structure "Tweaks"

Several potential tweaks to the rate structure were also discussed. None seemed pressing except as an ancillary change if larger modifications were made. These included:

- Fixed Cost Per Account – As discussed previously HRWC should mimic its other two rate structures as appropriate, realizing that a number of program components, like in those structures, have little to do with the basic rate methodology (impervious area). Also, as the fixed cost per account increases there will be a shift from non-residential accounts who have a large variable cost component to their individual bills to residential who have a relatively smaller variable component (none at present).
- Consideration of Gross Area – Some communities (Philadelphia, PA for example) employ a gross area charge though it is normally an order of magnitude smaller than the impervious area charge. Such a move would significantly increase the charges for the very large rural parcels. It should not be made without a clear understanding of the changing program drivers that necessitate such a change. Such drivers should be related to cost causation changes such as taking on responsibility for agricultural pollution or sediment, taking on responsibility for total river or stream flow or lake water quality, volume based impacts, etc.
- Billing Increment – The one square metre billing increment (actually billing takes place in increments rounded to the hundredth of a square meter) is illogical. Every bill is incorrect because the accuracy of the impervious area estimation is much greater. Changing to a different increment is not a pressing issue but one that might

be done if the rate structure is altered in other ways. A study should be made of the actual accuracy of impervious area estimations and a minimum increment chosen that better reflects that accuracy. However, if the rate structure is altered other reasons for a specific increment (i.e. the ERU) might prevail. When such an increment is developed the question of rounding will also need to be settled. Rounding "nearest" feels most fair while rounding "up" is permissible if the rate classes are defined as all properties within a certain range.

Long Range Strategic Thinking: Growing Program Responsibility

Nearly every successful large stormwater utility in the United States had to eventually face the reality that there must be a coordination, and in some cases consolidation, of stormwater/surface water responsibility and that they must play a vital part in not only planning but execution of management of water resources on holistic watershed level.

Halifax Regional Municipality has a stated objective in its Energy and Environment unit focused on clean water and climate change, and its watershed studies provide a blueprint for longer term water resource development and protection. However the long term execution of these plans requires a larger organization with stable and adequate funding.

In nearly every case in our experience a specific wastewater entity had a current "starter" set of responsibilities and was eventually challenged to move beyond that more narrow definition in some way to address a real sets of additional issues, and to play a leadership/partnership role in broader strategic thinking. They often end up saying to themselves and their boards, "If not us who; if not now when?"

For the typical public works agency the challenge is to move beyond the roadway network right of way and address all stormwater. For the planning agency it is to move beyond planning to operations. For the wastewater agency the typical challenge is to transform thinking from a "collector system" mentality to a watershed one. The collector system connects to larger natural streams or receiving waters, or contributes to or solves flooding problems.

Stormwater is different from wastewater in myriad ways that will initially impact and transform thinking and then programs and budgets. Stormwater:

- Is tied to land use decisions that are often outside the control of the wastewater agency.
- Is a system that is only used (and tested) during a rainstorm, and sits quietly deteriorating the rest of the time.
- Has an unlimited potential peak flow for which no conveyance system has been designed, leading to statistically planned failure rates.
- Is often tied to ownership of the land under the system as much as ownership of the system itself.
- Has poorly defined water quality requirements even in places where attempts are made to regulate runoff quality.
- Is characterized by episodic pollution discharges that are unpredictable and whose impacts are hard to quantify.

- Has no ultimate end of pipe treatment plant but hundreds of outfalls and discharge points – thus all treatment is at the source (and often a private responsibility) and throughout the conveyance system.
- Has mobile boundaries that can erode, can flood, create floodplains, and that are open to the air.
- Creates or supports a natural ecology that must be protected and enhanced.
- When done right can create local attractions and beauty that citizens can enjoy and that can be an immense economic driver for the local economy.

Citizens are not aware of the limits of responsibility of the local stormwater service provider but simply feel entitled to call the number on the bill and demand service when stormwater impacts their lives negatively. The understandable but unsatisfying response of "that is not our responsibility call _____" leads to negative public feelings and often political action.

Thus the management of expectations and program growth and expansion will become increasingly important to HRWC, especially as its program, in coordination with others, takes on more water quality, floodplain, receiving water quality, resiliency, and Green Infrastructure components or pressures. The difference between an agency that provides some stormwater services for a limited area and an agency that provides comprehensive surface water services is immense.

In discussions with staff was clear that HRWC is beginning to feel the pressures of these conflicting growing pains in areas such as: responsibility for private property, urban versus rural program approaches, integrated planning implementation, growth impact estimation, flooding solutions, and interaction with the Province and its ownership and management of local water resources.

It is important for HRWC to get out in front of these expectations and provide stronger partnership, leadership and a measure of control within that sphere. Many program facing this decision initially ask themselves a set of six interrelated questions:

1. What will we do?
   type of services
2. Where will we work (geography or program area)?
   extent of service
3. How good will we do it or how much will we do?
   level of service
4. How will we know we have done it?
   measure of service
5. How will others know?
   communication of service
6. *Who sets priorities and on what basis?*
   fairness of service

These questions are eventually answered as part of a business planning process where the business of stormwater management is discussed. Like any public agency business planning process, there are many questions concerning public involvement, planning process, portrayal of outcomes and outputs, level of technical analysis required for decision making, etc.

It is strongly recommended that HRWC both formalize its participation in the ongoing water resource efforts by HRM and others, and that it enter a business planning process to understand and take charge of its own role now while the pressures are more moderate and there is time to craft a process that is suitably inclusive targeted at preserving and enhancing the precious water resources that in many ways define the Halifax region.

Appendix: Court Case Summaries

These summaries have been extracted from the report at footnote #3.

State of Maine, et al. v. Greater Augusta Utility District Docket No. AP-11-052, Maine Superior Court, March 18, 2013 Docket No. AP-11-052, Maine Superior Court, March 18, 2013

Issue(s)/Question(s) Presented: Whether the utility equitably allocated rate increases in accordance with its charter language requiring equitable allocation of operating costs between sewerage service and stormwater service customer classes. The case specifically addresses sewer and stormwater fee allocation for combined sewer overflow projects.

Holding: The Superior Court held that the utility's rate model and allocation was equitable.

Summary: The City of Hallowell and several sewer customers filed suit against the Greater Augusta Utility District (GAUD) regarding how costs were divided between sewer and stormwater customers. GAUD does not provide stormwater services to the City of Hallowell. GAUD's charter requires that costs be equitably allocated between sewer service and stormwater service, and that the costs of stormwater service be borne entirely by Au- gusta ratepayers. GAUD's charter governs sewer and stormwater rates. In 2011, GAUD adopted a new rate model that resulted in rate increase of approximately 30 percent for sewer and stormwater customers. Plaintiffs filed suit challenging the underlying allocation of flow measured by GAUD at the treatment plan (gallons of flow generated by sewer customers v. gallons from stormwater flow). In particular, the plaintiffs alleged inequitable allocation of sewer fees to the Bond Brook capital improvement project to eliminate combined sewer outflows in Augusta. GAUD contended that it acted in accordance with its charter and performed a detailed review to ensure that stormwater-only costs were charged to stormwater customers. The project had only a small portion of the cost allocated solely to stormwater control and only that portion was entirely borne by stormwater customers. The remaining costs were allocated based upon estimated system-wide pro rata flow of sewer and stormwater using 10 years of flow data. The same system-side methodology was used to allocate operations and maintenance costs to the different customer classes. The court rejected the plaintiffs' challenges and affirmed every aspect of the 2011 rate model holding that GAUD's experts "have more experience and knowledge with regard to GAUD's system than the plaintiffs' experts."

City of Lewiston v. Gladu 40 A.3d 964 2012 ME 42, Supreme Judicial Court of Maine, March 27, 2012

Issue(s)/Question(s) Presented:
1. Whether city's stormwater assessment was a fee or a tax; and,
2. Whether impervious surface based rate methodology was valid.

Holding: The Supreme Judicial Court held that city's stormwater assessment was a fee, rather than a tax and that the methodology was valid.

Summary: In 2011, the City of Lewiston sued a property owner seeking payment of overdue stormwater utility fees. The property owner challenged the legality of the fees. The Maine Superior Court issued a decision rejecting those claims, holding that the city's 2006 ordinance was valid and authorized the program and confirmed the legitimate purpose of the stormwater utility as funding expenses necessary to provide stormwater management services to comply with federal and state water-quality requirements. The trial court also upheld the city's use of "impervious surface" as the basis for determining the fee applied to a property. As a result, the court issued judgment for the city for $7619.70 in delinquent stormwater fees, $1197.85 in interest, and $825 in penalties, and awarded the city $2539.90 in attorney fees and $350 in collection costs. The property owner appealed the decision. The Maine Supreme Judicial Court decision fully affirmed the lower court's decision.

With regard to the tax vs. fee issue, the Supreme Court applied a four-factor test:
1. Whether the Assessment Raises Revenue or is for a Regulatory Purpose The property owner argued that the purpose of the assessment is to raise revenue because forty-four percent of the utility's budget goes toward debt services, including debts acquired by the City prior to the creation of the utility. The court held that the property owner failed to provide evidence that the debt acquired was not used to build or maintain stormwater infrastructure. The court held that the stormwater fee met the regulatory-purpose requirement and "[t]he fact that the Utility acquired stormwater infrastructure debt from the City does not change the fact that the Utility is using the assessment to cover the costs of regulating stormwater runoff, and part of those regulatory costs include maintaining stormwater infrastructure. Because all of the Utility's expenses are for maintaining or administering the Utility, this factor weighs in favor of concluding that the assessment is a fee and not a tax."

2. Direct Relationship Between the Fee and the Benefit Conferred The court held that there was no dispute that stormwater runoff contributes to water pollution, nor that the utility provides benefits to the public by regulating runoff. The property owner's argument was that he does not receive an individual benefit that is not conferred to the public at large and that the assessment is not related to the utility's purpose of providing better water quality because the assessment is calculated by area of impervious surface, which relates to the quantity, not the quality. The court agreed with the city that basing assessments on amount of impervious surface is a widely accepted and recommended method of calculating fees, and that the quantity of stormwater runoff is directly related to water quality and, therefore, there was a direct relationship between the assessment of the fee and the benefit conferred. Next the court analyzed whether there was enough of an individualized benefit to the property owner to warrant upholding the assessment as a fee. The court relied on the *McLeod* Georgia Supreme Court decision in *Mcleod*, which acknowledged a "trend ... in favor of upholding fees that confer intangible benefits on both those who are assessed and those who are not."

The court held that there was a direct relationship between the fee paid and the benefit conferred if: [T]he fee applies to residential and non-residential developed property, but not to undeveloped property, which actually contributes to the absorption of stormwater runoff; the properties charged receive a special benefit from the funded stormwater services, which are designed to implement federal and state policies through the control and treatment of polluted stormwater contributed by those properties; and, the cost of those services was properly apportioned based primarily on horizontal impervious surface area. The court held that "viewing

this factor in light of the recent trend toward upholding fees that 'confer intangible benefits on both those who are assessed and those who are not,' ..., it weighs in favor of upholding the stormwater fee."

3. Voluntariness The court then turned to the issue of voluntariness, which concerns the availability of credits—if the proper- ty owner has the ability to avoid the assessment if he wishes to do so. The court held that the assessment is not involuntary simply because the costs of avoiding the assessment (via credits) are high. The court concluded that the available credits, which provide for up to 100% fee reduction, create a voluntary fee with the caveat that the court is not presented with the question of whether a fee is voluntary if the applicable ordinance does not include a 100% fee credit.

4. A Fair Approximation of the Cost to the Government and the Benefit to the Individual The court held that the city demonstrated through its financial reports that the assessment is based on a "fair approximation" of the cost of administering the utility and the city's impervious surface-based fee system makes a "fair approximation" of the benefit each property owner receives via having stormwater managed and water quality protected.

El Paso Apartment Ass'n v. City of El Paso 415 Fed.Appx. 574, United States Court of Appeals, Fifth Circuit, March 9, 2011

Issue(s)/Question(s) Presented: Landowners challenged stormwater drainage fee asserting that the fee: 1. Violated the Equal Protection Clause of Fourteenth Amendment due to different methods of measurement of "impervious cover"; and 2. Was an unconstitutional occupation tax under Texas law.

Holding: The Court of Appeals held that:
1. Water utilities public service board's use of different methods to measure "impervious cover" of residential and nonresidential properties did not violate Equal Protection Clause; and
2. Stormwater drainage fees were not unconstitutional occupation tax under Texas law.

Summary: 1. Owners and managers of apartment complexes in El Paso, represented by their trade association, challenged a stormwater drainage fee assessed on their properties arguing, *inter alia*, that it violated Equal Protection Clause of Fourteenth Amendment and was an unconstitutional occupation tax under Texas law. The apartments argued that the city's decision to measure the actual square footage for some properties, including driveways, sidewalks, and parking lots, but estimate for other properties was arbitrary and irrational. The court held that the city had not granted an exemption or discount to such properties but had "no effective way to measure the actual area of impervious cover and include it on the drainage bill for residential properties, so the [city] instead used an estimate of the impervious cover on residential properties." The court reasoned that "the amount of impervious cover on a particular piece of property is directly related to that property's use of the stormwater drainage system" and concluded that given the legitimacy of the city's objective, the "use of two different methods to measure the impervious cover on the properties in the City is rationally related to its decision to charge each property for stormwater drainage services."

2. The court then turned to the fee v. tax question: To determine whether a fee is in reality an occupation tax, Texas courts consider "whether the primary purpose of the exaction, when the statute or ordinance is considered as a whole, is for regulation or for raising revenue." *City of Houston*, 879 S.W.2d at 326. "Revenue," as used by Texas courts, "means the amount of money which is excessive and more than reasonably necessary to cover the cost of regulation." *Producers Ass'n of San Antonio v. City of San Antonio*, 326 S.W.2d 222, 224 (Tex.Civ.App.–San Antonio 1959, writ ref 'd n.r.e.); *see also Tex. Boll Weevil Eradication Found., Inc. v. Lewellen*, 952 S.W.2d 454, 461 (Tex.1997) ("The critical issue is whether the assessment is intended to raise revenue in excess of that reasonably needed for regulation."). Whether a fee is reasonably necessary to cover the cost of regulation is a question of fact. *City of Houston*, 879 S.W.2d at 326. The court held that there was no evidence to suggest that the amount collected by the city was unreasonable or that it did not represent the actual cost to provide stormwater drainage services. The court next addressed the Apartments' argument that the fee was not reasonably related to stormwater drainage services on their properties and that the court should evaluate the fees on an individual basis to determine whether the amount paid directly benefits each individual payor. The court responded: "While Texas courts do require that the amount of the fee be related to the level of regulatory or licensing services received by the payors, they do not require perfect correspondence between the fee charged and the service received." The court held that the Apartments had again provided no evidence in support of the argument that the amount charged exceeds the cost to provide stormwater services to the properties. In response to the Apartments' claim that the drainage fee is unrelated to stormwater drainage services because a certain percentage is allocated to green projects (acquisition of open spaces, greenways, arroyo and wilderness areas), the court held that the Apartments offered no evidence that the acquisition of open space is unrelated to stormwater management. The court then addressed the Apartments' assertion that certain properties had drainage ponds and, therefore, presented little risk of creating stormwater runoff that would burden the drainage system. The court noted that the city had a credit policy and exemption program that, upon application and approval, would provide a credit or complete exemption to property owners of land with drainage ponds. In refuting this argument, the court stated "the Apartments do not contend that any of their properties place *no* burden on the drainage system, or that they applied for and were denied an exemption for any of their properties." In conclusion, the court held that the stormwater drainage fee did not produce revenue in excess of the cost necessary to provide stormwater drainage services and there was no evidence to suggest that the fee was not reasonably related to the services provided. The court, therefore, concluded that the drainage fees were not unconstitutional occupation taxes.

Storedahl Properties, LLC v. Clark County 143 Wash.App. 489, Court of Appeals of Washington, Division 2, March 11, 2008

Issue(s)/Question(s) Presented: Whether stormwater charge is a user fee or tax.

Holding: The Court of Appeals upheld the stormwater charge as a user fee because:
1. The primary purpose of the charge was to fund activities directly related to the public health and safety im- pacts of stormwater runoff;
2. County allocated charge only to authorized purposes; and
3. A direct relationship existed between charge and services provided by the charge.

Summary: Landowner brought action to contest county's clean water charge, alleging that charge, which was based on stormwater runoff, was an unconstitutional tax. The Superior Court, granted the county's motion for summary judgment, and landowner appealed. The Court of Appeals applied a three-part test to determine whether the charge was a regulatory fee or a tax: "
(1) whether the primary purpose is to raise revenue (tax) or to regulate (regulatory fee);
(2) whether the money collected must be allocated only to the authorized regulatory purpose; and
(3) whether there is a direct relationship between the fee charged and the service received by those who pay the fee or between the fee charged and the burden produced by the fee payer."

The court held that with regard to the first factor, the applicable legislative language expressly recognized the public health and safety impacts of stormwater runoff and clearly specified the activities that could be funded. For the second factor, the court noted that the county can use the funds "only for the cost and expense of regulating, monitoring and evaluating storm water impacts; maintaining and operating storm water control facilities; educating the public on issues related to storm water; and all or any part of the cost and expense of planning, designing, establishing, acquiring, developing, constructing, and improving any such facilities." Therefore, the court held the charge "more closely resembles a regulatory fee than a property tax." For the final factor, the court relied on the test in *Tukwila Sch. Dist.*, 140 Wash. App. at 749: as long as the rate is reasonably based on the amount of the property owner's contribution to the problem, the fee is directly related to the service provided. The court upheld the fee in question pursuant to the reasonably-based test.

Wessels Co., LLC v. Sanitation Dist. No. 1 238 S.W.3d 673, Court of Appeals of Kentucky, March 9, 2007

Issue(s)/Question(s) Presented:
1. Whether sanitation district had authority to establish stormwater drainage plan and program; and
2. Whether district had statutory authority to impose a fee.

Holding: State statute providing that sanitation district may be established to develop and implement plans for collection and disposal of storm drainage authorized district to implement stormwater drainage plan, and district had statutory authority to impose surcharge for stormwater drainage plan.

Summary: In response to federal regulations, the Kentucky General Assembly in 1994 amended the enabling state statute by adding a new subsection to the stated purposes for which sanitation districts may be established: sanitation districts can be established for the purpose of development and implementation of "plans for the collection and disposal of storm drainage." The Kentucky Court of Appeals upheld the trial court decision that the state statute "clearly and unambiguously expressed the General Assembly's intent that among the proper functions of sanitation districts is the development and implementation of 'plans for the collection and disposal of storm drainage.' " The court reasoned "[h]aving concluded that implementation of a storm water drainage system is a proper function of the district, it would be absurd to suggest that it could not impose a surcharge to finance a service required by federal regulation." The court held that the state statute provided the requisite authority for the fee: The district may establish a surcharge or other rate, fee, or charge to be made applicable to users in

areas where facilities are to be acquired, constructed, or established, and to amortize part or all of the costs thereof.

Tukwila School Dist. No. 406 v. City of Tukwila 140 Wash.App. 735 167 P.3d 1167, Washington Court of Appeals, Div. 1, June 11, 2007

Issue(s)/Question(s) Presented: Whether stormwater assessment was a user fee or tax.
Holding: The Court of Appeals held that the:
1. Primary purpose of charge was to regulate runoff, supporting a finding that the charge was a fee, not a tax;
2. Money expended on design and construction of capital facilities was allocated exclusively to regulating the activity being assessed; and
3. Charge was directly related to city's services of controlling storm and surface water runoff.
Summary: School district brought action against city, seeking declaratory judgment and tax refund, and challenging city's storm and surface water utility charge as an unlawful tax. The court held that the stormwater fee met the regulatory-purpose requirement when it was enacted to "provide ... revenue to construct, reconstruct, replace, improve, operate, repair, maintain, manage, administer, inspect, enforce facilities and activities for the storm and surface water utility plan" and to "relieve a burden created by property owners whose impervious surfaces contribute directly to runoff and pollution problems." The court recognized that, because property owners contributed to water quality problems through stormwater runoff from their properties, the city could charge a fee to help "defray" the costs of ameliorating the problem. The court also concluded that "[t]he construction of capital facilities is a recognized regulatory activity."

Mcleod v. Columbia County 278 Ga. 242, 599 S.E.2d 152, Supreme Court of Georgia, June 28, 2004

Issue(s)/Question(s) Presented:
1. Whether county was authorized to establish a stormwater utility and fee pursuant to the Home Rule section of the state constitution; and
2. Whether the charge was a user fee or tax.

Holding: The Supreme Court affirmed the lower court ruling and held:
1. County was authorized to establish stormwater utility and to impose a utility charge for the stormwater management services;
2. The charge was a fee, not a tax; and
3. The charge did not violate landowners' rights to due process or equal protection.

Summary: Landowners brought class action in state court against county board of commissioners for adopting an ordinance for a stormwater service charge. Following removal, the District Court, 254 F.Supp.2d 1340, remanded the case. On remand, the Superior Court entered summary judgment in favor of county. Landowners appealed. The Supreme Court held that the Home Rule section of the Georgia Constitution grants any county or municipality the power to provide the service of "[s]torm water ... collection and disposal systems." The court further held that the state General Assembly is authorized to enact general laws relative to such services, including statutes which permit the imposition of reasonable fees. In accordance with

general law OCGA § 36-82-62(a)(3), local governments may "prescribe, revise, and collect rates, fees, tolls, or charges for the services, facilities, or commodities furnished or made available by such undertaking...." Therefore, the court held that pursuant to the Home Rule section of the Georgia Constitution and general statutory law, the county was authorized to establish the stormwater utility and to impose a utility charge for the stormwater management services. In its analysis, the court also acknowledged a "trend ... in favor of upholding fees that confer intangible benefits on both those who are assessed and those who are not."

City of Gainesville v. State, Department of Transportation A SI 778 So.2d 519, District Court of Appeal of Florida, First District, March 5, 2001

Issue(s)/Question(s) Presented: Whether Department of Transportation's sovereign immunity shields it from being required to pay stormwater utility charges.

Holding: The District Court of Appeal held that:
1. City could establish a stormwater management system as a traditional utility and finance it by collecting utility fees; and
2. Sovereign immunity would not insulate DOT from having to pay valid stormwater utility charges.

Summary: The court held that the city was authorized to establish the utility by the Florida Constitution, which grants municipalities "governmental, corporate and proprietary powers to enable them to ... render municipal services" and the right to "exercise any power for municipal purposes except as otherwise provided by law." In addition, the court noted that a special act of the Legislature express granted the city "full power and authority to provide public utility services of all kinds" and implicit "is the power to construct, maintain and operate the necessary facilities." Finally, the court pointed to the statute enacted that authorizes the city to construct, operate and finance a stormwater management utility and "[c]reate one or more stormwater utilities and adopt stormwater utility fees sufficient to plan, construct, operate, and maintain stormwater management systems." The court relied on state caselaw holding that the "imposition of fees for the use of a municipal utility system is not an exercise of the taxing power nor is it the levy of a special assessment."The court found that the statutes clearly granted municipalities the option of establishing stormwater management systems as traditional utilities and financing them by collecting utility fees and it was a valid exercise of the city's authority to fund a "stormwater management program by assessing the cost of the program to the beneficiaries based on their relative contribution to its need."

South Carolina v. City of Charleston 513 S.E.2d 97, Supreme Court of South Carolina, February 16, 1999

Issue(s)/Question(s) Presented:
1. Whether a stormwater charge was an authorized user fee or a tax; and
2. Whether city was authorized to impose stormwater fees on state facilities.

Holding: The court found that:
1. The stormwater charge was an authorized user fee; and

2. The fee could be imposed on state property.

Summary: The State of South Carolina brought a declaratory judgment action to determine whether the city was authorized to impose stormwater fees on state facilities pursuant to a state statute, S.C. Code Ann. § 48-1410, which authorized local governments to establish a "stormwater utility" and to fund it either through a fee or a tax assessment. The City of Charleston created its utility by local ordinance, and opted to fund it through a fee. The state argued that although denominated a fee, the charge involved was really a tax. The state supreme court found that the plain language of the statute allowed local governments to fund the utility through either a fee or an assessment, and that the city had chosen to use a fee, which could properly be imposed on state property.

Vandergriff v. City of Chattanooga 44 F. Supp. 2d 927, United States District Court, E.D. Tenn, March 31, 1998

Issue(s)/Question(s) Presented:
1. Whether a stormwater ordinance imposing a fee was constitutional; and
2. Whether the fee was authorized.

Holding: The Court held that:
1. The stormwater ordinance imposed a fee;
2. The fee was authorized by state statute; and
3. Combined Sewer Overflows (CSOs) falls within the definition of storm water facilities.

Summary: City taxpayers challenged validity of a local stormwater ordinance on various state and federal constitutional grounds. Plaintiffs argued, *inter alia*, that the city stormwater ordinance violates the enabling statute because the revenues generated were not "reasonable in amount" and claimed that the city improperly spent one half of the revenues collected on CSO projects and still had an $11.6 million surplus. The surplus was obtained through bond issues, was a restricted asset to only be used for stormwater capital projects and would be disbursed as necessary to fund construction projects. The court held "Given the conclusion the CSO falls within the definition of storm water facilities and the evidence proffered by Defendants, the Court finds Plaintiffs have failed to prove the revenues generated are not reasonable in amount." The court ruled that the ordinance imposed a fee, not at tax, because the charges were based on use of the stormwater system, and applying a portion of fees to construct or expand facilities as well as to defray cost of operating the system was explicitly authorized by state statute.

Smith v. Spokane County 948 P.2d 1301, Court of Appeals of Washington, November 18, 1997

Issue(s)/Question(s) Presented: Whether "Aquifer Protection Areas" fee was a valid regulatory fee or an unconstitutional tax.

Holding: Court upheld the validity of the fee.

Summary: Court held that a fee charged for funding certain "Aquifer Protection Areas" was not an unconstitutional tax and would be upheld if it was reasonable and designed to cover only the costs of the program. In reaching this decision, the court relied upon an earlier Washington

Supreme Court decision, in *Teter v. Clark County*, 704 P.2d 1171 (Wash. 1985), which held that charge for a county storm and surface water utility was not a tax but a valid regulatory fee.

City of Littleton v. State $ 855 P.2d 448, Supreme Court of Colorado, En Banc, July 6, 1993

Issue(s)/Question(s) Presented: Whether stormwater charge was a service fee, tax or special assessment.

Holding: Court held that the stormwater charge was a valid service fee.

Summary: City sought to collect unpaid stormwater management fees from state-owned school properties. The Colorado Supreme Court found the charge was not a tax or special assessment, but a service fee reasonably designed to meet the overall costs of the service provided. The court also found that the portion of the fee used to construct and maintain the drainage system was essential to provision of the services.

Long Run Baptist Association, Inc. v. Louisville and Jefferson County Metropolitan Sewer District 775 S.W.2d 520, Court of Appeals of Kentucky, June 23, 1989.

Issue(s)/Question(s) Presented: Whether a stormwater charge is a tax or a fee; whether the District had authority to impose the fee.

Holding: Kentucky Court of Appeals held that the service charge was a user fee and was reasonable and uniform in its application and that the Metropolitan Sewer District had express authority to impose the fee via the enabling state statute.

Summary: Plaintiffs challenged the constitutionality of a stormwater service charge that was based on an "Equivalent Surface Unit" approach (1 ESU for all residential parcels; 1 ESU per 2500 sq. ft. for commercial and industrial parcels). On the fee versus tax issue, the court relied upon *Veail v. Louisville and Jefferson County Metropolitan Sewer District*, 303 Ky. 248, 197 S.W.2d 413, 418 (1946), where the Kentucky Supreme Court held that the District's enabling statute was constitutional and stated that "the Act provides for no tax whatever. Charges for sewer service are not taxes any more than are bridge tolls or water rents." The court then turned to the plaintiffs' argument that no benefit was received from the plan because they had constructed their own system or because the stormwater runoff drains from their property directly into the Ohio River. The court relied on *Curtis v. Louisville and Jefferson County Metropolitan Sewer District, Ky.*, 311 S.W.2d 378 (1958), to reject this argument. In the Curtis case, property owners argued that the enabling statute was un- constitutional because it established a conclusive presumption that all land within a designated surface drainage improvement area would receive some benefit. The property owners argued that the property in question was located at an elevation "high enough to provide a vested right to the free flow of surface water," and therefore could receive no benefit. The court in *Curtis* disagreed: We think that in the case of a surface drainage improvement area, any property that geographically is a part of the watershed or drainage basin may properly be considered to be benefited by the

project through the general improvement of conditions of health, comfort and convenience in the area and the resulting general enhancement of values in the area. The circuit court held that all property in the area could be deemed to be benefited, and we affirm that holding. The Kentucky court of appeals found that the enabling statute clearly gave the District express authority to impose a service charge to fund its comprehensive county-wide drainage system, and was constitutional in all respects.

Zelinger v. City and County of Denver 724 P.2d 1356, Supreme Court of Colorado, En Banc, September 8, 1986

Issue(s)/Question(s) Presented: Whether a stormwater fee is a valid service charge or an unconstitutional tax.

Holding: Court ruled the charge was valid service charge.

Summary: The Colorado Supreme Court denied a class action challenge to the City of Denver's ordinance assessing fees and service charges for the city's storm drainage facilities. The court found that the ordinance was rationally related to a legitimate state purpose of financing the maintenance and construction of new storm sewers, and that it established a valid service charge rather than an unconstitutional tax because the funds raised by the fee were not used for general revenue purposes but were segregated and used solely to pay for the costs of the "operation, repair, maintenance, improvement, renewal, replacement and reconstruction of storm drainage facilities."

Zweig v. Metropolitan St. Louis Sewer District 412 S.W.3d 223, Supreme Court of Missouri, Nov. 12, 2013

Issue(s)/Question(s) Presented: Whether a stormwater assessment was a fee or tax.

Holding: Supreme Court upheld lower court ruling that invalidated the stormwater fee as a tax requiring voter approval.

Summary: The court determined through a detailed analysis that the Metropolitan St. Louis Sewer District's (MSD) contested stormwater user charge qualified as a tax and not a user fee under Missouri state law, and further determined that the charge was invalid because it had not been put to a voter referendum as required by Missouri law. The court stated that while it "sympathizes with MSD's predicament. MSD levied the stormwater user charge without prior voter approval." The court refused to grant the ratepayers' request for a refund of approximately $90 million in stormwater user charges, but affirmed the trial court's award of attorneys' fees of over $4 million. The Missouri Supreme Court appeal was the result of a 2010 decision by a Missouri trial court finding that MSD's stormwater utility fees were illegal taxes, thereby invalidating the utility's entire stormwater fee program, and a March 2012 Missouri Court of Appeals decision that upheld the trial court ruling. The lower appellate court reached its decision after analyzing the MSD stormwater rate structure, which is based on impervious surface, against a number of elements of Missouri state law. The appellate court's decision also upheld the trial court's factual finding that there is no direct relationship between impervious area and stormwater runoff. Using a similar analysis under state caselaw, the Missouri Supreme Court reasoned that because the stormwater fee is based on each landowner's contribution to the

overall need for MSD's stormwater services rather than that owner's actual use of the services and MSD provides services to ensure the continuous and ongoing availability of its drainage system to the district as a whole, not to individual users, the charge cannot be a valid user fee because MSD does not render a service individually in exchange for a fee. The dissenting judge in the lower appellate court decision wrote a strong opinion in support of the MSD program and the use of impervious surface to charge for stormwater services. The dissent noted that not only are stormwater fees based on impervious surface the industry norm, but that "the engineering literature has validated the equity of this methodology for stormwater management user fees."

Jackson County v. City of Jackson 302 Mich.App. 90 836 N.W.2d 903, Court of Appeals of Michigan, August 1, 2013

Issue(s)/Question(s) Presented: Whether a stormwater assessment is a tax or user fee.

Holding: The Court of Appeals held that the stormwater management charge was a tax that required electorate approval, rather than a fee, pursuant to Michigan's Headlee Amendment.

Summary: Property owners and county brought action against city alleging violation of the Headlee Amendment stemming from city's adoption of ordinance that imposed stormwater management charge on all property owners. Section 25 through 34 of article 9 of the Michigan Constitution of 1963 adopted on November 7, 1978 are known as the "Headlee Amendment." Section 31 "prohibits local governments from levying any new tax or in- creasing any existing tax above authorized rates without the approval of the unit's electorate." The court held that the ordinance contained few provisions of regulation and no provisions that truly regulated discharge of storm and surface water runoff, with exception of provision that allowed for credits against management charge for use of city-approved stormwater best management practices and the most significant motivation for the ordinance was to generate revenue. In addition, the court held there was no particularized benefit imposed on property owners that was not also conferred upon the general public, and the usage of stormwater sewer system was not accounted for in determining amount of fee. Thus, the court held that the stormwater management charge was an unconstitutional tax in violation of the Headlee Amendment. *See Bolt v. City of Lansing*

DeKalb County, Georgia v. United States Sl 108 Fed.Cl. 68, United States Court of Federal Claims, January 28, 2013

Issue(s)/Question(s) Presented: Whether a stormwater charge is a fee or tax.

Holding: The Court of Federal Claims held that:
1. Court of Federal Claims could exercise jurisdiction over county's claims;
2. Stormwater management charges assessed by county were taxes that could not be imposed on federal properties without government's consent;
3. Former version of CWA did not waive government's sovereign immunity as to county's stormwater management charges; and
4. Amendment to CWA requiring government to pay reasonable stormwater management charges could not be treated as clarification of an earlier waiver with retroactive effect.

Summary: DeKalb County, Georgia, filed litigation in the U.S. Court of Federal Claims in November 2011 to collect over $280,000 in unpaid stormwater bills from a number of different federal government facilities. In January 2013, the court ruled that stormwater charges billed to the federal facilities by the County were a local tax and not a utility fee under federal law. The court also found that a 2011 amendment to the CWA, which clarified federal responsibility for municipal stormwater charges, does not apply to charges that qualify as taxes and were billed prior to the amendment's enactment. Accordingly, the court ruled the County could not collect pre-2011 unpaid amounts. The court did note, however, that the language of the 2011 amendment clearly establishes federal responsibility for payment of stormwater charges going forward regardless of whether they are deemed fees or taxes. The decision's finding on the CWA amendment's applicability to pre-2011 amounts was directly at odds with the 2012 *Cities of Renton and Vancouver* case described above, which held the amendment does apply to pre-2011 amounts. The County appealed the decision to the U.S. Court of Appeals for the Federal Circuit in March 2013 but reached a settlement with the federal government before a decision was rendered. The settlement acknowledges the county's objection to the January 2013 U.S. Court of Federal Claims decision in the case, specifically the court's finding that 1) the stormwater charges in question were taxes and not utility fees, and 2) that a 2011 CWA Amendment clarifying federal responsibility for stormwater fees does not apply to pre-2011 charges.

Oneida Tribe of Indians of Wisconsin v. Village of Hobart, Wisconsin 891 F.Supp.2d 1058, United States District Court, E.D. Wisconsin, September 5, 2012

Issue(s)/Question(s) Presented: Whether stormwater charge is a fee or a tax; whether CWA waives sovereign immunity with regard to Indian tribe property.

Holding: The District Court held that: 1. The village's stormwater management charges constituted an impermissible tax upon tribal trust property; and 2. The CWA provision requiring federal facilities to comply with the specified state and local water pollution control requirements was not a waiver of sovereign immunity and the village was, therefore, not permitted to assess stormwater management charges upon the property held in trust for the benefit of Indian tribe.

Summary: Indian tribe filed action seeking a declaratory judgment that village lacked authority to impose charges under its stormwater management utility ordinance on parcels of land held in trust by the United States for the tribe located on reservation and within village.

City of Key West v. Florida Keys Community College Sl 281 So.3d 494, District Court of Appeal of Florida, Third District, January 18, 2012

Issue(s)/Question(s) Presented: Whether community college enjoyed sovereign immunity with respect to city's stormwater utility fees.

Holding: The District Court of Appeal held that: 1. Statute that allowed municipality to collect charges from persons, firms, or corporations served by its public works facilities did not expressly waive college's sovereign immunity from action by city; and 2. College was entitled to a refund of city's stormwater utility fees.

Summary: The City contended that the college was not protected by sovereign immunity because the enabling statute does not "exempt" state-owned property from payment of stormwater utility fees. The court held that "sovereign immunity is fundamentally different from the protection provided by an exemption. Whereas 'sovereign immunity is the rule, rather than the exception,' ... the converse is true of an exemption." The State enjoys sovereign immunity unless immunity is expressly waived. The court reasoned that because the enabling statute, which specifically relates to stormwater utility fees, does not expressly waive sovereign immunity for stormwater utility fees, the State, which includes the community college, has not waived sovereign immunity.

Lewiston Independent School Dist. No. 1 v. City of Lewiston Supreme Court of Idaho, Moscow, 151 Idaho 800 264 P.3d 907, November 7, 2011

Issue(s)/Question(s) Presented: Whether a stormwater assessment is a regulatory fee or unauthorized tax.

Holding: The Supreme Court held that city's stormwater fee was an unauthorized tax.

Summary: Five government entities brought action against city seeking declaratory judgment that city's stormwater fee was an unconstitutional tax. The Supreme Court of Idaho held that the city's stormwater fee was an unauthorized tax rather than a regulatory fee because the stormwater fee was used to generate funds for the non-regulatory function of repairing, maintaining, and expanding the city's preexisting stormwater system and streets, and thus, it was an unauthorized tax intended to free-up the city's general revenues.

Smith Chapel Baptist Church v. City of Durham Supreme Court of North Carolina, August 20, 1999 350 N.C. 805, 517 S.E.2d 874

Issue(s)/Question(s) Presented:
1. Whether the City exceeded its enabling authority by enacting a ordinance and the fees thereunder; and
2. Whether the impervious area method of calculating the fees was constitutionally permissible.

Holding: The Supreme Court held:
1. City was authorized to collect fees that would finance only structural and natural stormwater and drainage systems component part of stormwater program;
2. City was authorized to impose fees on owners of developed land based on impervious areas of each lot; and
3. Landowners were entitled to full refund of illegally collected fees from city.

Summary: Owners of developed land in city sued city, alleging that it did not have authority to impose fees to operate its stormwater program. The court held that municipalities are authorized to establish and operate public enterprises like utilities pursuant to state statute. However, pursuant to the statute, "Rates, fees, and charges imposed under this section may not exceed the city's cost of providing a stormwater and drainage system." The court reasoned that under a plain reading of the statute, the utility fees are limited to the amount which is necessary for the City to maintain the stormwater and drainage system rather than the amount

required to maintain the comprehensive Stormwater Quality Management Plan to comply with regulatory requirements. The stormwater utility approved a local ordinance that created a stormwater utility "to develop and operate the stormwater management program." The ordinance defines the stormwater management program as one that not only includes a stormwater system, but also "includes, but is not limited to ... the development of ordinances, policies, technical materials, inspections, monitoring, outreach, and other activities related to the control of stormwater quantity and quality." The court ruled that "the ordinance on its face exceeds the express limitation of the plain and unambiguous reading of the statute, and the operation of the utility exceeds the statutory authority." The city's stormwater management fund budget divided expenditures from the stormwater management fund into three separate components: stormwater quality, stormwater quantity, and clean city. All funds collected by the utility were placed in one fund which pays for the City's entire stormwater quality program and the utility's activities substantially exceeded the providing of stormwater infrastructure. The court stated that the City's stormwater management program funded by the stormwater utility is a fully comprehensive stormwater quality program with separate component parts, the majority of the city's stormwater management program funds were not used to fund and maintain the stormwater and storm sewer drainage systems but rather to comply with the mandated MS4 permit requirements. The court held "the City chose to establish the [stormwater utility] as a mechanism by which it would comply with the unfunded mandates of the [CWA] related to stormwater runoff. In addition, the City also chose not to fund the expenditures through the general fund." The court upheld the impervious surface rate methodology "as rationally related to the amount of runoff from each lot and was not an arbitrary exercise of the City's statutory authority," but noted that "[t]his finding ... does not apply to the amount of the stormwater charges that were adopted by the City ... or the use of the funds collected...." The court held that the City's ordinance and the fees charged thereunder were invalid as a matter of law, and that plaintiffs were entitled to a full refund of the illegally collected fees plus interest.

Bolt v. City of Lansing 459 Mich. 152, 587 N.W.2d 264, Supreme Court of Michigan, December 28, 1998

Issue(s)/Questions Presented: Whether a stormwater assessment was a fee or a tax.

Holding: Stormwater charge was an improper tax.

Summary: Landowner brought original action against city, alleging that city's stormwater service charges were disguised tax for purposes of the Headlee Amendment to State Constitution. Section 31 of the Headlee Amendment "prohibits local governments from levying any new tax or increasing any existing tax above authorized rates without the approval of the unit's electorate." Thus, if an assessment is deemed a tax, voter approval is required. A user-fee would not violate the Headlee Amendment. The Court of Appeals, 221 Mich.App. 79, 561 N.W. 2d 423, held that city's charge to landowners was a "user fee" rather than a "tax" not requiring voter approval under the Headlee Amendment, and the landowner appealed. The Supreme Court held that charge was an improper tax based on the following reasons: user fee had revenue-raising purpose; user fees were not proportionate to necessary costs of service; charges did not correspond to benefits conferred, and property owners had no choice whether to use service, or control over extent to which service was used. *See Jackson County v. City of Jackson*

Northeast Ohio Regional Sewer District (NEORSD) v. Bath Township, et al. A Supreme Court of Ohio, Case No. 2013-1770

Issue(s)/Question(s) Presented: Challenge to a municipal stormwater management program to determine whether NEORSD is authorized to administer the stormwater program and collect a fee pursuant to state statute or charter.

Holding: NEORSD is authorized to enact a stormwater fee and to administer the stormwater pogrom based on state enabling legislation and the definition of sewers.

Summary: The case involves a challenge to a municipal stormwater management program instituted by NEORSD. The Ohio Supreme Court heard oral arguments September 9, 2014. The Supreme Court judges were well prepared and very engaged during questioning. A number of judges on the 7-member panel appeared to endorse arguments put forth by NEORSD in defense of the stormwater program and seemed skeptical of contentions advanced by the challengers. Additionally, a significant number of the judges were attuned to, and concerned about, the environmental and flooding impacts related to stormwater management – and appeared to understand the need for robust and well-funded stormwater management programs. NEORSD was successful in defending its stormwater fee program at the state trial court level. However, the September 2013 state appellate court ruling (999 N.E.2d 181 2013 WL 5436646) held that NEORSD had no authority to enact its Regional Stormwater Management Program (SMP) and was, therefore, enjoined from implementing the program. The court further held that NEORSD lacked requisite authority under state statute or the District's Charter to enact a stormwater fee and is enjoined from implementing, levying and collecting such fee.

Halifax Water
Halifax Regional Water Commission

TO: Ray Ritcey, BComm, MBA, CPA/CGA, Chair and Members of the Halifax Regional Water Commission Board

SUBMITTED BY:

Cathie O'Toole, MBA, CPA, CGA, Director of Finance and Customer Service

Reid Campbell, P.Eng., Director of Water Services

for Susheel Arora, M.A.Sc., P.Eng., Director of Wastewater & Stormwater Services

Kenda MacKenzie, P.Eng., Director of Environmental Services

APPROVED:

Carl D. Yates, M.A.Sc., P.Eng., General Manager

SUBJECT: **Financial and Operations Monthly Information Report**

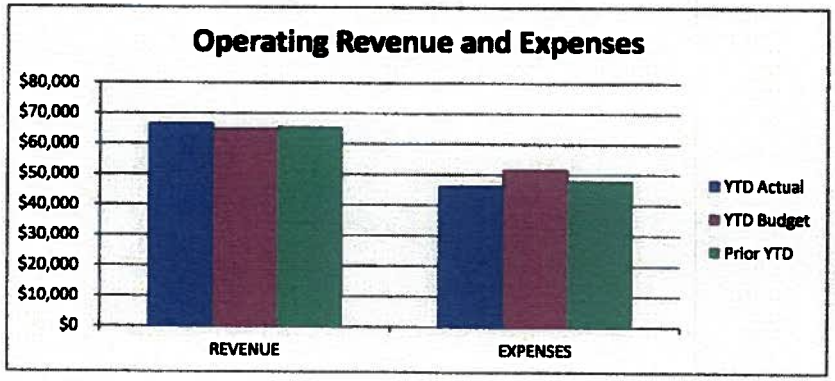
INFORMATION REPORT

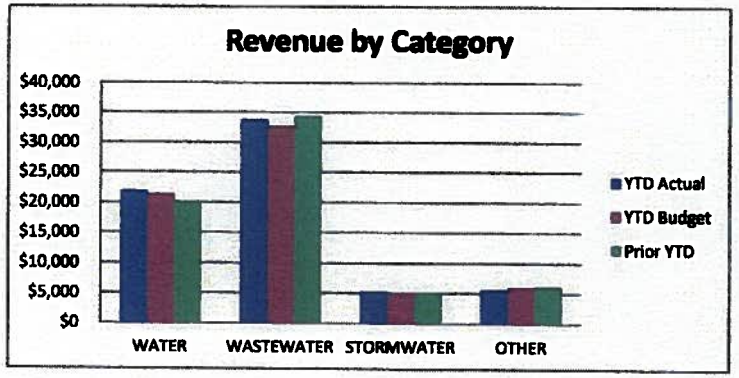
ORIGIN:

Regular monthly update.

This report provides a high level overview of financial and operational performance for the utility. Financial results are presented first, followed by indicators and statistics for water and wastewater.

HALIFAX WATER
UNAUDITED FINANCIAL INFORMATION
APRIL 1/15 - SEPTEMBER 30/15 (6 MONTHS)
'000



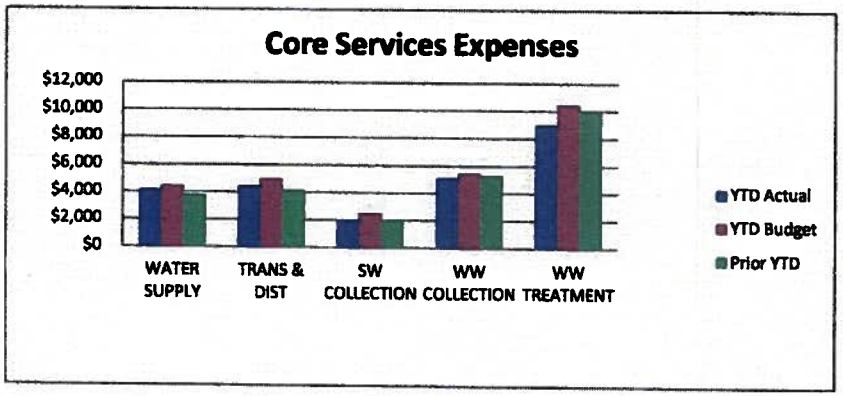


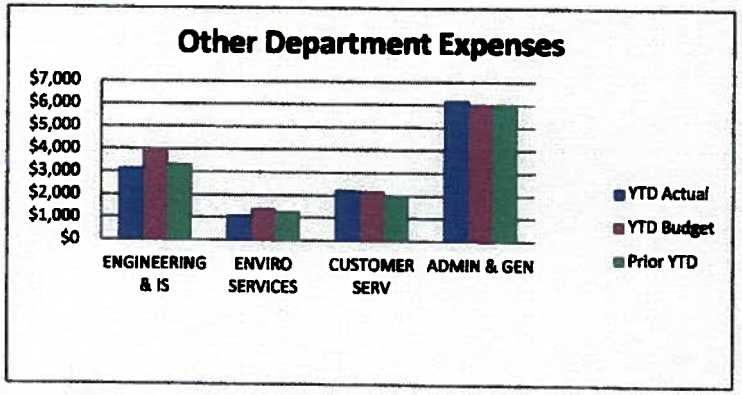
OPERATING REVENUE AND EXPENSES

	YTD Actual	YTD Budget	Prior YTD	% of Budget
REVENUE	$66,713	$64,953	$65,637	51.36%
EXPENSES	$46,437	$51,807	$48,019	44.82%
	$20,276	$13,146	$17,618	77.12%

REVENUE BY CATEGORY

	YTD Actual	YTD Budget	Prior YTD
WATER	$21,893	$21,372	$20,171
WASTEWATER	$33,826	$32,752	$34,418
STORMWATER	$5,306	$4,798	$4,925
OTHER	$5,688	$6,030	$6,123
	$66,713	$64,953	$65,637



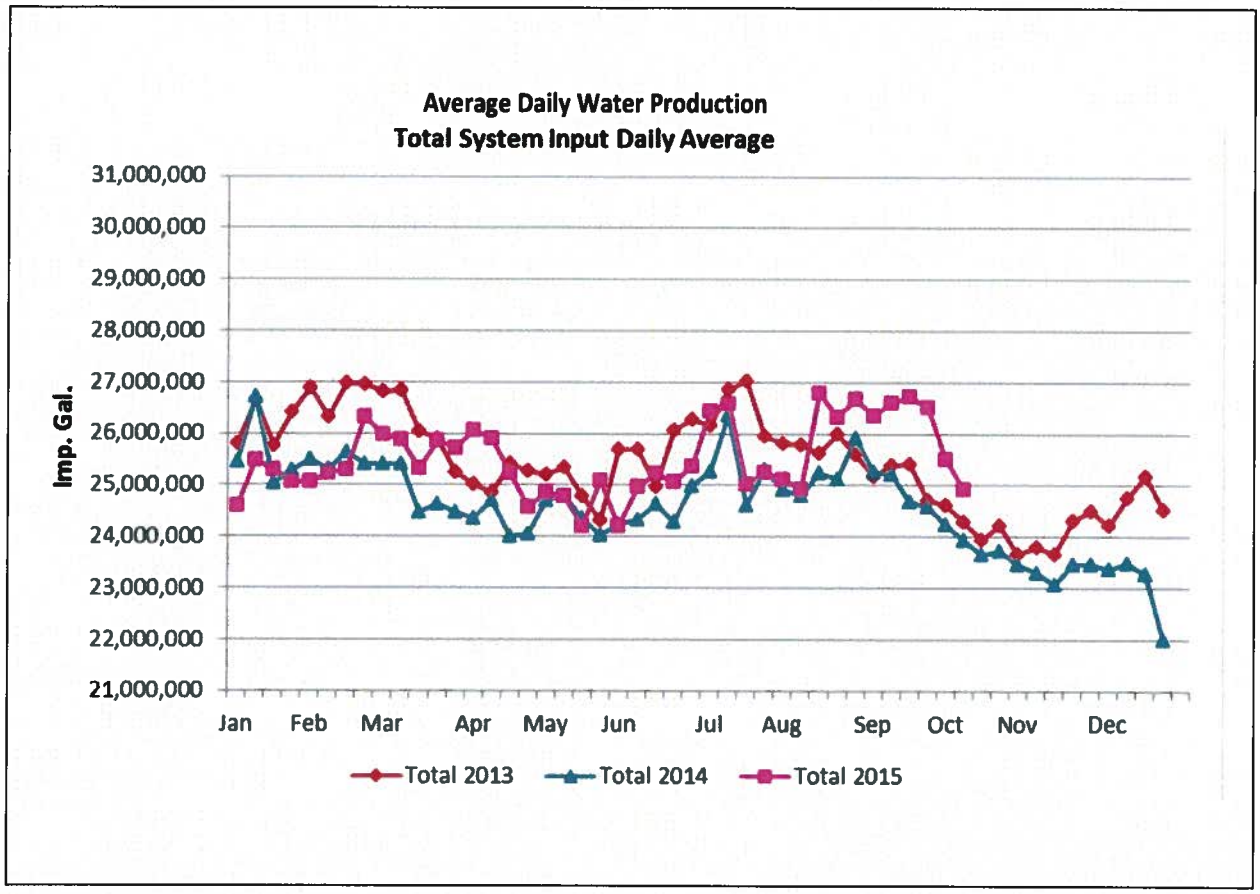


CORE SERVICES EXPENSES

	YTD Actual	YTD Budget	Prior YTD	% of Budget
WATER SUPPLY	$4,158	$4,463	$3,833	46.58%
TRANS & DIST	$4,423	$4,980	$4,185	44.41%
SW COLLECTION	$1,932	$2,522	$2,042	38.30%
WW COLLECTION	$5,087	$5,454	$5,310	46.64%
WW TREATMENT	$8,974	$10,486	$10,047	42.79%
	$24,575	$27,906	$25,418	44.03%

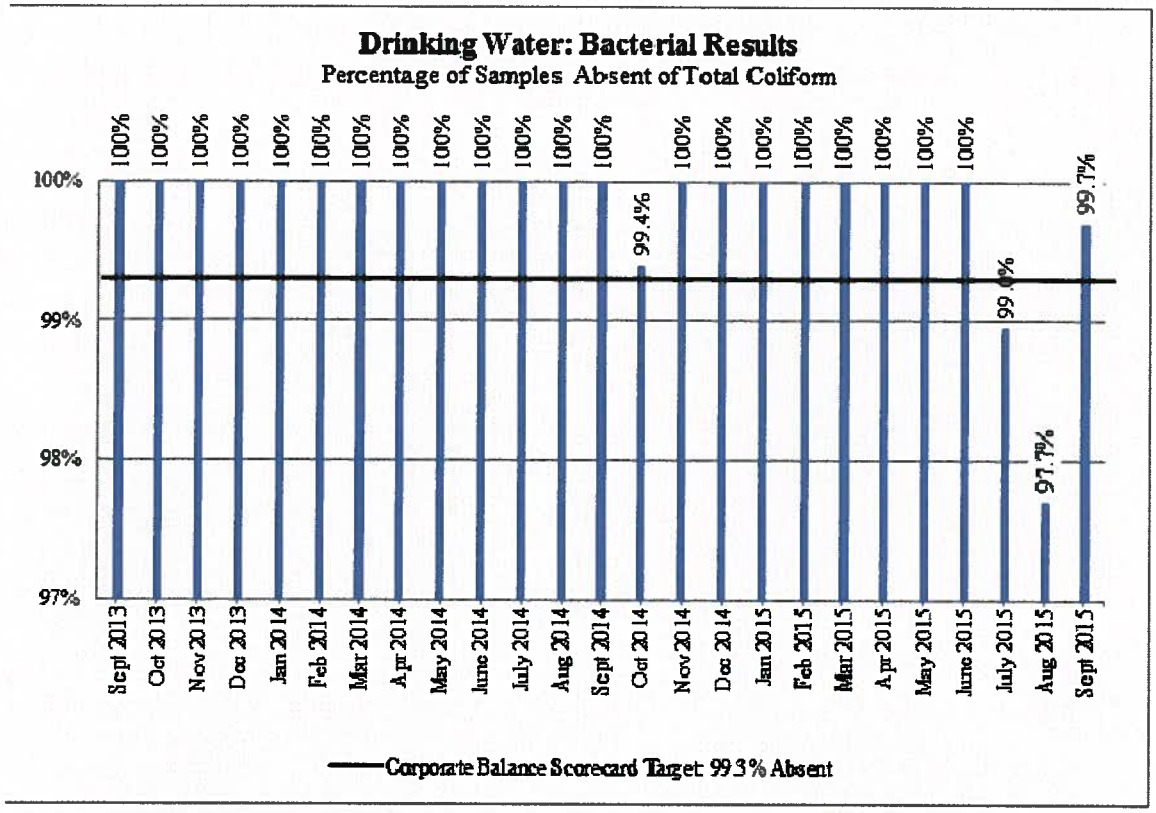
OTHER DEPARTMENT EXPENSES

	YTD Actual	YTD Budget	Prior YTD
ENGINEERING & IS	$3,161	$3,935	$3,359
ENVIRO SERVICES	$1,102	$1,398	$1,276
CUSTOMER SERV	$2,225	$2,186	$1,942
ADMIN & GEN	$6,191	$5,976	$5,936
	$12,700	$13,495	$12,513



Regional Water Main Break/Leak Data		
Year	**Total Breaks/Leaks**	**Current 12 Month Rolling Total *(up to October 18/15)***
2014/15	210	222
2013/14	213	
2012/13	262	
2011/12	205	
2010/11	198	
Total	**1088**	
Yr. Avg.	**217.6**	

Water Accountability
Losses per Service Connection/Day (International Water Association Standard)
Period Ending March 31, 2015
Real Losses: 210 litres CBS Target: 180 - 190 litres *(Target adjusted in 2015/16 to be consistent with the latest IWA/AWWA methodology.)*



Water Quality Master Plan Objectives 2015-2016 Q2				
Objective	Total Sites	% of Sites Achieving Target	All Sites: 90th Percentile < 15 µg/L	CBSC Awarded Points
Disinfection	64	94%	---	14
Total Trihalomethanes	24	92%	---	13
Haloacetic Acids	21	100%	---	20
Particle Removal	5	100%	---	20
Corrosion Control*	69	---	8.88	20
TOTAL				87

Score: 87/100

With the exception of Aerotech, all waste water treatment facilities have had their compliance criteria changed by NSE. Each facility in this report is assessed based on monthly or quarterly averages, depending on the averaging period specified in its Approval variance.

Wastewater Treatment Facility Compliance Summary

Rolling Averages - July, August, September 2015

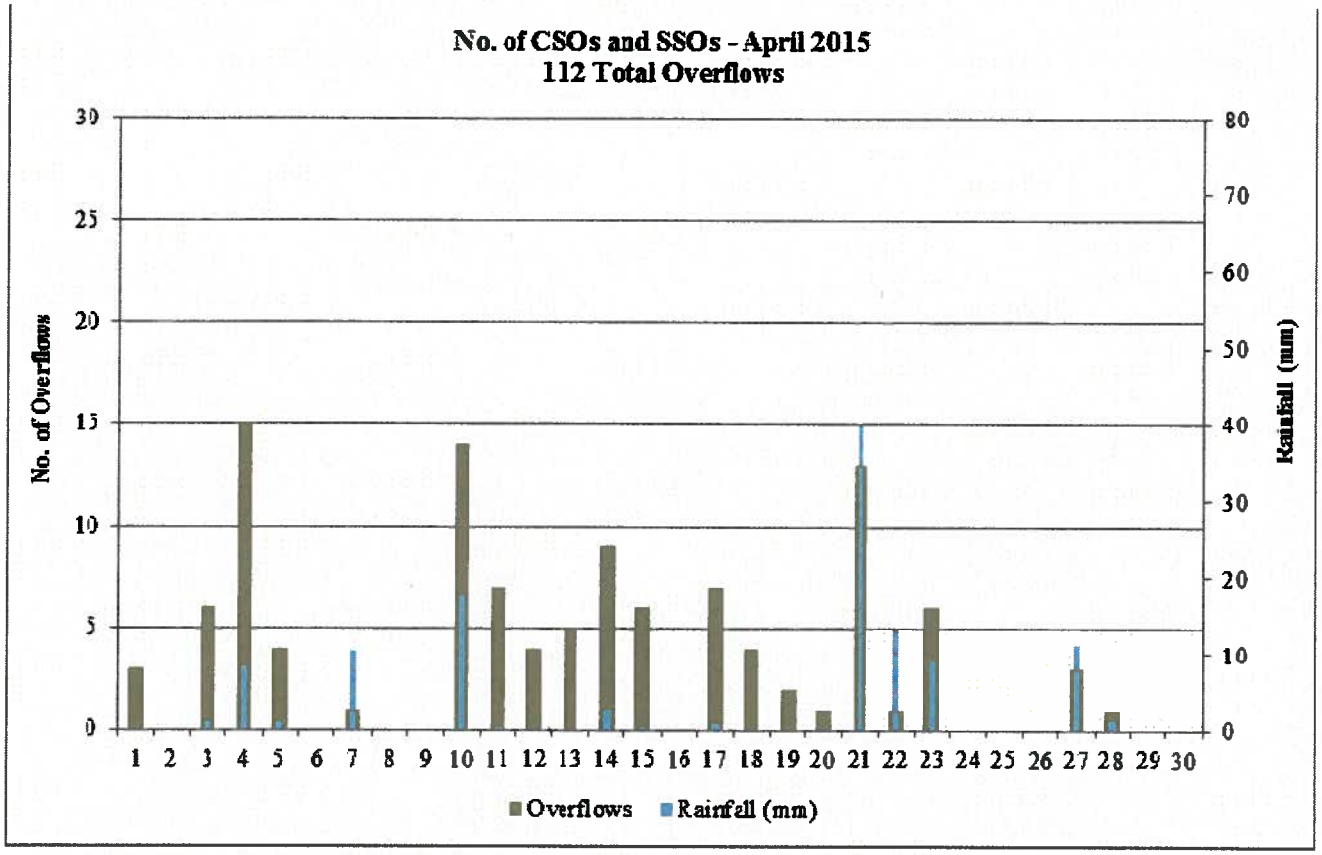
Wastewater Treatment Facility	CBODs (mg/L)		TSS (mg/L)		F. coliform (CFU/100mL)		E. coli (counts/ 100mL)		pH		Ammonia (mg/L)		O-Phosphate (mg/L)		Phosphorous (mg/L)		TRC (mg/L)		Dissolved Oxygen (mg/L)		Q3 Toxicity	Trend
	NSE Limit	Avg.	NSE Limit	Avg.	NSE Limit	Avg.	NSE Limit	Avg.	NSE Limit	Avg.	NSE Limit	Avg.	NSE Limit	Avg.	NSE Limit	Avg.	NSE Limit	Avg.	NSE Limit	Avg.		
Halifax	50	50	40	17	5000	8082	-		-		-		-		-		-		-		-	Declined
Dartmouth	50	27	40	14	5000	6344	-		-		-		-		-		-		-		-	Declined
Herring Cove	50	17.9	40	8	5000	1142	-		-		-		-		-		-				-	Continued
Eastern Passage	50	10	40	10	5000	46	-		6.5-9	7.0	-		-		-		-		-		-	Continued
Mill Cove	25	11	25	8	-		200	258	6.5-9	6.7	-		-		-		-		-		Not acutely lethal	Declined
Springfield	20	4	20	5	-		200	63	6-9	7.5	-		-		-		0.02	0.28	-		Not acutely lethal	Continued
Belmont	25	7	25	25	-		200	148	6-9	7.2	-		-		-		0.02	0.84	-		-	Declined
Frame	20	9	20	30	-		200	75	6-9	6.5	-		-		-		0.02	1.02	-		-	Continued
Middle Musq.	20	3	20	12	-		200	16	6-9	7.4	-		-		-		-		-		-	Continued
Uplands	20	6	20	10	-		200	25	6-9	6.4	-		-		-		-		-		-	Continued
Aerotech	10	4	10	6	200	31	-		6.5-9	7.3	3	1.7	-		2	0.3	-		-		-	Continued
North Preston	10	4	10	2	200	5	-		6.5-9	7.4	3	0.6	1.5	0.2	-		-		-		-	Continued
Lockview	20	8	20	29	-		200	114	6.5-9	7.0	8S	9.2	-		1.2	0.9	-		-		-	Continued
Steeves (Wellington)	15	6	15	2	200	34	-		6.5-9	7.6	3	0.3	1	0.2	-		-		-		-	Continued
BLT	15	7	20	17	-		200	10	6.5-9	7.1	5W 3S	5.6	-		3W 1S	1.4	0.02	0.12	5	6.9	Not acutely lethal	Continued
Average of all Facilities		12		13		2241		64.5		7.1		3.5		0.2		0.9		0.6		6.9		

NOTES & ACRONYMS:
CBODs - Carbonaceous 5-Day Biochemical Oxygen Demand
TSS - Total Suspended Solids
TRC - Total Residual Chlorine

LEGEND
NSE Compliant
NSE Non-Compliant

NSE requires monthly averages be less than the NSE Compliance Limit for each parameter (Dartmouth, Eastern Passage, Halifax, Herring Cove, Mill Cove)
NSE requires quarterly averages be less than the NSE Compliance Limit for each parameter (Aerotech, Lockview, Mid. Musq., Belmont, Frame, BLT, Uplands, North Preston, Steeves, Spring
Continued - All parameters remain essentially unchanged since the last report.
Improved - One or more parameter(s) became compliant since the last report.
Declined - One or more parameters(s) became non-compliant since the last report.

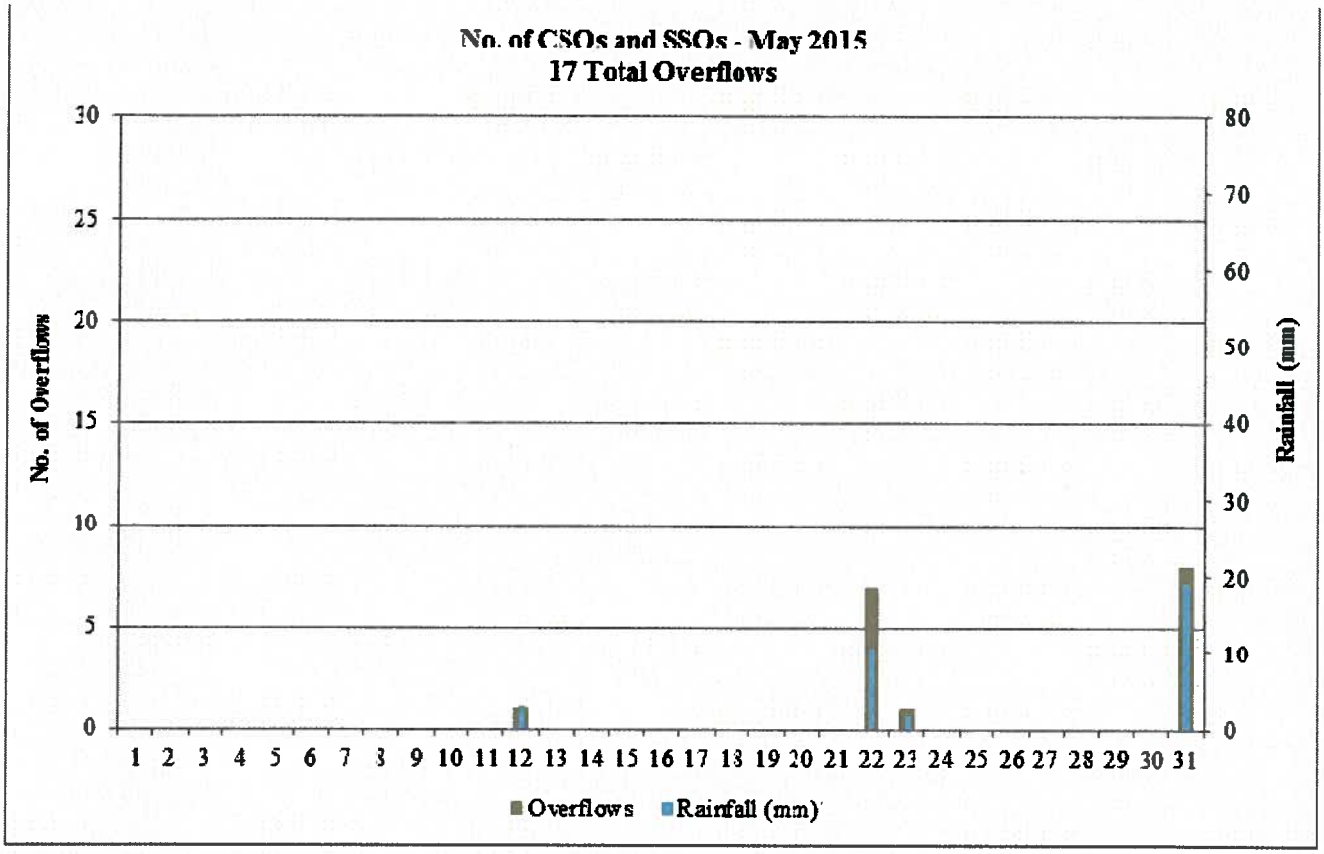
W = Winter
S = Summer



NOTES & ACRONYMS: CSO - Combined Sewer Overflow SSO - Sanitary Sewer Overflow

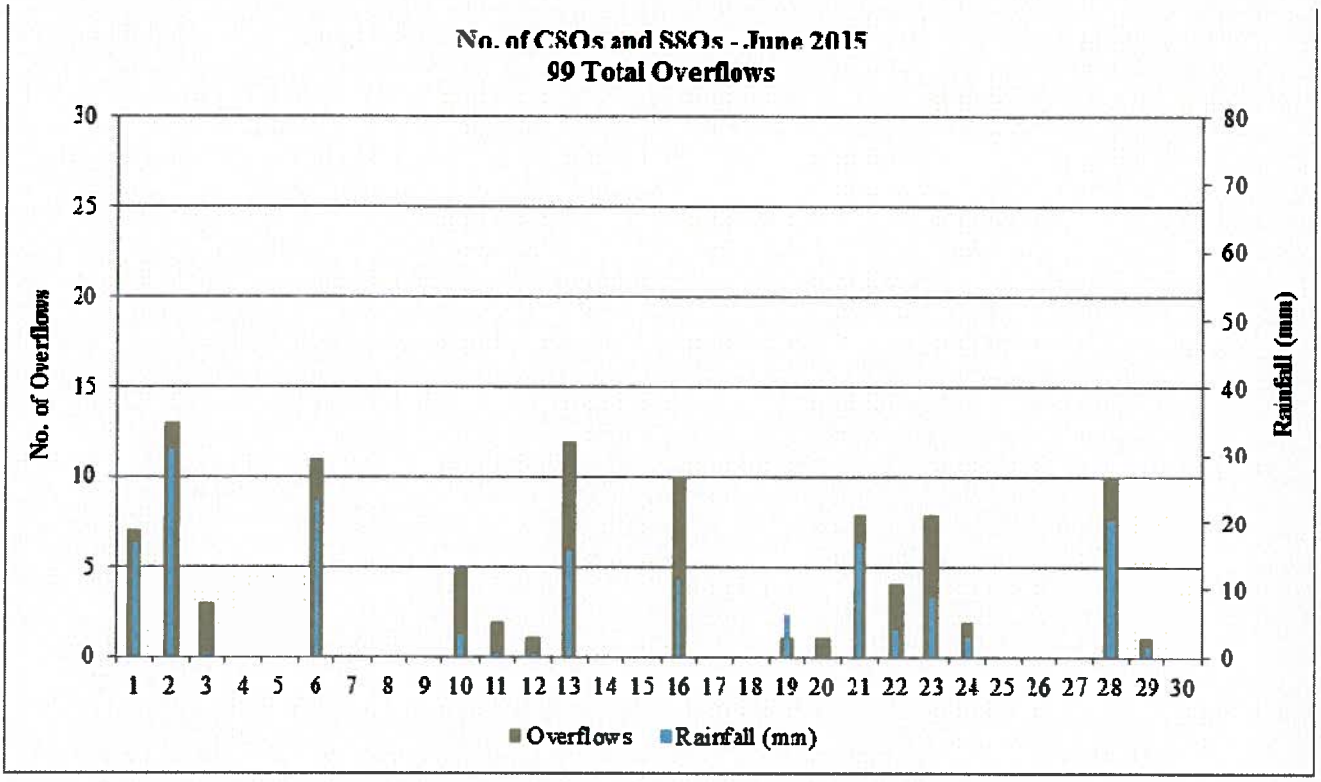
- Rainfall data is from Halifax Water's rain gauge at the Halifax WWTF.
- There were thirty-two overflows on days when there was no recorded rainfall, as follows:

1. Apr 1: The CSO at the Old Ferry Rd PS & CSO was due to a mechanical issue. The CSOs at the Duffus St PS and the Sackville St CSO were due to snow melt.
2. Apr 11: The CSOs at the Wallace St CSO, Chain Rock PS & CSO, Pier A PS & CSO, Young St CSO and Fish Hatchery Park PS were due to snow melt.
3. Apr 12: The CSOs at the Grove St CSO, Upper Water St CSO, Beaver Crescent PS and Fish Hatchery Park PS were due to snow melt.
4. Apr 13: The CSOs at the Grove St CSO, Chain Rock PS & CSO, Upper Water St CSO, Beaver Crescent PS and Fish Hatchery Park PS were due to snow melt.
5. Apr 15: The CSOs at the Grove St CSO, King St PS & CSO, Chain Rock PS & CSO, Upper Water St CSO, Beaver Crescent PS and Fish Hatchery Park PS were due to snow melt.
6. Apr 18: The CSOs at the Maitland St PS & CSO, Sackville St CSO and Beaver Crescent PS were due to snow melt.
7. Apr 19: The CSO at the Old Ferry Rd PS & CSO was due to a mechanical issue and the CSO at the Maitland St PS & CSO was due to snow melt.
8. Apr 20: The CSO at the Duffus St PS was due to snow melt.



NOTES & ACRONYMS: CSO - Combined Sewer Overflow SSO - Sanitary Sewer Overflow

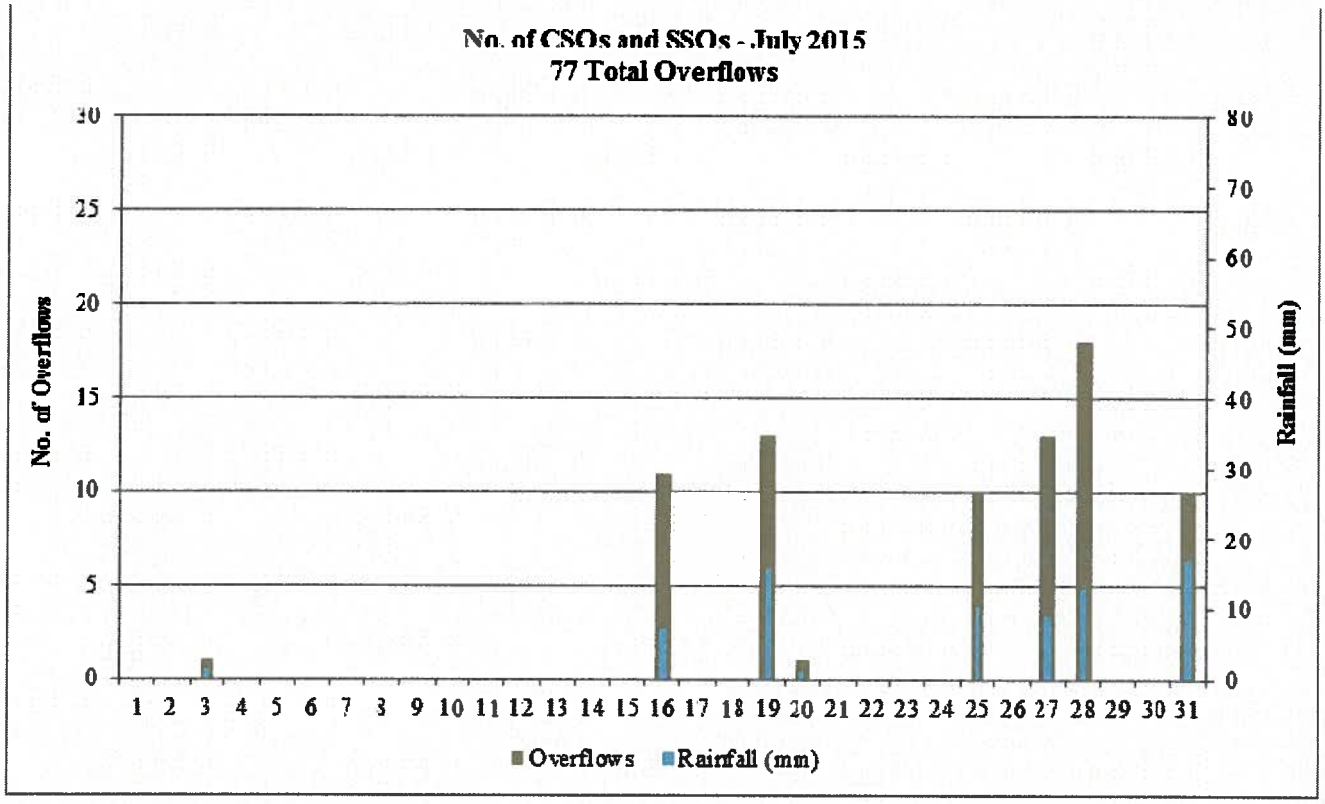
- Rainfall data is from Halifax Water's rain gauge at the Halifax WWTF.
- There were no overflows on days when there was no recorded rainfall.



NOTES & ACRONYMS: CSO - Combined Sewer Overflow SSO - Sanitary Sewer Overflow

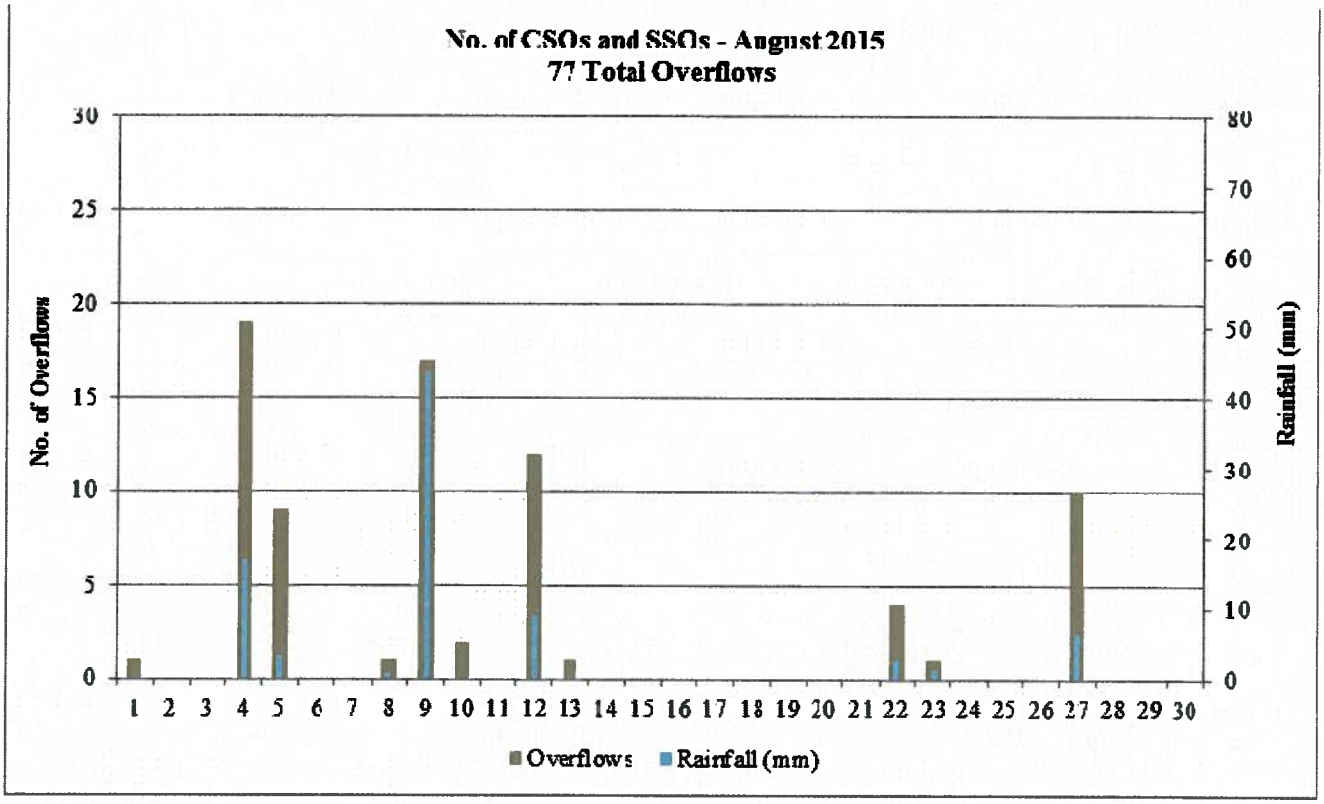
- Rainfall data is from Halifax Water's rain gauge at the Halifax WWTF.
- There were seven overflows on days when there was no recorded rainfall, as follows:

1. June 3: The CSOs at the Lyle St CSO, Jamieson St PS & CSO and Maitland St PS & CSO were due to rainfall on the previous day.
2. June 11: The CSOs at the Maitland St PS & CSO were due to blockages caused by debris.
3. June 12: The CSO at the Maitland St PS & CSO was due to a blockage caused by debris.
4. June 20: The CSO at the Lyle St CSO was caused by a mechanical issue.



NOTES & ACRONYMS: CSO - Combined Sewer Overflow SSO - Sanitary Sewer Overflow

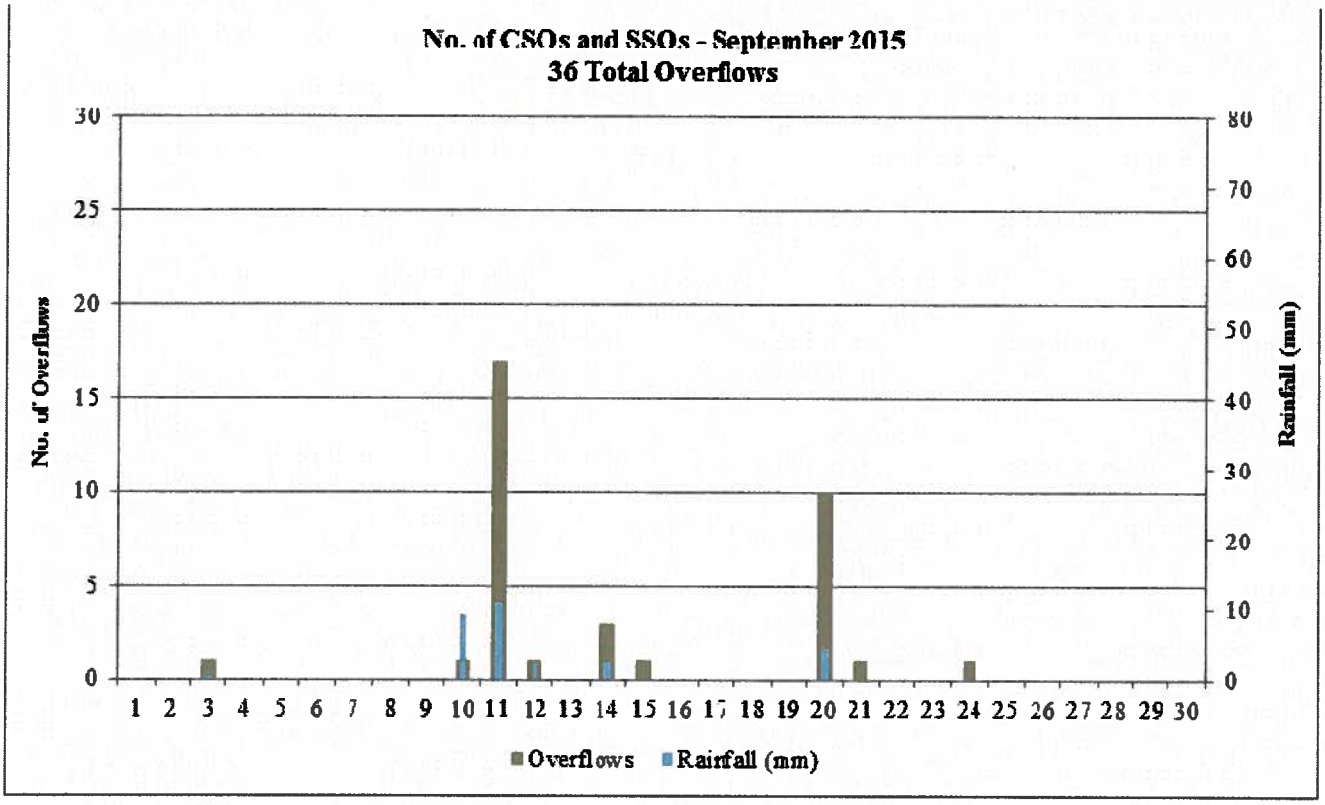
- Rainfall data is from Halifax Water's rain gauge at the Halifax WWTF.
- There were no overflows on days when there was no recorded rainfall.



NOTES & ACRONYMS: CSO - Combined Sewer Overflow SSO - Sanitary Sewer Overflow

- Rainfall data is from Halifax Water's rain gauge at the Halifax WWTF.
- There were four overflows on days when there was no recorded rainfall, as follows:

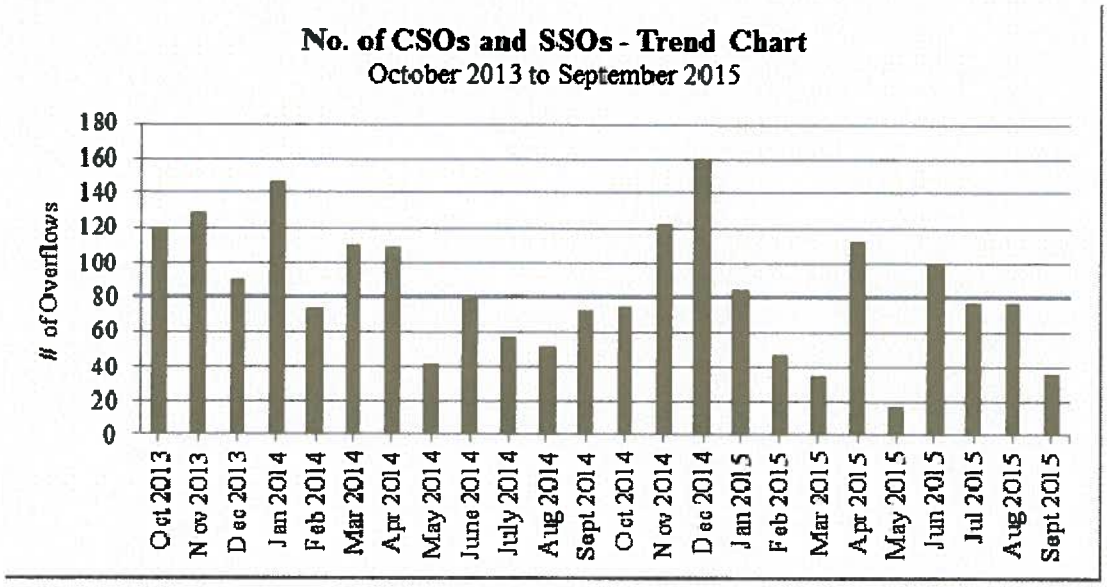
1. August 1: The CSO at the Upper Water St CSO was due to a mechanical issue.
2. August 10: The CSOs at the Beaver Crescent PS and the Stuart Harris Dr PS resulted from a power outage.
3. August 13: The CSO at the Old Ferry Rd PS &CSO was due to heavy rainfall on the previous day.

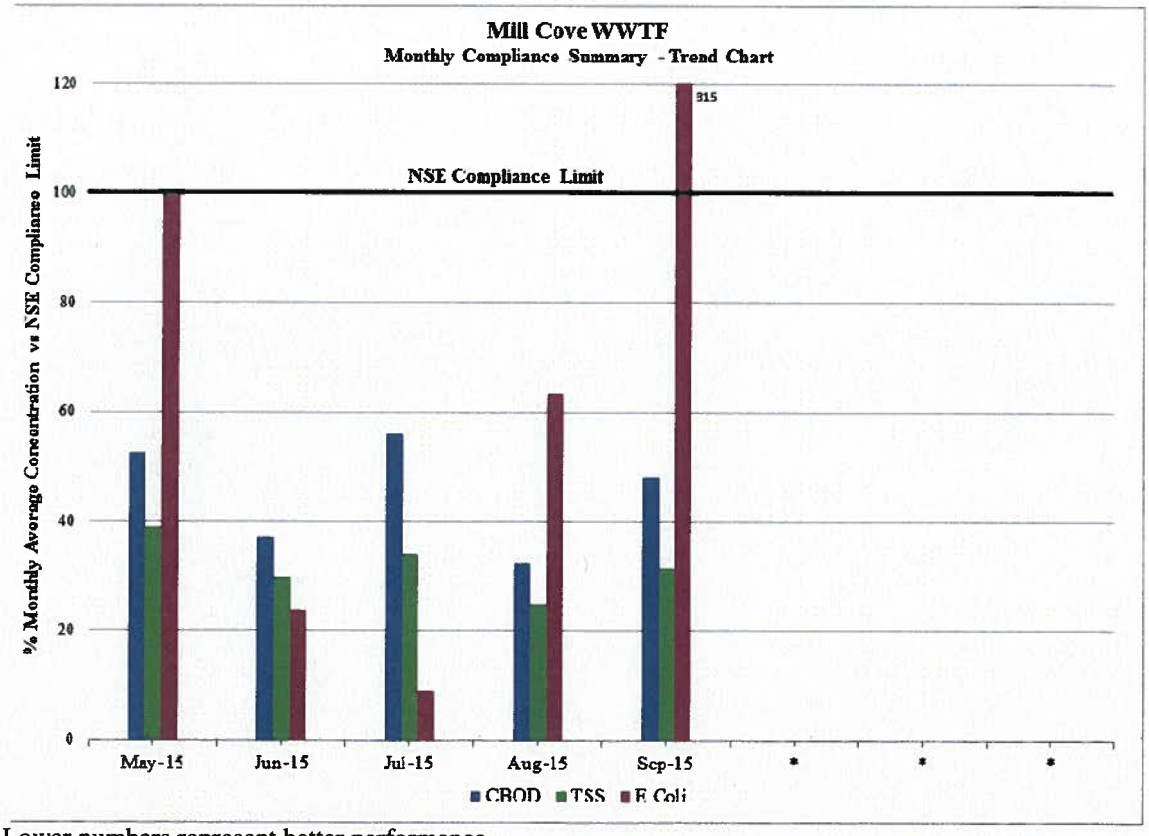


NOTES & ACRONYMS: CSO - Combined Sewer Overflow SSO - Sanitary Sewer Overflow

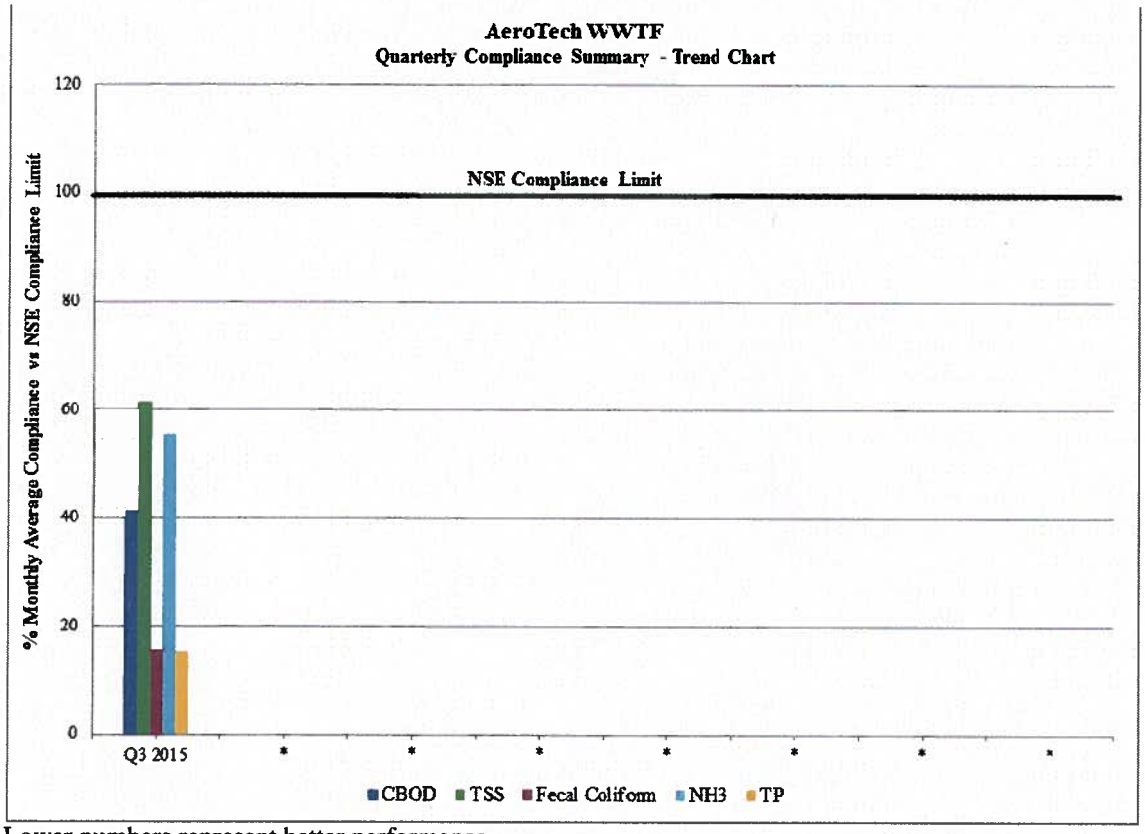
- Rainfall data is from Halifax Water's rain gauge at the Halifax WWTF.
- There were four overflows on days when there was no recorded rainfall, as follows:

1. September 3: The CSO at the Upper Water St CSO was due to a mechanical issue.
2. September 15: The CSO at the Upper Water St CSO was due to a mechanical issue.
3. September 21: The CSO at the Upper Water St CSO was due to a mechanical issue.
4. September 24: The CSO at the Ferguson Rd CSO was due to planned maintenance at the Jamieson St PS & CSO.

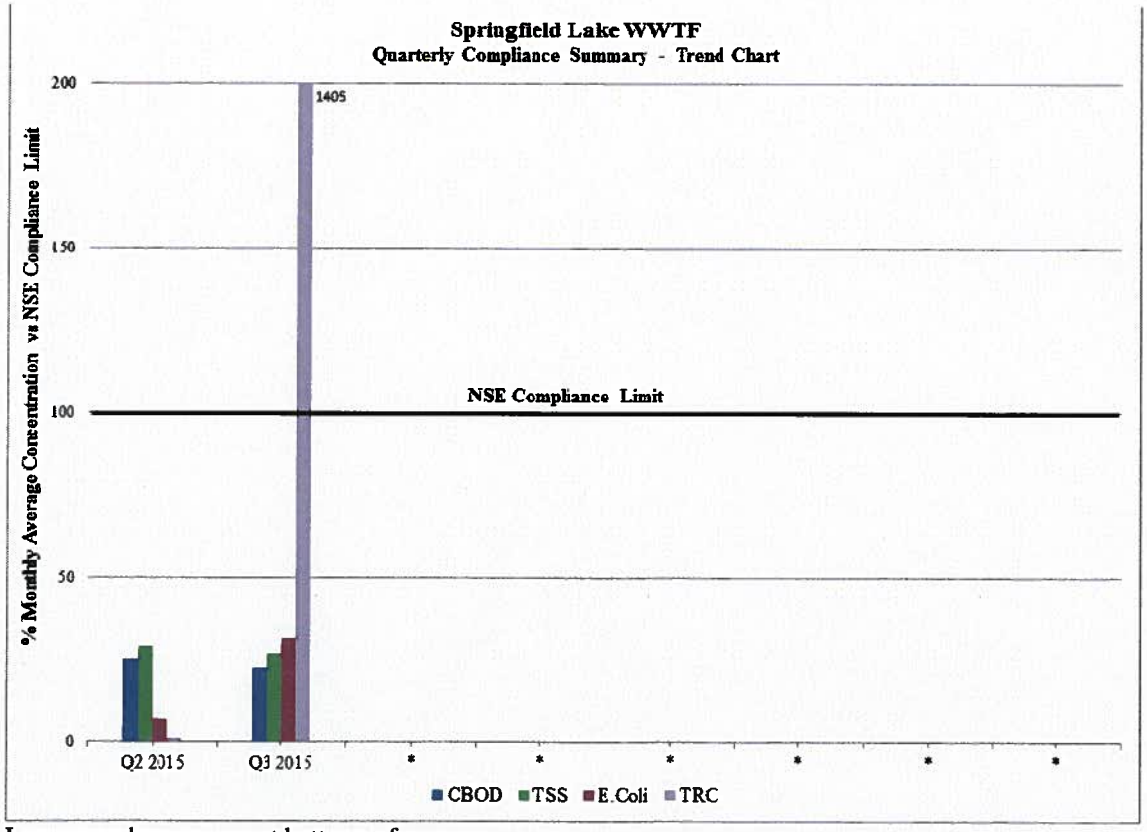




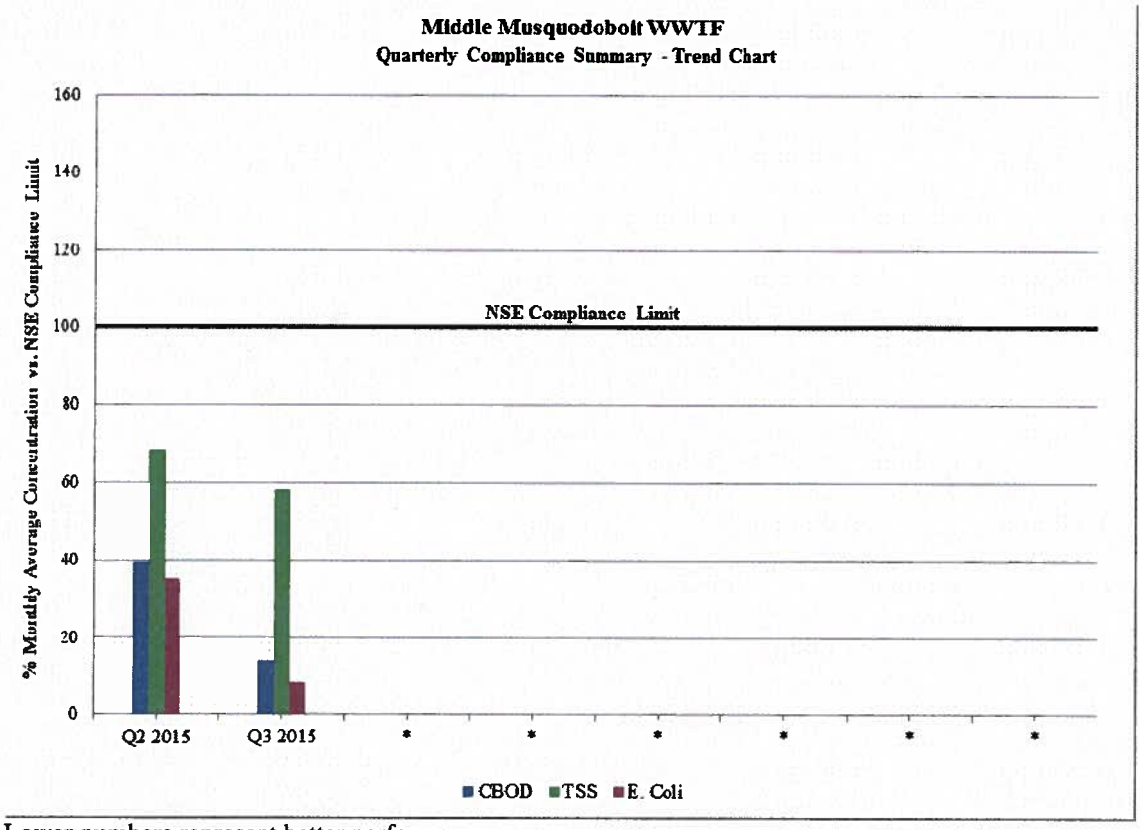
Lower numbers represent better performance



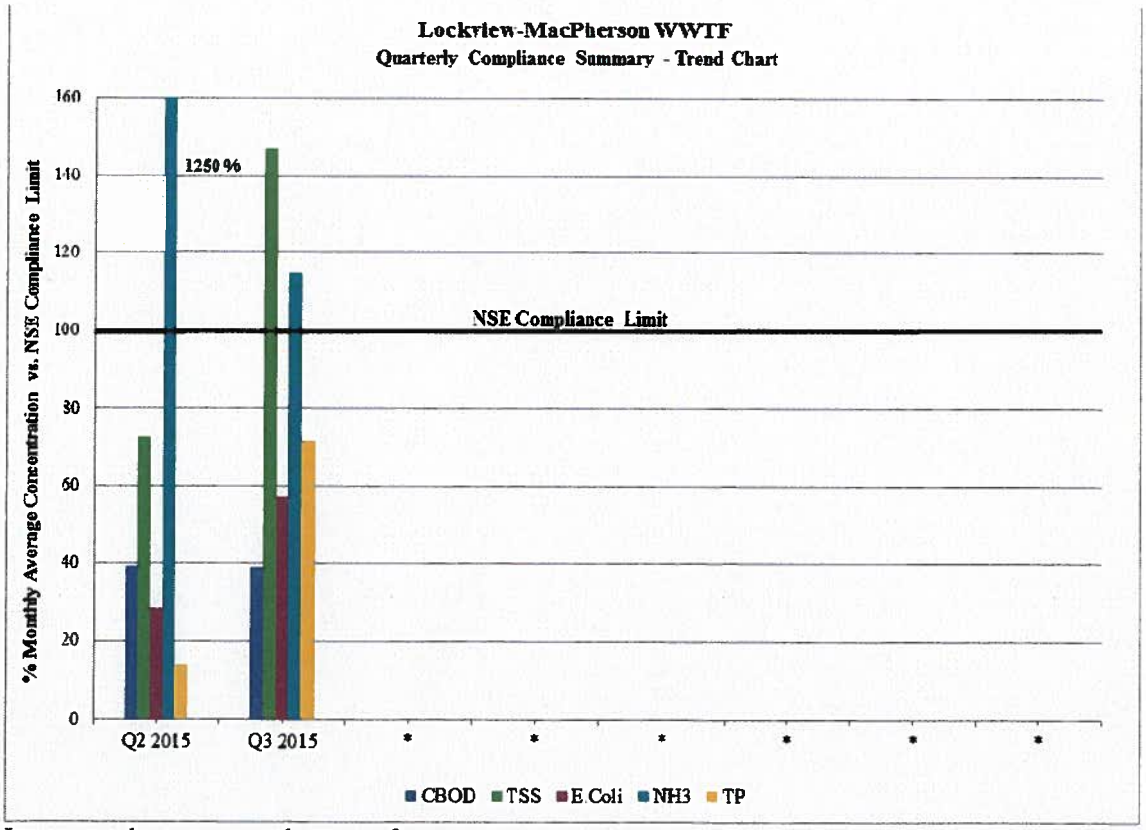
Lower numbers represent better performance



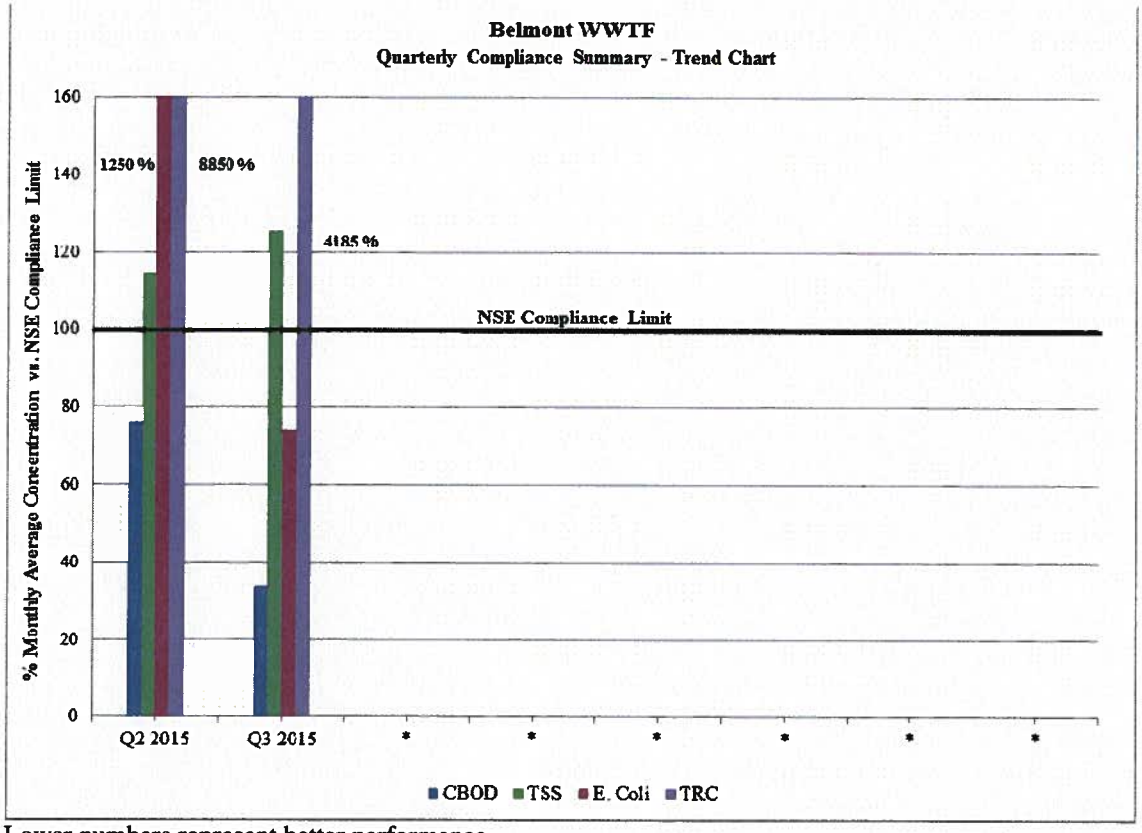
Lower numbers represent better performance



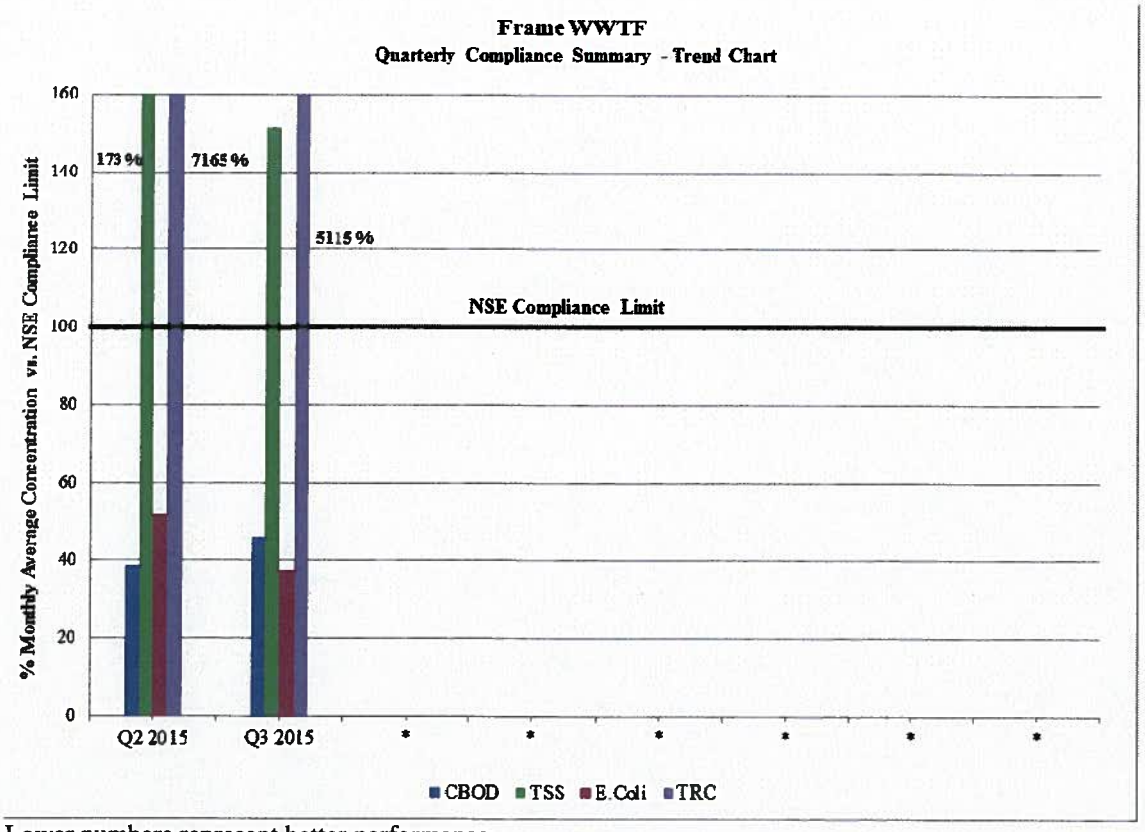
Lower numbers represent better performance



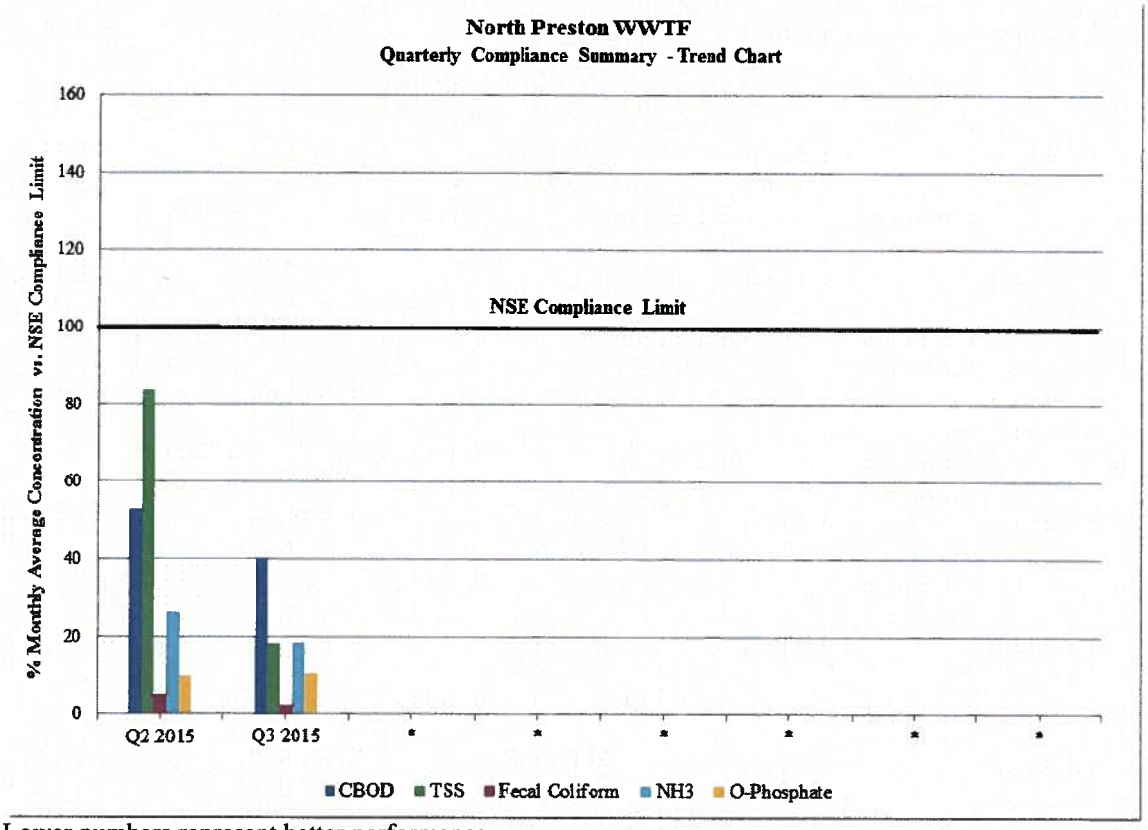
Lower numbers represent better performance



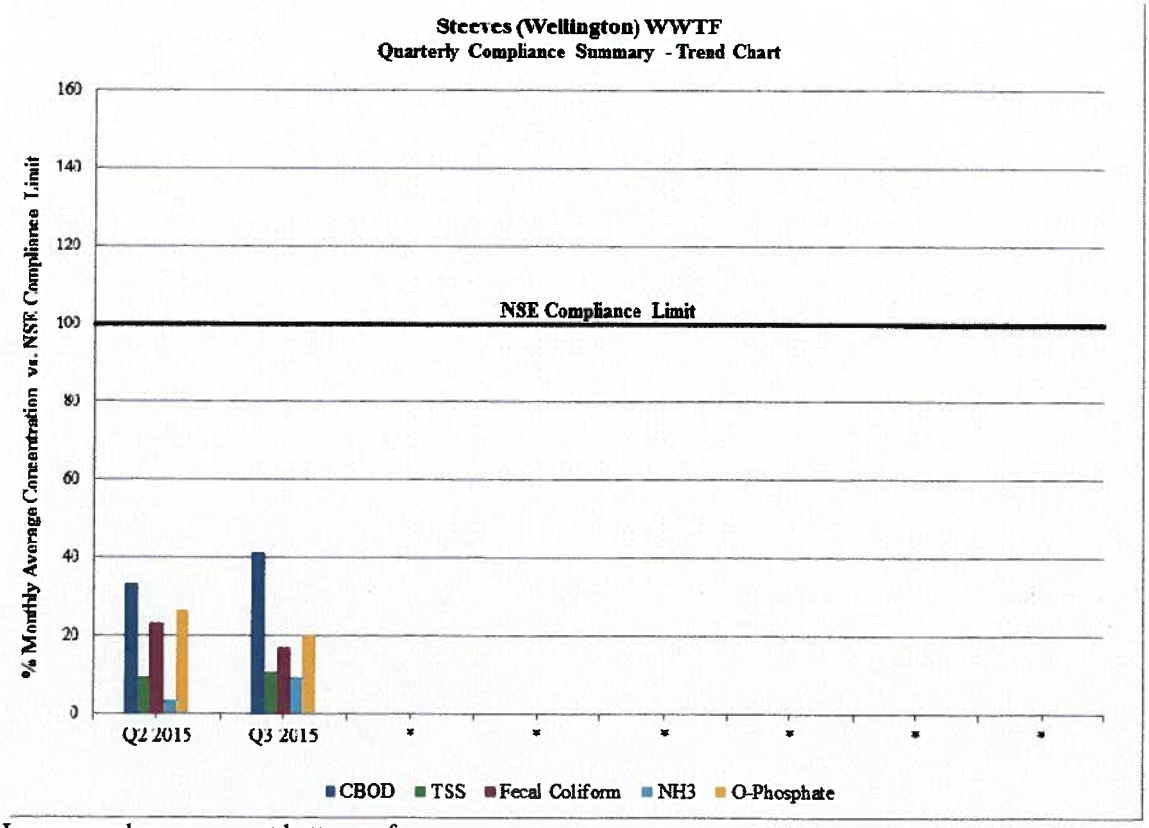
Lower numbers represent better performance



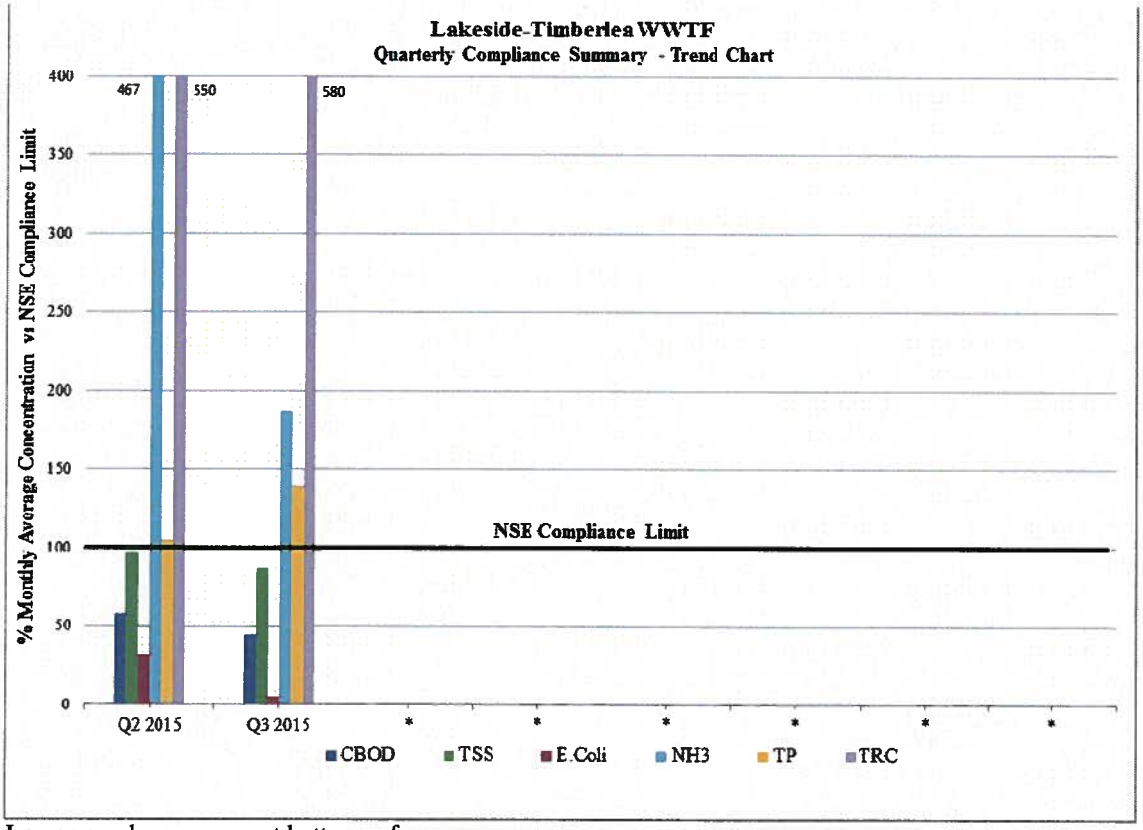
Lower numbers represent better performance



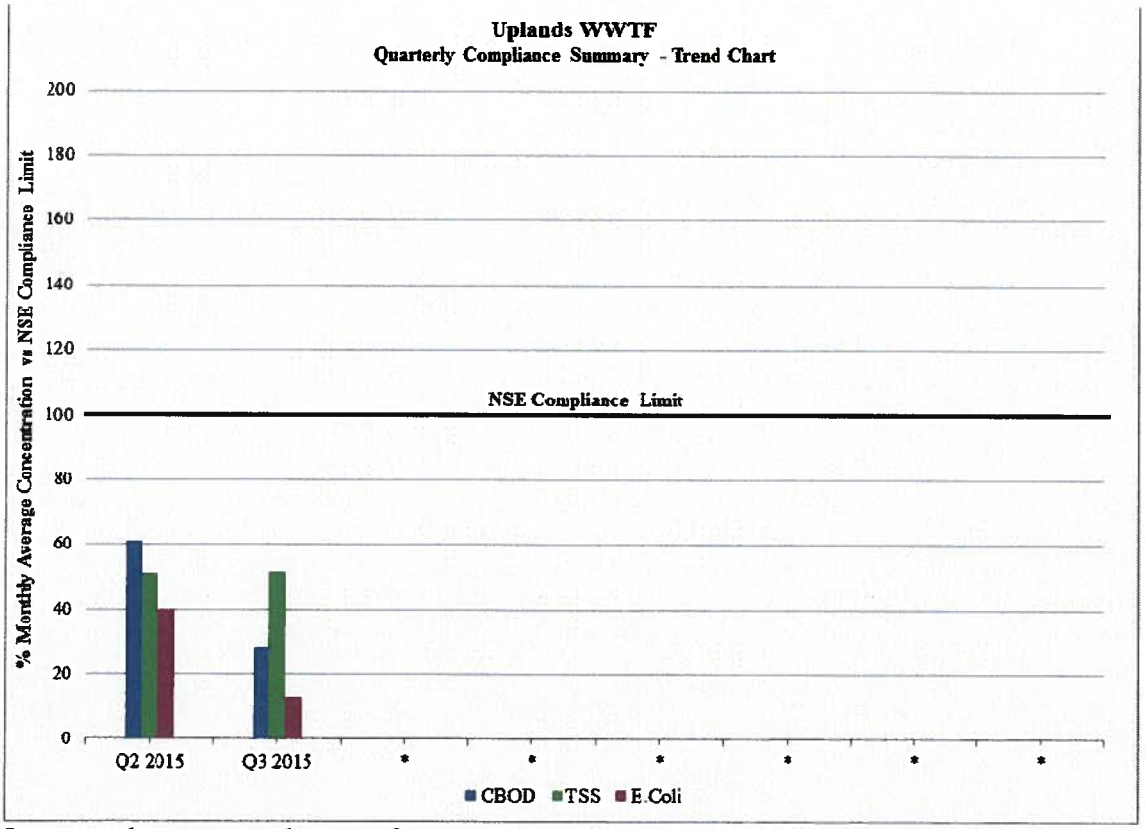
Lower numbers represent better performance



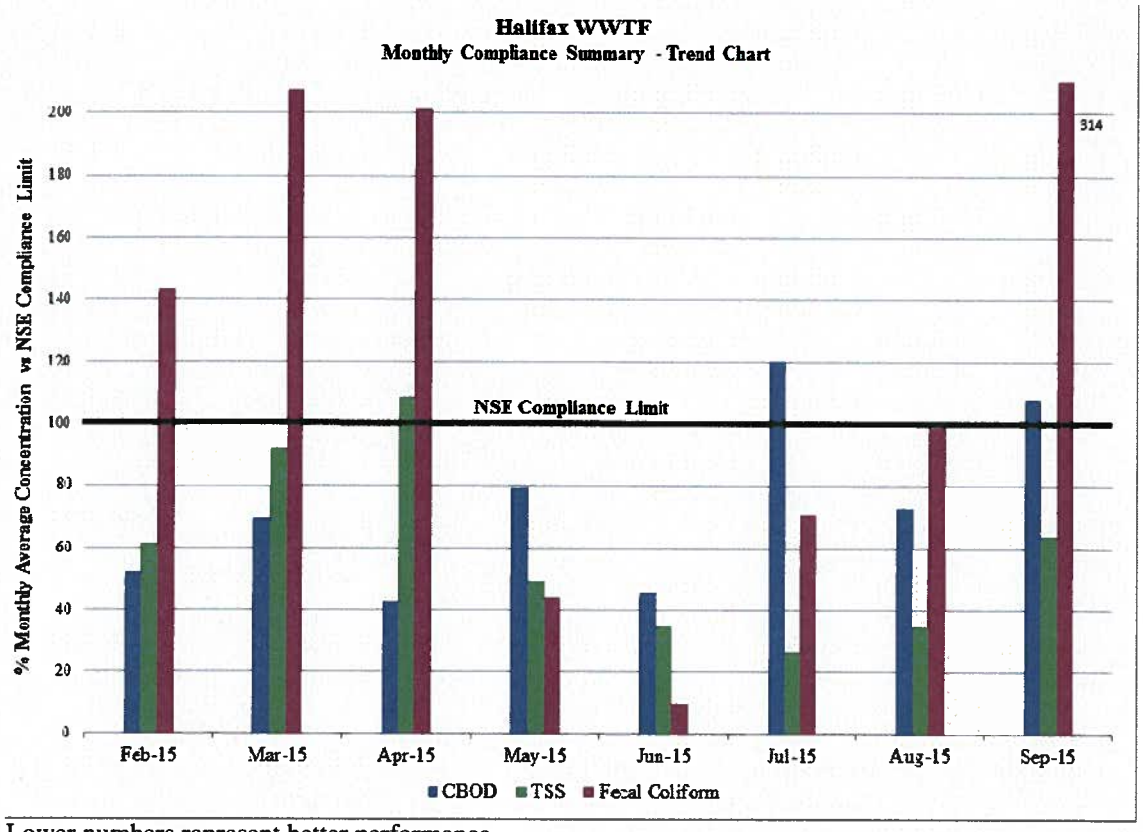
Lower numbers represent better performance



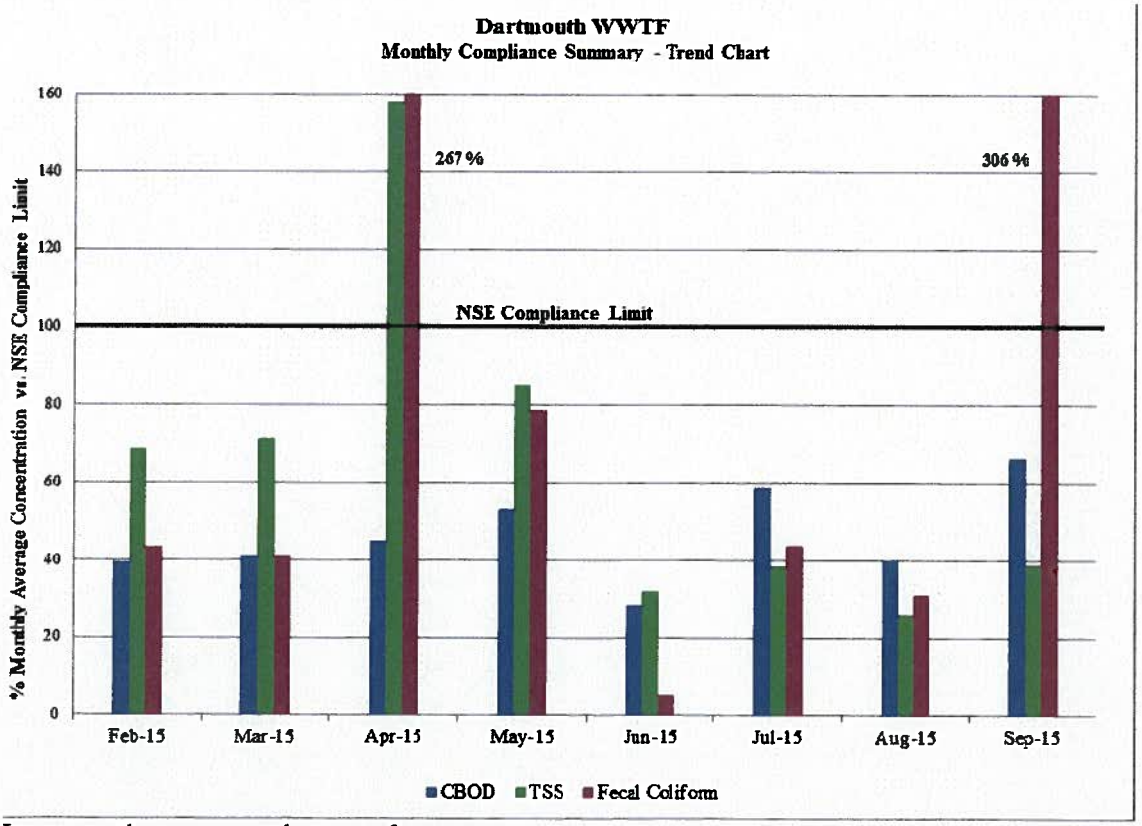
Lower numbers represent better performance



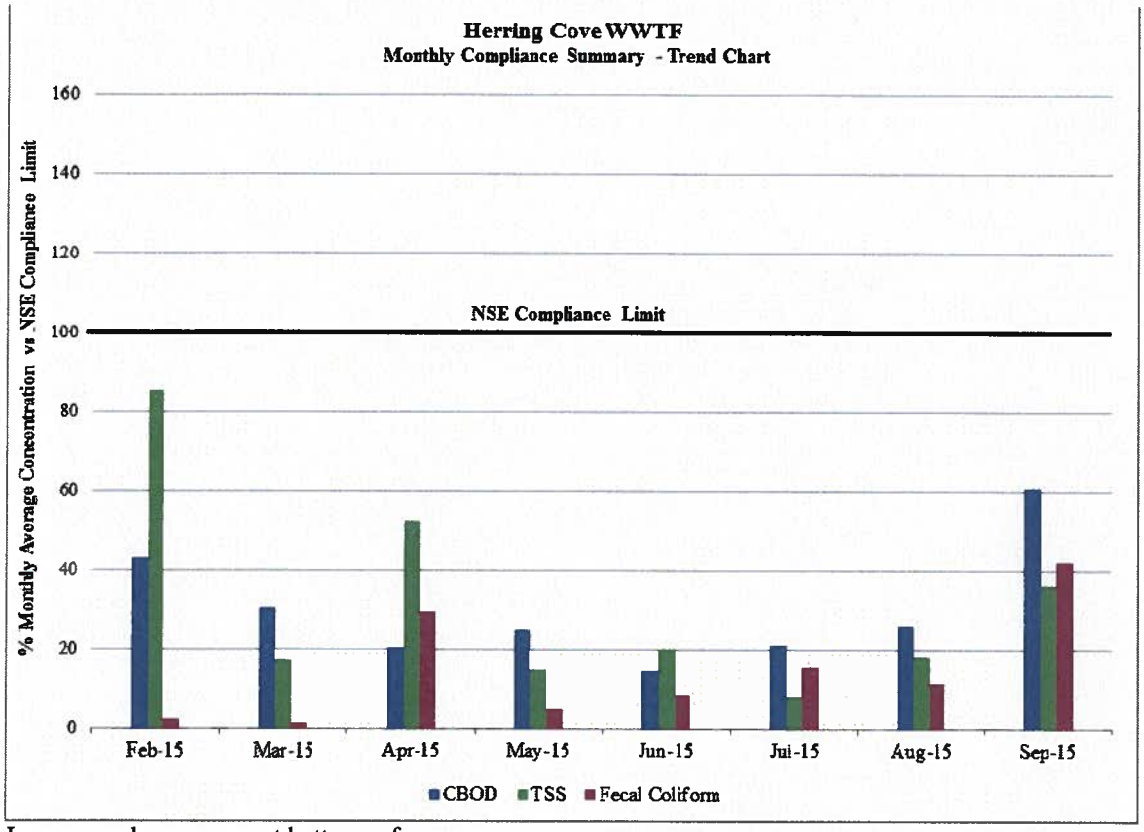
Lower numbers represent better performance



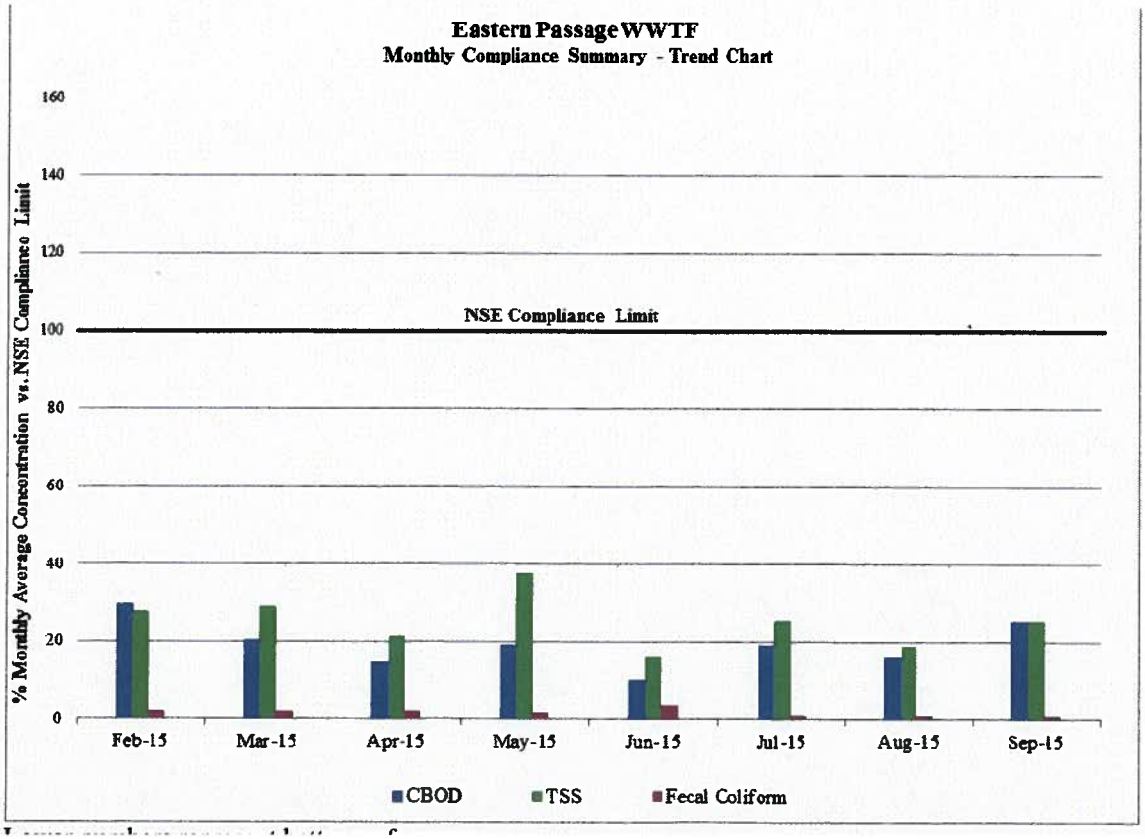
Lower numbers represent better performance



Lower numbers represent better performance



Lower numbers represent better performance



Item 3-I

23-Oct-15

FINANCIAL REPORT

Consolidated balance of the four operating accounts maintained by the Commission as of:	23-Oct-15	$39,016,779
Rate of interest on the above balance - Investment Rate of Return	0.074%	$39,016,778.69

Halifax Water
Halifax Regional Water Commission

ITEM # 4-I
HRWC Board
October 29, 2015

TO: Ray Ritcey, BComm, MBA, CPA/CGA Chair, and Members of the Halifax Regional Water Commission Board

SUBMITTED BY: Cathie O'Toole, MBA, CGA
Director of Finance and Customer Service

APPROVED: Carl Yates, M.A.Sc., P.Eng
General Manager

DATE: October 22, 2015

SUBJECT: **2015/16 Cost Containment**

INFORMATION REPORT

ORIGIN

The Cost Containment Process (Item #6) as approved by the Halifax Regional Water Commission (HRWC) Board, October 3, 2013.

April 14, 2015 NSUARB Decision- HRWC General Rate Application (M06540)

BACKGROUND

The process for cost containment as approved by the HRWC Board on October 3, 2013 called for the implementation of a number of recommended actions that would assist HRWC in addressing the Nova Scotia Utility and Review Board's (NSUARB) request for a more rigorous approach to cost containment as an organization. One key recommendation was the establishment of a reporting structure whereby, "*on a quarterly basis, the monthly financial report of the HRWC Board will also include an update on Cost Containment Initiatives*".

In the Decision on the 2015 Rate Hearing, the NSUARB directed HRWC to file annual reports on its efforts to contain operating costs of the utility, with this report to be filed no later than June 30 of each year. Within the Decision, the NSUARB expressed it's

appreciation in receiving HRWC's first cost containment report, and HRWC's initiatives to contain its operating costs. HRWC filed this initial report with the NSUARB in September 2014, identifying $2.8 million of savings for 2013/14.

The 2014/15 Cost Containment Report was submitted to the HRWC Board on June 18, 2015 (Item #4-I) and subsequently filed with the NSUARB. For 2014/15 cost containment initiatives of HRWC totaled $1.7 million.

DISCUSSION

A Summary Report of Cost Containment Initiatives for 2015/16 is attached, with updated information as at October 22, 2015. This report shows the cost containment initiatives effecting operations for 2015/16, with new initiatives implemented thus far during the year along with amounts of an ongoing nature from 2013/14 and 2014/15. Inclusion of amounts of prior years' assists in showing synergies created by those initiatives considered ongoing in nature. Projected cost savings for 2015/16 total $2.7 million.

New cost containment initiatives identified since the last report filed with the Board on June 18, 2015 amount to $0.9 million, and are highlighted on the Report attached for ease of reference. The impacts of these new cost containment initiatives are most evident in the areas of Human Resource Strategies ($0.7 million), Facilities/ Process Strategies ($0.1 million) and Technology and Business Process Changes ($0.1 million). Pension plan re-design (Human Resource Strategies) produced the most significant impact with respect to cost containment. Annual savings from pension plan re-design is anticipated to be in the range of $1.0-$1.7 million, with $0.4 million representing the projected savings for 2015/16. In 2016, employer contributions on pensionable earnings are expected to decrease from the current 12.95% to 9.85%, with employees experiencing a similar decrease from 12.95% to 10.65%. Pension plan re-design was a collaborative effort through collective bargaining, in an effort to make the HRWC Employees' Pension Plan more sustainable. A savings of $20.2 million for the employer is projected over the next 14 years, with a 50% likelihood the plan will be fully funded within 10 years.

Halifax Water's Energy Efficiency Program continues to make strides with respect to cost containment, with six (6) additional projects (Facilities/ Process Strategies) implemented in 2015/16, contributing some $125 thousand in cost savings. As part of an assessment process within the Engineering and IT Services, specifically in Development Approvals, the department was able to reduce two (2) full-time, permanent positions resulting in savings of approximately $140 thousand. In a similar fashion within Customer Service, $48 thousand in annual savings is expected to be realized through the utilization of technology associated with the Customer Relationship Management System (CRM) (Technology and Business Process Changes), allowing a budgeted position to be removed going forward.

Under Human Resource Strategies there are several initiatives considered one-time in nature, the most notable of which are two (2) hiring deferments for 2015/16 approximating $100 thousand. These positions will be re-evaluated for the 2016/17 fiscal year, with a potential of future cost savings.

The AMI Study was completed and presented to the HRWC Board in January, 2014. The AMI Phase II Study is currently underway, exploring the potential for AMI in conjunction with Nova Scotia Power. A Request for Proposals (RFP) for meter supply is scheduled to be issued sometime in 2015/16. No savings were realized in 2013/14 or 2014/15. In 2015/16 initial savings have been identified with respect to a workload, labour force assessment (Technology and Business Process Changes) in the amount of $65 thousand annually, with $32 thousand attributed to 2015/16. Again, the AMI/AMR project has the potential for significant cost savings in the future.

BUDGET IMPLICATIONS

Available information on cost containment initiatives were taken into consideration when the 2015/16 budgets were developed. Initiatives that impact future fiscal periods (not annual or one-time occurrences only) will be incorporated into budget cycles and processes of these future periods.

ATTACHMENTS

Summary Report – Cost Containment Initiatives

Report Prepared by:

Allan Campbell, B.Comm., CPA-CMA
Supervisor of Budget & Financial Analysis

Halifax Water
Summary Report - Cost Containment Initiatives
2015/2016

Attachment
Item # 4-I

#	Initiative	Annual Cost Savings	Comments	Year Initiated	2015/16 Cost Savings
1	**General Budget Strategies**				
	Sub-total				$0
2	**Procurement Strategies**				
	Insurance adjustment services - sole source relationship over a 10 year period	$5,460	HW participated in a joint tender with HRM. Costs will be approximately 20% lower.	2013/14	$5,460
	Standardized uniforms and clothing	$20,000	Issuance of a bulk tender; centralization of purchasing and distribution function; possible policy change to "as required" rather than a quota system	2013/14	$20,000
	Standardized boots	$5,000	Issuance of a bulk tender; centralization of purchasing and distribution function; possible policy change to "as required" rather than a quota system	2013/14	$50,000
	Mobile devices - switched supplier and carrier	$51,624	HW participated in a joint tender with HRM	2013/14	$51,624
	Customer account collections	$10,000	Coordination of collection services related to closed customer accounts in conjunction with the Provincial Public Procurement Act, rather than outsourcing to private organizations	2014/15	$10,000
	Lab Testing	$60,000	Savings as a result of contract tendering	2013/14	$60,000
	NSPI rate reclassification	$16,000	Eastern Passage WWTF	2014/15	$16,000
	Chemical purchasing	$11,000	Negotiated a 2% reduction in the cost of polymer treatment for the Harbour Solution Plants	-	$11,000
	NSPI rate reclassification	$15,000	Duffus Street Pumping Station	-	$12,500
	Sub-total				$236,584
3	**Human Resource Strategies**				
	Corporate ID Badges	$3,200	updating the corporate ID badges to be deferred from the 2013/14 fiscal year to 2014/15 for existing employees	2013/14	$3,200
	Heavy Truck and Equipment Service	$100,000	the addition of a new Heavy Equipment Technician provides in-house maintenance service capabilities for the HW fleet.	2013/14	$100,000
	Beeper Pay	$75,000	Elimination of an inconsistency between Water and Wastewater Services, as Water Services staff do not receive beeper pay. This involves 10 non-union staff in total.	2013/14	$75,000
	Annual service awards banquet	$15,000	Changed the venue and the cost of the meal	2014/15	$15,000
	Accessing on-line training opportunities	$2,241	More use of on-line training versus the traditional methods, including WHMIS and TDG renewals	2014/15	$22,451
	Background Checks	$654	Out-sourced background checks to a new contractor.	-	$654
	Hiring deferment (Process Technician)	$56,264	The hiring of a new process technician for the Eastern Passage WWTP has been deferred and will be re-assessed for the 2016/17 fiscal year.	-	$56,264
	Hiring deferment (Administrative Assistant)	$59,490	The hiring of a replacement administrative assistant has been deferred and will be re-assessed for the 2016/17 fiscal year.	-	$44,618
	Flu vaccination	$2,540	Administering the flu vaccination for staff in the current year has been secured at a "net zero" cost.	-	$2,540
	Event Cancelation	$3,500	The annual HW picnic was cancelled in 2015	-	$3,500
	Workload, labour force assessment	$140,000	A reduction in number of staff in Development Approvals. The volume of work did not warrant 6 planning technologists, and as a result this number has been reduced to 4.	-	$140,000
	Pension plan re-design	$1,700,000	Through the collective bargaining process, HW was able to negotiate pension plan re-design to make the plan more sustainable. It is estimated the employer's share contributions will decrease from the current 12.95% to 9.85% effective January 1, 2015.	-	$425,000
	Sub-total				$888,227
4	**Information Technology (IT) Strategies**				
	Xerox managed print solutions	$20,000	Rationalization and replacement of photocopiers and printers	2013/14	$20,000
	Network	$80,000	Change in cost model by Eastlink, giving HW the new pricing	2013/14	$80,000
	Telephone land lines	$8,700	Rationalization of services and eliminate duplication of resources as required	2013/14	$8,700
5	**Facilities/ Process Strategies**				
	Chlorine Utilization - Pockwock	$40,000	Discontinuation of the pre-chlorination process	2013/14	$40,000
	Lab Testing	$105,000	Price benefits from purchasing product from a different source mainly affecting the Harbour Solution Plants	2013/14	$105,000
	Pumper Truck Utilization	$130,000	pilot project to be scheduled initially for stormwater customers only as a test	2013/14	$130,000

Halifax Water
Summary Report - Cost Containment Initiatives
2015/2016

Attachment
Item # 4-I

#	Initiative	Annual Cost Savings	Comments	Year Initiated	2015/16 Cost Savings
	Change in Recycling Pickups	$2,700	By changing the schedule for recycling pickups from from bi-weekly to every three (3) weeks, the anticipated annual savings will range from $2,500 to $2,700.	-	$2,475
	Waste oil boiler system - Herring Cove WWTF	$13,250	new system to allow the use of waste oil from Metro Transit as an alternative heating source	2014/15	$13,250
	System sampling for HPC's	$8,025	sampling was reduced from weekly to monthly	2014/15	$8,025
	NSE system assessments	$25,000	Assessment reports are being completed in-house rather that being outsourced	2014/15	$25,000
	Decommissioning of the Bedford South pumping station	$15,000	The developer driven system expansion will permit the use of gravity and pressure reduction rather than the pumping station	2014/15	$15,000
	Lighting upgrades - Bennery Lake WSP	$4,793		2014/15	$4,793
	Insulation upgrades - Bennery Lake WSP	$36,000		2014/15	$36,000
	Lighting upgrades - Eastern Passage WWTF	$7,880		2014/15	$7,880
	Lighting upgrades - Dartmouth WWTF	$22,542		2014/15	$22,542
	Lighting upgrades - Herring Cove WWTF	$13,744		2014/15	$13,744
	Lighting upgrades - Halifax WWTF	$29,845		2014/15	$29,845
	Lighting upgrades - Aerotech BPF	$19,109		2014/15	$19,109
	HVAC upgrades - Eastern Passage WWTF	$20,711		2014/15	$20,711
	HVAC upgrades - Roach's Pond pumping station	$13,500		2014/15	$13,500
	MCC 190 cooling and heat recovery - Halifax WWTF	$13,164		2014/15	$13,164
	Aeration system upgrades - Eastern Passage WWTF	$76,382		2014/15	$76,382
	Orchard Park in-line turbine project	$31,494		2014/15	$31,494
	Wind farm - Pockwock WSP	$130,399		2014/15	$130,399
	Biogas CHP system - Mill Cove	$86,000		2014/15	$28,667
	Disposal of water treatment plant solid residual material	$36,000	A new location for the disposal of the residual material was found	2014/15	$36,000
	Advanced investigative tool for leaks and structural condition of pipes	$150,000	The current program has been halted as a cost containment initiative and as a result of the information received.	2014/15	$150,000
	Seasonal disinfection of wastewater effluents	$250,000	In coordination with NSE, UV disinfection of effluents will not be required during certain periods of the year	2014/15	$250,000
	E-delivery	$20,000	Transitioning from traditional billing methods to e-delivery	2014/15	$20,000
	Highway #7 Booster Station Upgrade	$14,300	Expected energy savings	-	$7,150
	Dartmouth WWTF - UV Channel Isolation	$59,460	Expected energy savings	-	$34,685
	Halifax WWTF - Fixed Compressed Air Leaks	$2,293	Expected energy savings	-	$2,293
	Halifax WWTF - UV Channel Isolation	$62,115	Expected energy savings	-	$62,115
	Herring Cove WWTF - MCC 190 Cooling/Heat Recovery	$8,496	Expected energy savings	-	$4,956
	Herring Cove WWTF - Ventilation Air Heat Recovery	$28,300	Expected energy savings	-	$14,150
	Sub-total				$1,477,029
6	**Reduce Paper and Printing Costs**				
	Electronic HRWC Board Packages	$7,500	Send Board packages out electronically rather than issuing hard copies	2013/14	$7,500
	Paperless Office within the HR Department	$4,804	Creating electronic workflow	2013/14	$4,804
	Stewardship Report	$3,000	The Stewardship Report will be published electronically only, with no hard copies	2013/14	$3,000
	Changes to document archiving	$3,175	Transitioning file storage from outside contractor to public resources	2013/14	$3,175
	Sub-total				$18,479
7	**Technology and Business Process Changes**				
	Workload, labour force assessment	$47,605	Through the utilization of technology, such as a Customer Relationship Management (CRM) system, a budgeted addition (customer service representative) has been removed.	-	$47,605
	Workload, labour force assessment	$64,533	With pending technological changes associated with the AMI/AMR project, hiring of a vacant position has been defered.	-	$32,266
	Sub-total				$79,871
					$2,700,189

Halifax Water
Halifax Regional Water Commission

ITEM 5-I
HRWC Board
October 29, 2015

TO: Ray Ritcey, BComm, MBA, CPA, CGA, Chair, and Members of the Halifax Regional Water Commission Board

SUBMITTED BY: Cathie O'Toole, MBA, CPA, CGA
Director of Finance and Customer Service

APPROVED: Carl Yates M.A.Sc., P.Eng., General Manager

DATE: October 19, 2015

SUBJECT: **Pension Plan Investment Performance 2nd Quarter, 2015**

INFORMATION REPORT

ORIGIN

The Pension Plan investment performance is reported to the Commission periodically throughout the year.

BACKGROUND

None

DISCUSSION

The tables below and the attached Investment Report outlines the performance update for the second quarter of 2015 (April to June) for the Halifax Regional Municipality (HRM) Pension Plan Master Trust, of which Halifax Regional Water Commission (HRWC) is a part. The fair value of the investment in the Master Trust is determined and updated at year-end, and HRWC's share of the total HRM Master Trust at December 31, 2014 was 5.59%, and totaled $86.3 million.

Returns:

	2nd Quarter April to June	1-Year	5-Year Annualized	Since October 1999
Fund Return	0.07%	10.34%	10.31%	7.01%
Policy Benchmark	-0.21%	6.63%	7.75%	5.64%

Asset Mix June 30, 2015:

Asset:	Actual	Policy
Cash & Equivalents	0.44%	
Canadian Equity	9.15%	9.70%
Global Equity	29.29%	24.40%
Bonds	27.59%	36.50%
Minimum Target Return	33.53%	29.40%

The total fund returned 0.07% in the 2nd Quarter, which outperformed the policy benchmark of -0.21% by 0.28%. The return for the year was 10.34% which exceeded the policy benchmark of 6.63% by 3.71%. Effective June 30, 2015, the policy benchmark is 6.7% (no change from the prior benchmark).

The total fund return is subject to investment management fees and plan expenses.

As at June 30, 2015, the Master Trust was in compliance with the Statement of Investment Policies and Procedures (SIP&P).

ATTACHMENT

Halifax Regional Municipality Pension Plan Investment Report 2nd Quarter, 2015

HRM PENSION PLAN

Investment Report

Q2 2015

Consent Agenda No. 1

Executive Summary

Compliance

As at June 30, 2015, the Master Trust (MT) was in compliance with the SIP&P.

Funded Status

As at December 31, 2014, the accounting funded position was 100%, the estimated going concern funded status was 87.1%, and the estimated solvency funded ratio was 64.2%.

Master Trust Performance

In Q2, the MT earned 0.1%, outperforming the policy benchmark return by 0.3%. The YTD performance for the MT earned 5.7%, outperforming the policy benchmark by 1.7%.

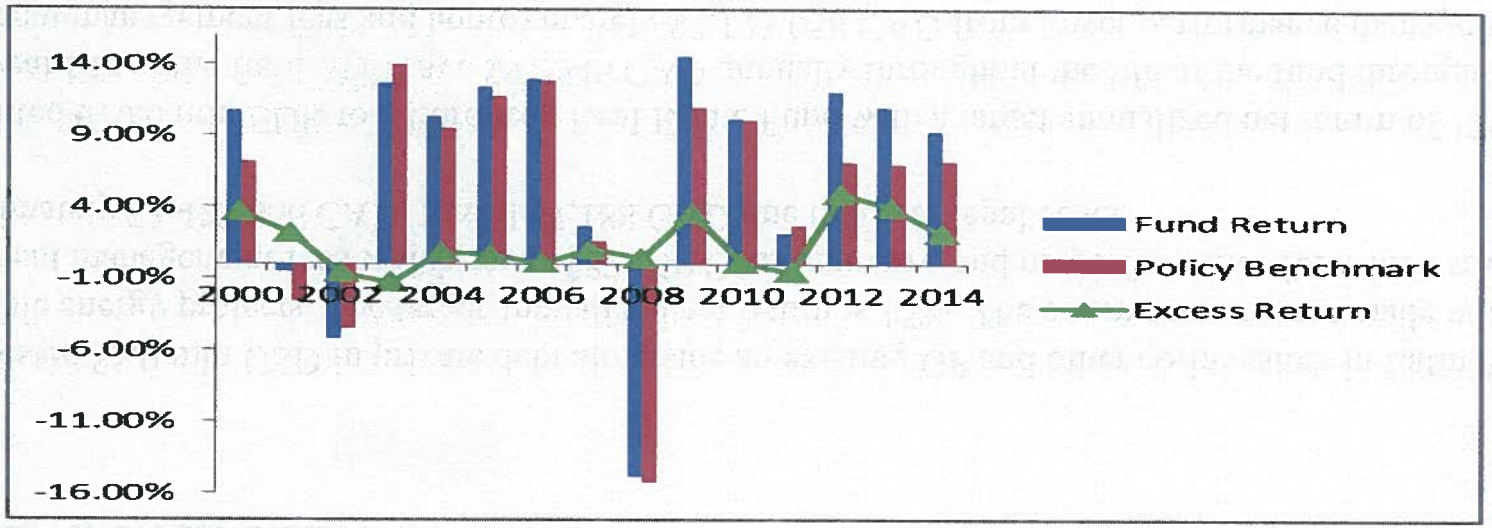
For the one-year period ending June 30, 2015, the MT earned 10.3%, outperforming the policy benchmark by 3.7%.

The MT earned annualized returns of 10.3% over the 5-year ending June 30, 2015 outperforming the policy benchmark by 2.6%.

Since inception (October 1999), the MT earned 7.0% outperforming the Plan's long-term rate objective of 6.5%. The table on the next slide summarizes the calendar year returns for the MT.

Executive Summary – Cont.

Calendar Returns



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Fund Return	10.71%	-0.56%	-5.21%	12.60%	10.27%	12.38%	12.88%	2.60%	-14.83%	14.47%	10.12%	2.11%	12.01%	10.94%	9.27%
Policy Benchmark	7.12%	-2.64%	-4.50%	13.91%	9.50%	11.76%	12.85%	1.58%	-15.20%	10.92%	10.08%	2.71%	7.12%	7.01%	7.24%
Excess Return	3.59%	2.08%	-0.71%	-1.31%	0.77%	0.62%	0.03%	1.02%	0.37%	3.55%	0.04%	-0.60%	4.89%	3.93%	2.03%

Executive Summary – Cont.

Added Value

In Q2 of 2015, the MT outperformed its benchmark by 0.28%. Attribution: Minimum Target Return +0.29%, Universe Bonds +0.11% MSCI EAFE Equity +0.03%, CAD Equity +0.02%, US Equity -0.02%, World Equity -0.05%, and Emerging Market Equity -0.05% and Global Credit -0.05%.

Q2 Updates

- Co-Invested $5.0 mln USD in private debt alongside an existing GP and other co-investors in Latin American renewable energy projects. The target annualized net return is 15%. The co-investment was made with no investment management fees which saves $82,659 CAD annually, and no performance fee which saves approximately $3,423,866 CAD. Saved $7,188 CAD due to lower legal costs.

- Committed €10.0 mln EUR to a European Real Estate Fund with a target annualized net return of 12% over the seven year life of the fund. Will save $97,546 CAD annually throughout the life of the fund through reduced investment management fees and approximately $2,123,058 CAD from lower performance management fees. Legal costs were shared creating savings of $8,660 CAD.

Executive Summary – Cont.

- Invested $10.0 mln USD in a private placement bond with a company we own in our private equity portfolio. The floating interest payments is LIBOR + 6%. We will receive $164,525 in value from lender fees over the life of the bond. The investment was made directly which saves $33,064 in management fees annually and approximately $139,174 CAD in performance fees. Saved $4,081 CAD due to lower legal costs.

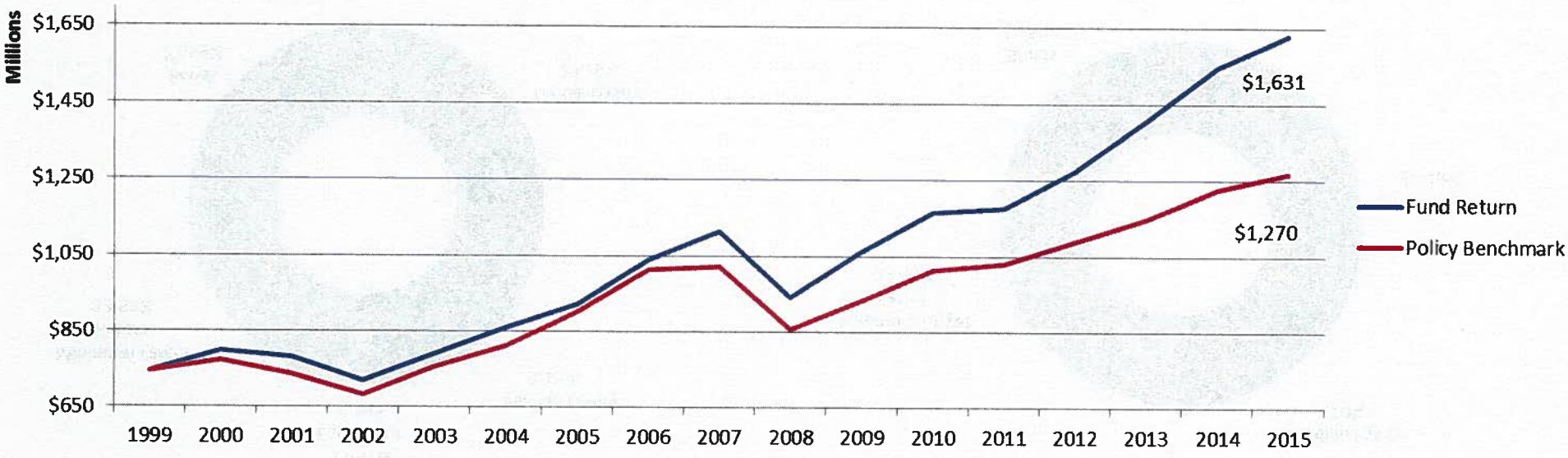
Total one-time fee savings are $5,706,027 CAD and $213,269 CAD ongoing annually.

Total Fund Returns – June 30, 2015

	Current Quarter	YTD	1-Year	3-Year Annualized	5-Year Annualized	Since Inception (Oct 1999)
Fund Return	0.07%	5.66%	10.34%	11.44%	10.31%	7.01%
Policy Benchmark*	-0.21%	4.01%	6.63%	7.59%	7.75%	5.64%
Excess Return	0.28%	1.65%	3.71%	3.85%	2.56%	1.37%

*Effective June 30, 2015, the Policy Benchmark is 6.7% S&P/TSX Index + 3.0% S&P/TSX 60 + 2.6% S&P 500 Index ($CAN) + 4.2% S&P 500 Index($USD) + 7.1% MSCI EAFE Index ($CAN) + 3.9% MSCI Emerging Markets (CAN$) + 6.6% MSCI World (CAN$) +19.6% FTSE TMX Canadian Universe + 16.9% 3 Month Bankers Acceptance + 29.4% Min. Target Return.

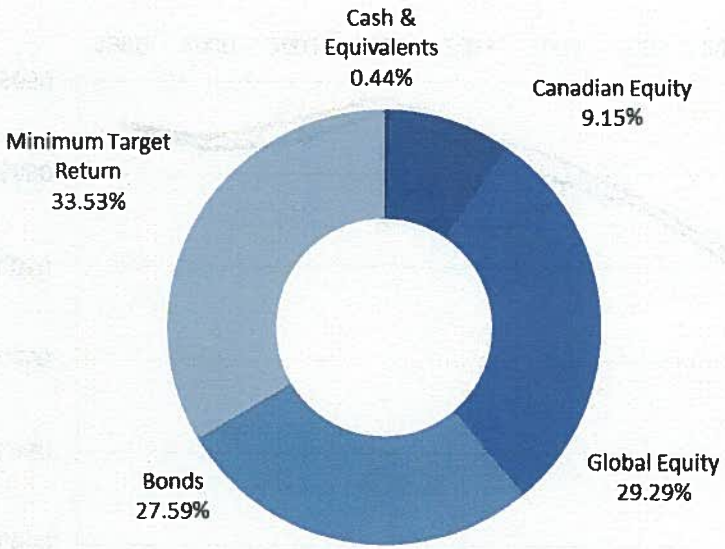
Since Inception Performance



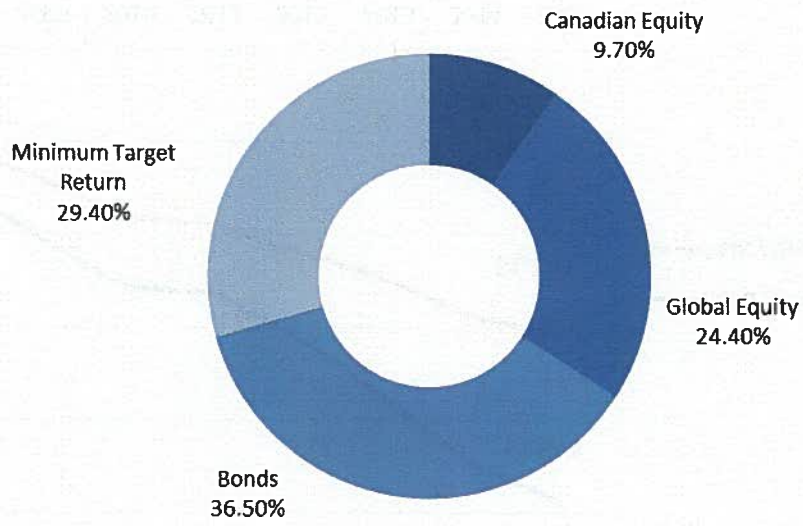
In dollar terms, the fund has grown $361.0 mm in excess of the policy benchmark since inception.

Asset Mix – June 30, 2015

Actual Asset Mix
As of June 30, 2015



Asset Mix Policy
As of June 30, 2015



*Effective June 30, 2015, the Policy Benchmark is 6.7% S&P/TSX Index + 3.0% S&P/TSX 60 + 2.6% S&P 500 Index ($CAN) + 4.2% S&P 500 Index($USD) + 7.1% MSCI EAFE Index ($CAN) + 3.9% MSCI Emerging Markets (CAN$) + 6.6% MSCI World (CAN$) +19.6% FTSE TMX Canadian Universe + 16.9% 3 Month Bankers Acceptance + 29.4% Min. Target Return.

Market Index Returns

Indexes	Current Quarter	YTD	1-Year Ending June 30, 2015	4-Year Ending June 30, 2015
Canadian Equity (S&P/TSX Capped Index)	-1.63%	0.91%	-1.16%	5.34%
US Equity (S&P 500 C$)	-1.37%	8.85%	25.51%	21.82%
US Equity (S&P 500 U$)	0.28%	1.23%	7.42%	14.22%
EAFE Equity (MSCI EAFE C$)	-1.04%	13.47%	11.91%	11.85%
Emerging Markets (MSCI EM C$)	-0.97%	10.70%	10.85%	4.94%
World Equity (MSCI World C$)	-1.34%	10.35%	18.51%	16.37%

All markets with the exception of the S&P 500 (U$) earned negative returns in Q2 2015. All markets earned positive returns YTD. Stock market returns have been robust over the 4-year time period. One-year returns have been positive with the exception of Canadian Equity.

Bond Market Index Returns

Bond Indexes	Current Quarter	1-Year Ending June 30, 2015	4-Year Ending June 30, 2015
Canadian Long Duration Bonds (FTSE TMX Canada Long Government)	-4.50%	11.02%	7.95%
Canadian Universe Bonds (FTSE TMX Canada Universe)	-1.71%	6.25%	5.17%
Canadian Corporate Bonds (FTSE TMX Canada All Corporate)	-1.27%	4.96%	5.56%

Corporate bonds have outperformed Universe bonds over the Q2 and 4 year periods but underperformed for the 1 year period.

Long bonds have outperformed Universe and corporate bonds over the 1 and 4 year periods.

Fixed Income – Q2 Summary

- The MT's Fixed Income portfolio returned -0.53%, which outperformed it's benchmark return of -0.80% by +0.27%. The outperformance was primarily due to the portfolio's overweight to corporate bonds. [The YTD performance for the MT's Fixed Income portfolio was 2.20% which outperformed it's benchmark return of 1.50% by +0.70%.]

- The MT's corporate bond component of the FTSE TMX Canada Universe mandate returned 0.91% outperforming the FTSE TMX Canada All Corporate Bond Index return of -1.27% by 2.18%.

- The MT's Universe Bond mandate returned -1.03%, outperforming the FTSE TMX Canada Universe Bond Index by 0.68%.

- The MT's combined short duration portfolio returned 0.16% in Q2, underperforming the 3 Month BA returned of 0.25% by 0.09%.

Equity – Q2 Summary

- In absolute terms, the MT's Equity portfolio returned -1.11% during the quarter, outperforming the equity policy benchmark by +0.02%. [The YTD performance for the MT's Equity portfolio was 8.22% which outperformed it's benchmark return of 7.09% by +1.13%.]

- Within the Equity portfolio, the Canadian and EAFE equity allocations outperformed their benchmarks while the World, Emerging Markets and US equity portfolio trailed its benchmark.

Halifax Water
Halifax Regional Water Commission

ITEM #6-I
HRWC Board
October 29, 2015

TO: Ray Ritcey, BComm, MBA, CPA, CGA, Chair and Members of the Halifax Regional Water Commission Board

SUBMITTED BY:
Jamie Hannam, P. Eng.
Director - Engineering & Information Services

APPROVED:
Carl Yates, M.A.Sc., P.Eng., General Manager

DATE: October 22, 2015

SUBJECT: **Capital Cost Contribution – Financial Status Report for Fiscal Year ended March 31, 2015**

INFORMATION REPORT

ORIGIN

Halifax Water and NSUARB approval of various capital cost contribution charges.

BACKGROUND/DISCUSSION

Beginning in 1998, the Halifax Water Board and subsequently the NSUARB approved ten (10) area specific capital cost contribution (CCC) charges consistent with our CCC policy. The overall CCC policy and the specific charge rates were developed for the equitable facilitation of master water and wastewater infrastructure within new development areas or new service extension areas. In addition, in conjunction with the 2007 wastewater/stormwater merger, Halifax Water inherited and endorsed three (3) additional wastewater CCC charges established by HRM.

In accordance with the approved policy, Halifax Water is to provide an accounting of all funds received and all costs incurred with respect to the infrastructure improvements. Attached is an annual report showing the cumulative accounting of all CCC funds received and incurred as of the end of the fiscal year at March 31, 2015. The format provides a detailed entry of each individual debit and credit transaction with a cumulative total to date for each individual charge area from inception to the applicable year-end.

As of March 31, 2015, the results show that seven (7) charge areas are in a negative cash position and seven (7) in a positive or zero cash position. However, across all areas combined, the net current surplus is $2,500,000 with the implementation of over $17,000,000 in infrastructure projects. These results indicate that the CCC program is remaining basically cost neutral and fulfilling the desired facilitation role within these development areas.

This report will be forwarded to the NSUARB for information in accordance with the policy requirements.

ATTACHMENT

1. Halifax Water Capital Cost Contribution Report – Summary to March 31, 2015

Report Prepared by: Corey Ellis

Corey Ellis, CPA, CGA, Accountant
Engineering & IS Department at 490-2796

Financial Reviewed by: Cathie O'Toole

Cathie O'Toole, MBA, CPA, CGA, Director of Finance and Customer Service, 490-3572

HALIFAX WATER

Capital Cost Contribution Report

Summary to March 31, 2015

Capital Cost Contribution Area		Receivables	Disbursements	Cumulative
Beaverbank		$1,332,814	($1,762,046)	($429,232)
Bedford South - Water		$2,921,973	($1,742,917)	$1,179,055
Bedford South - Wastewater		$2,033,325	($1,016,202)	$1,017,123
Bedford West - Water		$3,062,693	($3,152,917)	($90,223)
Bedford West - Wastewater		$2,949,430	($1,720,523)	$1,228,907
Birch Cove North - Water		$1,679,348	($2,081,921)	($402,573)
Birch Cove North - Wastewater		$78,087	($78,087)	$0
Herring Cove		$1,385,726	($698,579)	$687,148
Lakeside Timberlea		$736,758	($1,251,813)	($515,055)
Morris Russell Lake		$1,128,095	($363,291)	$764,804
Northgate		$585,772	($788,960)	($203,188)
Portland Hills - Wastewater		$883	$0	$883
Sackville Lively		$715,099	($888,058)	($172,959)
Geizer Hill		$967,154	($1,504,806)	($537,652)
Grand Total		**$19,577,157**	**($17,050,119)**	**$2,527,038**

HALIFAX WATER

BEAVERBANK - WATER

Summary to March 31, 2015

Transaction Description	Receivables	Disbursements	Cumulative
Balance as of March 31/15	**$1,332,814.04**	**($1,762,045.74)**	**($429,231.70)**

Project Information

Nova Scotia Utility & Review Board Approval Date: March 31, 2000; Revised: December 21, 2000
Total Acreage: 1,302.03
Acreage Developed to Date: 802.85 (61.66%)
Acreage Rate: $1,515.00 (Proposed amendment to $850/acre)
Total Infrastructure Cost: $3,198,896.00
Infrastructure to be completed: None
* Based on NSURB review

HALIFAX WATER

BEDFORD SOUTH - WATER

Summary to March 31, 2015

Transaction Description	Receivables	Disbursements	Cumulative
Balance as of March 31/14	**$2,798,895.85**	**($1,629,584.54)**	**$1,169,311.31**
Bedford South CCC - Crosskerry Estates	$5,364.52		
Bedford South Phase 15	$47,402.68		
Close 3-1862 Bedford South Phase 15		($113,332.95)	
Fire Protection 3-1862 Bedford South Phase 15	$41,933.19		
Halifax Water Capital Budget benefit to existing customers (3-1862)	$14,993.95		
Bedford South Phase 14B	$13,382.42		
Fiscal 2015 Yearly Totals	*$123,076.76*	*($113,332.95)*	*$9,743.81*
Balance as of March 31/15	**$2,921,972.61**	**($1,742,917.49)**	**$1,179,055.12**

Project Information

Nova Scotia Utility & Review Board Approval Date: June 19, 1998

Total Acreage: 598.0

Acreage Developed to Date: 497.68 (85.89%)

Acreage Rate: $4,621.00

Total Infrastructure Cost: $6,155,269.00

Infrastructure to be completed: Reservoir and Pipe Oversizing

HALIFAX WATER
BEDFORD SOUTH - WASTEWATER / STORMWATER
Summary to March 31, 2015

Transaction Description	Receivables	Disbursements	Cumulative
Balance as of March 31/14	**$1,944,403.99**	**($999,745.85)**	**$944,658.14**
Bedford South CCC - Croskerry Estates WW	$2,768.18		
Bedford South CCC - Croskerry Estates WW	$4,429.09		
Correct GL for West Bedford Holdings Phase 5		($16,456.00)	
Bedford South 14B CCC	$11,072.72		
Bedford South Ph C2A CCC	$55,776.77		
Bedford South Ph C2A CCC - revised entry	$14,873.81		
Fiscal 2015 Yearly Totals	*$88,920.57*	*($16,456.00)*	*$72,464.57*
Balance as of March 31/15	**$2,033,324.56**	**($1,016,201.85)**	**$1,017,122.71**

Project Information

Nova Scotia Utility & Review Board Approval Date: August 1, 2007
Total Acreage: 624
Acreage Developed to Date: 481.09 (77.1%)
Acreage Rate: $3,305.29
Total Infrastructure Cost: $2,273,400.00
Infrastructure to be completed: oversized piping

HALIFAX WATER
BEDFORD WEST - WATER
Summary to March 31, 2015

Transaction Description	Receivables	Disbursements	Cumulative
Balance as of March 31/14	**$2,443,364.77**	**($2,176,463.26)**	**$266,901.51**
Correct GL for West Bedford Holdings Phase 5C	$16,456.00		
Correct GL for Bedford West		($5,616.00)	
West Bedford CCC - LUB 15	$630.31		
West Bedford CCC - LUB 16	$2,846.93		
West Bedford CCC - WBC14 & WBC 15	$12,276.50		
West Bedford CCC - Kearney Lake Rd - R1 & R5	$23,038.69		
West Bedford CCC Phase 5-1B (Parcels AG-3 and AM55)	$2,461.47		
West Bedford CCC Ph 2-1B	$34,944.09		
West Bedford CCC Ph 2-2	$19,549.79		
West Bedford CCC Ph 5-2A	$64,038.07		
West Bedford CCC Ph 2-1A	$30,993.72		
West Bedford CCC Ph 5-1A	$23,689.08		
Fire Protection Kearney Run Crossing (3-2060)	$47,967.94		
Close 3-2060 Kearney Lake rd Crossing		($129,643.10)	
Halifax Water Capital Budget benefit to existing customers (3-2060)	$4,410.46		
Fire Protection West Bedford Ph 5-1A (3-1943)	$31,461.80		
Close 3-1943 West Bedford Ph 5-1A		($85,031.88)	
Halifax Water Capital Budget benefit to existing customers (3-1943)	$2,892.78		
Fire Protection West Bedford Ph 5-1B (3-1944)	$22,173.08		
Close 3-1944 West Bedford Ph 5-1B		($59,927.23)	
Halifax Water Capital Budget benefit to existing customers (3-1944)	$2,038.72		
Fire Protection Kearney Lake Rd PRV & watermain extension (3-1949)	$110,025.25		
Close 3-1949 Kearney Lake Rd PRV & watermain extension		($297,873.55)	
Halifax Water Capital Budget benefit to existing customers (3-1949)	$10,133.66		
Fire Protection Larry Uteck Ph 1B (3-1847)	$143,748.06		
Close 3-1847 Larry Uteck Ph 1B		($398,361.69)	
Halifax Water Capital Budget benefit to existing customers (3-1847)	$13,552.26		
Fiscal 2015 Yearly Totals	*$619,328.66*	*($976,453.45)*	*($357,124.79)*
Balance as of March 31/15	**$3,062,693.43**	**($3,152,916.71)**	**($90,223.28)**

Project Information

Nova Scotia Utility & Review Board Approval Date: September 2012
Total Acreage: 1611.00
Acreage Developed to Date: 376.07 (23.34%)
Acreage Rate: $3,149.83 (2012)
Total Infrastructure Cost: $9,290,316
Infrastructure to be completed: Proportionate amount of Bedford South Reservior, PRV's, and Pipe Oversizing

HALIFAX WATER

BEDFORD WEST - WASTEWATER / STORMWATER

Summary to March 31, 2015

Transaction Description	Receivables	Disbursements	Cumulative
Balance as of March 31/14	**$2,083,151.89**	**($734.85)**	**$2,082,417.04**
West Bedford Holdings Phase 1E parcel 1D-6A	$5,616.00		
West Bedford CCC - LUB 15	$2,025.63		
West Bedford CCC - LUB 16	$9,149.21		
West Bedford CCC - WBC14 & WBC 15	$39,453.20		
West Bedford CCC - Kearney Lake Rd - R1 & R5	$74,039.83		
West Bedford CCC Phase 5-1B (Parcels AG-3 and AM55)	$7,902.62		
West Bedford CCC Ph 2-1B	$112,189.35		
West Bedford CCC Ph 2-2	$62,765.37		
West Bedford CCC Ph 5-2A	$205,596.72		
West Bedford CCC Ph 2-1A	$99,506.56		
West Bedford CCC Ph 5-1A	$76,054.72		
Close 6-809 Larry Uteck Ph 1B - WW		($1,551,371.01)	
Halifax Water Capital Budget benefit to existing customers (6-809)	$155,137.10		
Close 6-1042 Kearney Run Brook Crossing - WW		($168,416.81)	
Halifax Water Capital Budget benefit to existing customers (6-809)	$16,841.68		
Fiscal 2015 Yearly Totals	*$866,277.99*	*($1,719,787.82)*	*($853,509.83)*
Balance as of March 31/15	**$2,949,429.88**	**($1,720,522.67)**	**$1,228,907.21**

Project Information

Nova Scotia Utility & Review Board Approval Date: September 2012

Total Acreage: 1611.00

Acreage Developed to Date: 376.07 (23.34%)

Acreage Rate: $10,122.65 (2012)

Total Infrastructure Cost: $20,175319

Infrastructure to be completed: Forcemains, Pumping Stations and Pipe Oversizing

HALIFAX WATER

BIRCH COVE NORTH - WATER

Summary to March 31, 2015

Transaction Description	Receivables	Disbursements	Cumulative
Balance as of March 31/14	**$1,568,361.75**	**($2,057,125.21)**	**($488,763.46)**
Bedford South Ph C2A (Cresco Starboard Drive) CCC	$57,759.90		
Bedford South Ph C2B (Cresco Starboard Drive) CCC	$43,440.10		
Close 3-1960 Bedford South Phase C2A		($19,483.69)	
Fire Protection 3-1960 Bedford South Phase C2A	$7,208.97		
Halifax Water Capital Budget benefit to existing customers (3-1960)	$2,577.69		
Interest		($5,312.04)	
Fiscal 2015 Yearly Totals	*$110,986.66*	*($24,795.73)*	*$86,190.93*
Balance as of March 31/15	**$1,679,348.41**	**($2,081,920.94)**	**($402,572.53)**

Project Information

Nova Scotia Utility & Review Board Approval Date: September 17, 1999

Total Acreage: 494.0

Acreage Developed to Date: 281.21 (56.92%)

Acreage Rate: $5,060.00

Total Infrastructure Cost: $3,717,646.00

Infrastructure to be completed: Reservoir and Pipe Oversizing

HALIFAX WATER

BIRCH COVE NORTH - WASTEWATER / STORMWATER

Summary to March 31, 2015

Transaction Description	Receivables	Disbursements	Cumulative
Balance as of March 31/15	**$78,087.48**	**($78,087.48)**	**$0.00**

Project Information
Birch Cove North Wastewater Charge Area CCC Closed May 2011

HALIFAX WATER
HERRING COVE
Summary to March 31, 2015

Transaction Description	Receivables	Disbursements	Cumulative
Balance as of March 31/15	**$1,385,726.23**	**($698,578.68)**	**$687,147.55**

Project Information

Nova Scotia Utility & Review Board Approval Date: April 10, 2002; Revised: October 26, 2005
Total Acreage: 787.7
Acreage Developed to Date: 311.22 (39.51%)
Acreage Rate: $3,622.00
Total Infrastructure Cost: $4,957,204.00
Infrastructure to be completed: Future Reservoir

HALIFAX WATER

LAKESIDE TIMBERLEA

Summary to March 31, 2015

Transaction Description	Receivables	Disbursements	Cumulative
Balance as of March 31/15	**$736,758.06**	**($1,251,813.46)**	**($515,055.40)**

Project Information

Nova Scotia Utility & Review Board Approval Date: December 14, 2012
Overall Acerage 277.79
Acreage Developed to Date: 41.812 (15.1%)
Acreage Rate: $14,926.23
Total Infrastructure Cost: $ 8,062,204.55
Infrastructure to be completed: Pipe Oversizing

HALIFAX WATER

MORRIS RUSSELL LAKE

Summary to March 31, 2015

Transaction Description	Receivables	Disbursements	Cumulative
Balance as of March 31/15	**$1,128,094.67**	**($363,290.75)**	**$764,803.92**

Project Information

Nova Scotia Utility & Review Board Approval Date: Interim June 10, 2002
Total Acreage: 1,178.7
Acreage Developed to Date: 574.84 (48.77%)
Acreage Rate: $1,300.00
Total Infrastructure Cost: $2,641,851.00
Infrastructure to be completed: Pipe Oversizing

HALIFAX WATER

NORTHGATE

Summary to March 31, 2015

Transaction Description	Receivables	Disbursements	Cumulative
Balance as of March 31/14	**$579,580.51**	**($788,960.44)**	**($209,379.93)**
PCL Constructors - Northgate CCC	$6,191.57		
Fiscal 2015 Yearly Totals	*$6,191.57*	*$0.00*	*$6,191.57*
Balance as of March 31/15	**$585,772.08**	**($788,960.44)**	**($203,188.36)**

Project Information

Nova Scotia Utility & Review Board Approval Date: September 28, 2008
Total Acreage: 485.4 (plus 16.8 acres of adjacent benefitting lands)
Acreage Developed to Date: 188.9 (38.91%)
Acreage Rate: $1,168.00
Total Infrastructure Cost: $900,041.00
Infrastructure to be completed: Pipe Oversizing

HALIFAX WATER

PORTLAND HILLS - WASTEWATER

Summary to March 31, 2015

Transaction Description	Receivables	Disbursements	Cumulative
Balance as of March 31/15	**$883.17**	**$0.00**	**$883.17**

Project Information

Nova Scotia Utility & Review Board Approval Date: August 1, 2007
Total Acreage: 103.0
Acreage Developed to Date: 0.0 (0%)
Acreage Rate: $16.20
Total Infrastructure Cost: $12,940.00
Infrastructure to be completed: Pipe Oversizing

HALIFAX WATER

SACKVILLE LIVELY

Summary to March 31, 2015

Transaction Description	Receivables	Disbursements	Cumulative
Balance as of March 31/14	**$357,462.66**	**($556,683.00)**	**($199,220.34)**
Twin Brooks Phase 2B/C	$26,261.62		
Close 3-1712 Twin Brooks Ph 2B/C		($331,374.62)	
Halifax Water Capital Budget benefit to existing customers (3-1712)	$331,374.62		
Fiscal 2015 Yearly Totals	*$357,636.24*	*($331,374.62)*	*$26,261.62*
Balance as of March 31/15	**$715,098.90**	**($888,057.62)**	**($172,958.72)**

Project Information

Nova Scotia Utility & Review Board Approval Date: October 29, 2007
Total Acreage: 335.5
Acreage Developed to Date: 186.36 (55.55%)
Acreage Rate: $1,253.00
Total Infrastructure Cost: $667,497.00
Infrastructure to be completed: None

HALIFAX WATER

GEIZER HILL

Summary to March 31, 2015

Transaction Description	Receivables	Disbursements	Cumulative
Balance as of March 31/14	**$0.00**	**$0.00**	**$0.00**
Fire Protection Geizer Hill Booster Station 3-1659	$439,038.15		
Close 3-1659 Geizer Hill Booster Station		($1,389,800.87)	
Correct GL for Clayton Developments payment	$485,564.00		
Fire Protection Grand Haven Heights (3-1801)	$42,551.73		
Close 3-1801 Grand Haven Heights		($115,004.67)	
Fiscal 2015 Yearly Totals	*$967,153.88*	*($1,504,805.54)*	*($537,651.66)*
Balance as of March 31/15	**$967,153.88**	**($1,504,805.54)**	**($537,651.66)**

Project Information

Nova Scotia Utility & Review Board Approval Date: 2014
Total Acreage: 99
Acreage Developed to Date: 52.1 (52.63%)
Acreage Rate: $1,253.00
Total Infrastructure Cost: $1,528,000
Infrastructure to be completed: Water Main Extension