

June 18, 2019

**\*REVISED**

Darlene Fenton, Chair  
Halifax Water  
Halifax, NS

The regular meeting of the Halifax Water Board will be held on Thursday, June 20, 2019. The In-Camera meeting will be held at 9:00 am, followed by the Regular Meeting at 10:00 a.m. in the Boardroom at 455 Cowie Hill Road, Halifax.

## **AGENDA**

### **In Camera Reports**

- 1C a) Approval of Minutes of the In-Camera Meeting held on Thursday, March 28, 2019
- 1C b) Approval of Minutes of the Special In-Camera Meeting held on Wednesday, May 22, 2019
- 2C Business Arising from Minutes
  - a) Contractual Matter (Verbal)
- 3C Personnel Matter
- 4C Governance Matter (Verbal)

### **In Camera Information Reports**

- 1C-I Legal Matter

### **Regular Reports**

- 1. a) Ratification of In-Camera Motions
- 1. b) Approval of the Order of Business and Approval of Additions and Deletions
- 2. a) Approval of Minutes of the Regular Meeting held on Thursday, March 28, 2019
- 2. b) Approval of Minutes of the Special Meeting held on Wednesday, May 22, 2019
- 3. Business Arising from Minutes
  - a) 2019/20 CBS Organizational Indicator (OI) Target Revision (Verbal)

### **Financial**

- 4.1 2018/19 Audited Financial Statements and Year-End Results
- 4.2 Halifax Regional Water Commission Employees' Pension Plan Audited Financial Statements for the Year Ended December 31, 2018
- 4.3 Halifax Regional Water Commission (HRWC) Employees' Pension Plan January 1, 2019 Actuarial Valuation

**Other**

- 5. Group Extended Health Plan Enhancements and Annual Renewal

**Capital**

- 6. Quarry Road Integrated Project Additional Funding Component – Water..... \$464,000

**Information Reports**

- 1-I Operations and Financial Monthly Update
- 2-I Capital Budget Approvals to Date – 2018/19 and 2019/20
- 3-I Bank Balance
- 4-I 2018/2019 Lead Service Line Replacement Program
- 5-I Capital Cost Contribution Areas – Financial Status Report for the Fiscal Year ended March 31, 2019
- 6-I Halifax Regional Water Commission Employees’ Pension Plan Financial Report – 1<sup>st</sup> Quarter (Q1), 2019
- 7-I Corporate Balanced Scorecard – 2018/19 Results
- 8-I 2018-19 Q4 Cost Containment
- 9-I HRM Pension Plan Investment Performance – 1<sup>st</sup> Quarter (Q1, 2019)
- 10-I Use of Dry Ice in Rodent Management

*Original Signed By:*

\_\_\_\_\_  
Heidi Schedler  
Secretary



**MINUTES WILL BE POSTED UPON APPROVAL**

**TO:** Darlene Fenton, Chair and Members of the Halifax Regional Water Commission Board

**SUBMITTED BY:** Original Signed By:  
Cathie O'Toole, CPA, CGA, MBA, ICD.D, Director, Corporate Services

**APPROVED:** Original Signed By:  
Carl Yates, M.A.Sc., P.Eng., General Manager

**DATE:** June 7, 2019

**SUBJECT:** **2018/19 Audited Financial Statements and Year End Results**

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### **ORIGIN**

Operational and Regulatory Requirement.

### **RECOMMENDATION**

It is recommended that the Board approve the March 31, 2019, Halifax Regional Water Commission's Audited Financial Statements prepared using International Financial Reporting Standards.

### **BACKGROUND**

Halifax Regional Water Commission (HRWC) is required to submit Board-approved audited financial statements to the Halifax Regional Municipality (HRM) and the Nova Scotia Utility and Review Board (NSUARB).

### **DISCUSSION**

Attached are the financial statements for the year ended March 31, 2018, presented in two formats.

HRWC is a fully regulated government business enterprise, falling under the jurisdiction of the Nova Scotia Utility and Review Board (NSUARB). The NSUARB requires that HRWC file

# ITEM # 4.1

HRWC Board

June 20, 2019

Financial Statements and rate applications with the Board based on the NSUARB Handbook for Accounting and Reporting for Water Utilities. The Accounting Standards Board (AcSB) requires rate regulated entities to conform to International Financial Reporting Standards (IFRS). The Commission maintains the SAP financial records in IFRS for the purposes of the annual audit and consolidation of the financial statements with those of Halifax Regional Municipality (HRM). The budget for the 2018/19 fiscal year was prepared using the NSUARB format and financial results continue to be provided in NSUARB format.

The on-site field work portion of the annual audit by Grant Thornton began May 6<sup>th</sup>. The audit timing and presentation of results is coordinated with HRM for consolidation with its statements.

The following discussion of the operating results is based on the internal NSUARB format statements except where noted. The results reflect direct operating costs by department and allocations among water, wastewater and stormwater for common costs shared across all the services provided by HRWC.

Summary information is provided for the Balance Sheet on Page 1 and the Income Statement on Page 2. A detailed presentation of the Balance Sheet and Income Statement is provided on Pages 3 and 4. Pages 5 through 8 provide Income Statements by Service and for Regulated and Un-Regulated Services. Pages 9 and 10 provide the Balance Sheet and Income Statement in IFRS format.

## Consolidated Income Statement - Page 2

Summarized Consolidated Operating Results				
	Actual YTD 2018/19	Actual YTD 2017/18		
	'000	'000	\$ Change	% Change
Operating Revenue	<b>\$138,413</b>	\$138,145	\$268	0.2%
Operating Expenses	<b>\$106,731</b>	\$99,437	\$7,294	7.3%
Operating Profit (Loss)	<b>\$31,682</b>	\$38,708	(\$7,027)	-18.2%
Non Operating Revenue	<b>\$1,898</b>	\$4,486	(\$2,588)	-57.7%
Non Operating Expenditure	<b>\$33,190</b>	\$34,376	(\$1,186)	-3.5%
Net Surplus before OCI	<b>\$390</b>	\$8,819	(\$8,429)	-95.6%
Pension Plan Expense	<b>(\$5,208)</b>	(\$5,015)	(\$193)	3.9%
OCI	<b>\$3,735</b>	(\$1,750)	\$5,485	-313.4%
Net Surplus (Deficit)	<b>(\$1,083)</b>	\$2,054	(\$3,137)	-152.8%

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

### Key items of note:

- Operating revenue of \$138.4 million is on par with the prior year.
- Operating expenses of \$106.7 million are \$7.3 million higher than the prior year.

# ITEM # 4.1

HRWC Board

June 20, 2019

- Excluding Other Comprehensive Income (OCI) and Pension Plan Expense, the Net Surplus for the year is \$0.4 million, a decline of \$8.4 million.
- Other Comprehensive Income is a function of the change in the liability for employee benefits, including the Pension Plan. The OCI adjustment at year-end was an improvement (income) of \$3.7 million whereas in the prior year it was a loss of \$1.7 million.
- The Net Surplus for the year is a loss of \$1.1 million, a decline of \$3.1 million from the prior year.
- The approved budget was for a loss of \$12.1 million.

## Balance Sheet - Page 3

Key indicators and balances from the Balance Sheet are as follows:

Cash On Hand		
	2018/19	2017/18
Cash On Hand	<b>\$51,603</b>	\$51,470

Balance Sheet Liquidity (Current Ratio)		
	2018/19	2017/18
Current Assets ('000)	<b>\$94,567</b>	\$89,095
Current Liabilities ('000)	<b>\$47,447</b>	\$45,995
Current Ratio	<b>1.99</b>	1.94

Accounts Receivable		
	2018/19	2017/18
Customer Receivables	<b>\$17,407</b>	\$18,723
Unbilled Services	<b>\$17,012</b>	\$16,640
Halifax Regional Mun.	<b>\$3,728</b>	\$5,275
Total	<b>\$38,148</b>	\$40,638

Accounts Payable		
	2018/19	2017/18
Trade Payables	<b>\$23,493</b>	\$23,944
LT Debt Interest	<b>\$2,051</b>	\$2,030
Halifax Regional Mun.	<b>\$2,865</b>	\$2,439
Total	<b>\$28,409</b>	\$28,413

- Cash balances throughout the fiscal year were higher than anticipated due to higher consumption revenue and RDC collections, and lower capital expenditures than anticipated. The original Cash Flow projection had forecasted a \$30.9 million decline in cash by year-end.
- Other current assets and liabilities are all within the expected ranges for the end of the fiscal year.

Capital Asset Additions	
	Cumulative '000
Aerotech Wastewater Treatment Facility	<b>\$23,997</b>
Fall River Water Servicing	<b>\$10,167</b>
AMI - Advanced Metering Infrastructure	<b>\$6,596</b>
Mainline Lining Program	<b>\$4,233</b>
WW Lateral Lining Program	<b>\$1,980</b>
WW Lateral Replacement Program	<b>\$1,748</b>
All other projects	<b>\$31,939</b>
Total	<b>\$80,659</b>

Capital Assets Under Construction	
	Cumulative '000
AMI - Advanced Metering Infrastructure	<b>\$9,794</b>
JD Kline Filtration Replacement	<b>\$6,623</b>
Lake Major Dam Replacement	<b>\$4,693</b>
Ellenvale Run Retaining Wall System	<b>\$2,878</b>
All other projects	<b>\$10,409</b>
Total Capital Expenditures	<b>\$34,397</b>
External Funding Received	<b>(\$4,792)</b>
Net Assets Under Construction	<b>\$29,605</b>

# ITEM # 4.1

HRWC Board

June 20, 2019

- Plant in Service assets, net of Accumulated Depreciation, total \$1.27 billion, an increase of \$43.3 million.
- Capital work orders closed during the year totaled \$80.7 million.
- Expenditures on Capital Budget projects within the fiscal year total \$64.5 million.
- The Aerotech Wastewater Treatment Facility was the largest project completed, with a value of \$24.0 million.
- The Fall River Water Servicing project, valued at \$10.2 million, is treated as a donated asset as it was fully funded through Federal and Provincial programs and HRM Local Improvement Charges.
- Meters installed through the AMI – Advanced Metering Initiative during the year were capitalized, totaling \$6.6 million. The remaining meter installations and associated technology are expected to be capitalized in 2019/20.

Long Term Debt by Service		
	2018/19	2017/18
	'000	'000
Water	\$56,585	\$53,697
Wastewater	\$114,157	\$127,043
Stormwater	\$12,833	\$11,043
Combined	\$183,575	\$191,783

Debt Servicing Ratio by Service		
	YTD Debt Servicing Cost Ratio	
	2018/19	2017/18
Water	16.3%	18.7%
Wastewater	23.7%	23.6%
Stormwater	19.0%	17.9%
Combined	20.3%	21.2%

- Long Term Debt is down \$8.2 million from the prior year as debt repayments have been greater than new debt acquired for the capital program.
- The debt service ratio of 20.3% is well below the maximum 35% ratio allowed under the blanket guarantee agreement with HRM.

Operating Surplus		
	2018/19	2017/18
Opening Op Surplus	\$20,481	\$16,677
YTD Net Profit	(\$1,083)	\$2,054
Cumulative Op Surplus	\$19,398	\$18,731

## Income Statement – All Services - Page 4

The following tables compare the results with the budget and most recent forecasts for the year.

# ITEM # 4.1

## HRWC Board

June 20, 2019

Summarized Consolidated Operating Results			
	Twelve Month		\$ Variance
	Actual YTD 2018/19 '000	Budget 2018/19 '000	
Operating Revenue	\$138,413	\$135,182	\$3,231
Operating Expenses	\$106,731	\$108,770	(\$2,039)
Operating Profit (Loss)	\$31,682	\$26,412	\$5,270
Non Operating Revenue	\$1,898	\$1,006	\$893
Non Operating Expenditure	\$33,190	\$36,564	(\$3,374)
Net Surplus (Deficit)	\$390	(\$9,146)	\$9,536

Summarized Consolidated Operating Results			
	Twelve Month		\$ Variance
	Actual YTD 2018/19 '000	Forecast 2018/19 '000	
Operating Revenue	\$138,413	\$137,386	\$1,027
Operating Expenses	\$106,731	\$105,473	\$1,258
Operating Profit (Loss)	\$31,682	\$31,913	(\$231)
Non Operating Revenue	\$1,898	\$1,862	\$37
Non Operating Expenditure	\$33,190	\$33,459	(\$269)
Net Surplus (Deficit)	\$390	\$316	\$74

- Results are \$9.5 million better than the pro-rated budget and on par with the forecast.

### Customer Rates

Rates for services did not change this fiscal year, having last been adjusted in 2016 for Water and Wastewater and 2017 for Stormwater. It is anticipated that an application for new rates will be submitted to the NSUARB in 2019/20 to take effect in mid-2020.

Summary of Rates				
	Effective April 1/16	Effective May 1/15	\$ Change	% Change
<u>Volumetric Charges (per m<sup>3</sup>)</u>				
Water	0.976	0.845	0.131	15.5%
Wastewater	1.753	1.638	0.115	7.0%
Combined	2.729	2.483	0.246	9.9%
<u>Base Charges (per year)</u>				
Water	Varies by meter size		No Change	0.0%
Wastewater	Varies by meter size		Varies	1.1%-7.7%

Summary of Rate Change - Stormwater				
	Effective July 1/17	Effective April 1/14	\$ Change	% Change
<u>Residential - Impervious Area</u>				
Less than 50 m <sup>2</sup>	-	33.39	- 33.390	-100.0%
50 to 200 m <sup>2</sup>	14.00	33.39	- 19.390	-58.1%
210 to 400 m <sup>2</sup>	27.00	33.39	- 6.390	-19.1%
410 to 800 m <sup>2</sup>	54.00	33.39	20.610	61.7%
Greater than 810 m <sup>2</sup>	81.00	33.39	47.610	142.6%
Culvert only service	14.00	Varied	Varies	Varies
ICI Rate per m <sup>2</sup>	0.135	0.149	- 0.014	-9.4%

### Operating Revenue

Operating Revenue Results			
	YTD Actual 2018/19 '000	YTD Budget 2018/19 '000	\$ Variance
Consumption Revenue	\$86,244	\$81,748	\$4,496
Base Charge Revenue	\$33,191	\$33,257	(\$67)
Wastewater Rebate	(\$1,494)	(\$1,252)	(\$242)
Metered Sales Sub-total	\$117,941	\$113,754	\$4,187
SW Site Generated Charge	\$5,906	\$6,752	(\$846)
HRM Fire Prot & ROW	\$10,909	\$10,909	\$0
Other Operating Revenue	\$3,657	\$3,767	(\$111)
Operating Revenue Total	\$138,413	\$135,182	\$3,231

Operating Revenue Results			
	YTD Actual 2018/19 '000	Prior Yr Actual 2017/18 '000	\$ Variance
Consumption Revenue	\$86,244	\$85,012	\$1,232
Base Charge Revenue	\$33,191	\$32,845	\$346
Wastewater Rebate	(\$1,494)	(\$642)	(\$851)
Metered Sales Sub-total	\$117,941	\$117,215	\$726
SW Site Generated Charge	\$5,906	\$6,169	(\$262)
HRM Fire Prot & ROW	\$10,909	\$10,921	(\$12)
Other Operating Revenue	\$3,657	\$3,841	(\$185)
Operating Revenue Total	\$138,413	\$138,145	\$268

Operating Revenue remained on par with the previous year and was \$3.2 million ahead of budget, which had anticipated a decline in revenue. Key items of note include:



# ITEM # 4.1

HRWC Board

June 20, 2019

- Water consumption increased 1.4% from the previous year on a volumetric basis. Consumption had been budgeted to decline by 2.5%.
- Base Charge Revenue is slightly below budget but slightly ahead of the prior year.
- Metered Sales revenue for Water Service is up \$0.8 million (1.7%) as compared to the prior year.
- Metered Sales revenue for Wastewater Service is down \$0.1 million (0.1%) as compared to the prior year. The lower revenue is attributable to higher Wastewater Rebates. The Wastewater Rebate is an offset to revenue. It is available to certain large customers whose water does not enter the Wastewater system.
- Stormwater Site Generated revenue was below budget and the prior year. Revenue had been expected to increase from the prior year, which was also below budget. A review of the Stormwater billing process is underway to ensure all new customers are being charged appropriately.

Other revenue categories are comparable with budget and forecasted amounts.

## Operating Expenses

Summary of Operating Expenses by Department				
	Actual YTD 2018/19 '000	Budget YTD 2018/19 '000	\$ Variance	% Variance
Water Services	\$20,670	\$21,232	(\$562)	-2.6%
WW Services	\$33,124	\$33,437	(\$313)	-0.9%
SW Services	\$4,950	\$5,276	(\$326)	-6.2%
Engineering & IS	\$8,156	\$8,177	(\$21)	-0.3%
Regulatory Services	\$3,152	\$3,763	(\$611)	-16.2%
Corporate Services	\$13,672	\$13,451	\$221	1.6%
Depreciation	\$23,007	\$23,434	(\$427)	-1.8%
Total Operating Expenses	\$106,731	\$108,770	(\$2,039)	-1.9%

Key items to note:

- Operating Expenses of \$106.7 million are \$7.3 million higher than the prior year and \$2.0 million below the pro-rated budget for the year.
- Compared to the prior year, expense categories with the largest increases in costs are Depreciation, Water Transmission and Distribution, Administration and Pension.

## Financial Revenue

Key items to note:

- Higher than anticipated cash balances and rising interest rates have generated interest income of \$1.2 million, which is more than double the budgeted amount.
- The agreement with the Province of Nova Scotia for funding for the Halifax Harbour Solutions Project concluded in 2017/18.

## ITEM # 4.1

HRWC Board

June 20, 2019

- Miscellaneous Revenue includes various un-regulated activities such as tower leases, energy generation, consulting activities and some contracted services. The prior year figure is higher because it included one-time item of \$0.9 million.

### Financial Expenses

Key items to note:

- Long Term Debt costs are \$1.2 million lower than in the prior year. Debt servicing savings are a result of:
  - New debt issues having lower interest rates than older, maturing issues.
  - This is the third year in a row that debt repayments have been greater than new debt issues.
- New debt of \$15.0 million was acquired through MFC's Fall Debenture in November.

### **Operating Results by Service - Pages 5-7**

Year to Date Operating Results by Service		
	2018/19	2017/18
	'000	'000
Water	<b>(\$402)</b>	\$1,043
Wastewater	<b>(\$3,190)</b>	\$2,884
Stormwater	<b>(\$1,226)</b>	(\$124)
Net Surplus (Deficit)	<b>(\$4,818)</b>	\$3,804

### **Regulated and Unregulated Operations - Page 8**

Results by Activity		
	2018/19	2017/18
	'000	'000
Regulated Activities	<b>(\$6,186)</b>	\$2,214
Unregulated Activities	<b>\$1,368</b>	\$1,590
Net Surplus (Deficit)	<b>(\$4,818)</b>	\$3,804

Key items to note:

- Activities regulated by the NSUARB show a loss of \$6.2 million, a decline from the profit of \$2.2 million profit in the prior year.
- Unregulated activities show a profit of \$1.3 million, a decline in the profit of \$1.6 million for the prior year. The declining profit is a result of lower revenue in several contracted services.

### **Results under International Financial Reporting Standards - Pages 9 & 10**

As noted previously, the AcSB requires HRWC, as a rate regulated utility, to report financial results using International Financial Reporting Standards (IFRS).

On the IFRS Balance Sheet, Accumulated Depreciation is higher producing a lower value for assets, Contributed Capital is treated as a long term liability and amortized rather than being treated

as a contribution to equity, and the Operating Surplus is much higher due to changes in the Income Statement.

On the IFRS Income Statement, Operating Revenue is the same. Depreciation Expense is higher as contributed assets are depreciated and some assets are depreciated more quickly. Financial Revenue is higher as the amortization of contributed capital is treated as revenue. The most significant change is Financial Expenses are lower as there is no expense for the Long Term Debt Principal appropriation – a difference of \$20.5 million for the full year.

The IFRS Net Profit for the year to date is \$16.1 million.

**ATTACHMENTS**

1. Audited Financial Statements for the twelve (12) months ended March 31, 2019 (IFRS format)
2. Unaudited Financial Statements for the twelve (12) months ended March 31, 2019 (Internal NSUARB & IFRS format)
3. Financial Information Graph of Revenue and Expenses for 2018/2019

Report prepared by: <i>Original Signed By:</i> Warren Brake, B.Comm, CPA, CGA, Manager, Accounting, 902-490-4814
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Financial Statements

Halifax Regional Water Commission

March 31, 2019

DRAFT

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# Halifax Regional Water Commission

## Statement of earnings

Year ended March 31, 2019 (in thousands)

	2019	2018
Operating revenues		
Water	\$ 48,040	\$ 47,220
Wastewater	69,901	69,994
Stormwater	9,741	10,016
Fire protection	7,074	7,074
Private fire protection	869	856
Other operating revenue	<u>2,576</u>	<u>2,985</u>
	<u>138,201</u>	<u>138,145</u>
Operating expenditures (Note 14)		
Water supply and treatment	9,766	8,646
Water transmission and distribution	10,902	9,410
Wastewater collection	13,124	12,642
Stormwater collection	4,949	4,842
Wastewater treatment	19,789	19,647
Engineering and information services	8,990	8,105
Regulatory services	2,319	2,450
Customer service	4,916	4,896
Administration and pension	13,965	12,553
Depreciation and amortization	<u>44,066</u>	<u>41,625</u>
	<u>132,786</u>	<u>124,816</u>
Earnings from operations before financial and other revenues and expenditures	<u>5,415</u>	<u>13,329</u>
Financial and other revenues		
Interest	1,157	694
Contributed capital	18,142	17,372
Other	<u>742</u>	<u>3,792</u>
	<u>20,041</u>	<u>21,858</u>
Financial and other expenditures		
Interest on long term debt	7,430	7,884
Amortization of debt discount	199	202
Grant in lieu of taxes	4,999	4,774
Other	<u>232</u>	<u>354</u>
	<u>12,860</u>	<u>13,214</u>
Earnings for the year before regulatory deferral account balance amortization	12,596	21,973
Regulatory deferral account balance amortization (Note 5)	<u>(192)</u>	<u>(192)</u>
Earnings for the year	<u>\$ 12,404</u>	<u>\$ 21,781</u>

See accompanying notes to the financial statements.

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## Halifax Regional Water Commission

### Statement of comprehensive earnings

Year ended March 31 (in thousands)

	2019	2018
Earnings for the year	\$ 12,404	\$ 21,781
Other comprehensive income (loss)		
Items that will not be reclassified subsequently to earnings:		
Re-measurement on defined benefit plans	<u>3,734</u>	<u>(1,750)</u>
Total comprehensive earnings for the year	<u>\$ 16,138</u>	<u>\$ 20,031</u>

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See accompanying notes to the financial statements.

# Halifax Regional Water Commission

## Statement of financial position

March 31 (in thousands)

2019

2018

### Assets

#### Current

Cash and cash equivalents	\$ 51,603	\$ 51,470
Receivables		
Customer charges and contractual	17,407	17,494
Unbilled service revenues	17,012	16,640
Halifax Regional Municipality	3,728	5,274
Inventory	2,057	1,442
Prepays	1,066	1,013
	<u>92,873</u>	<u>93,333</u>
Intangible assets (Note 11)	15,418	13,877
Capital work in progress	29,605	24,550
Utility plant in service (Note 12)	1,233,440	1,200,430
Total assets	<u>1,371,336</u>	<u>1,332,190</u>

Regulatory deferral account balance (Note 5)	<u>3,004</u>	<u>3,196</u>
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<b>Total assets and regulatory deferral account debit balances</b>	<b><u>\$ 1,374,340</u></b>	<b><u>\$ 1,335,386</u></b>
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### Liabilities

#### Current

Payables and accruals		
Trade	\$ 23,493	\$ 22,715
Interest on long term debt	2,051	2,030
Halifax Regional Municipality	2,865	2,439
Contractor and customer deposits	207	186
Current portion of deferred contributed capital	13,846	13,405
Current portion of long term debt (Note 13)	24,709	22,630
Unearned revenue	507	584
	<u>67,678</u>	<u>63,989</u>
Deferred contributed capital	867,802	842,967
Long term debt (Note 13)	182,732	190,871
Employee benefit obligation – pension plan (Note 4)	67,755	65,486
Employee benefit obligation – post-retirement benefits (Note 4)	380	430
Employee benefit obligation – pre-retirement benefits (Note 4)	4,195	3,983
	<u>1,190,542</u>	<u>1,167,726</u>

### Equity

Accumulated other comprehensive loss (page 6)	(41,209)	(44,943)
Accumulated surplus (page 6)	225,007	212,603
	<u>183,798</u>	<u>167,660</u>
	<b><u>\$ 1,374,340</u></b>	<b><u>\$ 1,335,386</u></b>

Contingent liabilities (Note 3)

Commitments (Note 6)

Subsequent event (Note 15)

Approved by the Board

\_\_\_\_\_  
Commissioner

\_\_\_\_\_  
Commissioner

See accompanying notes to the financial statements.



# Halifax Regional Water Commission

## Statement of changes in equity

Year ended March 31 (in thousands)

	Accumulated other comprehensive income (loss)	Accumulated surplus	Total
Balance at March 31, 2017	\$ (43,193)	\$ 190,822	\$ 147,629
Earnings for the year	-	21,781	21,781
Other comprehensive loss	(1,750)	-	(1,750)
Comprehensive earnings for the year	(1,750)	21,781	20,031
Balance at March 31, 2018	\$ (44,943)	\$ 212,603	\$ 167,660
Balance at March 31, 2018	\$ (44,943)	\$ 212,603	\$ 167,660
Earnings for the year		12,404	12,404
Other comprehensive income	3,734		3,734
Comprehensive earnings for the year	3,734	12,404	16,138
Balance at March 31, 2019	\$ (41,209)	\$ 225,007	\$ 183,798

See accompanying notes to the financial statements.

# Halifax Regional Water Commission

## Statement of cash flows

Year ended March 31 (in thousands)

2019

2018

(Decrease) increase in cash and cash equivalents

	2019	2018
<b>Operating</b>		
Comprehensive earnings for the year	\$ 16,138	\$ 20,031
Depreciation and amortization	27,787	25,926
Employee benefit obligations	2,431	7,254
Loss (gain) loss on disposal of plant in service	<u>188</u>	<u>(127)</u>
	46,544	53,084
Change in non-cash operating working capital items (Note 7)	<u>1,762</u>	<u>754</u>
	<u>48,306</u>	<u>53,838</u>
<b>Financing</b>		
Proceeds from issuance of long term debt	16,500	10,000
Contributed capital	13,691	11,162
Debt issue costs, net	70	121
Principal repayment on Harbour Solutions long term debt	(6,500)	(6,500)
Principal repayments on long term debt	<u>(16,130)</u>	<u>(15,089)</u>
	<u>7,631</u>	<u>(306)</u>
<b>Investing</b>		
Deferred capital contributions	790	3,701
Proceeds from sale of plant in service	189	120
Purchase of capital work in progress	(18,519)	(14,405)
Purchase of utility plant in service	<u>(38,264)</u>	<u>(47,357)</u>
	<u>(55,804)</u>	<u>(57,941)</u>
Net increase (decrease) in cash and cash equivalents	133	(4,409)
Cash and cash equivalents, beginning of year	<u>51,470</u>	<u>55,879</u>
Cash and cash equivalents, end of year	<u>\$ 51,603</u>	<u>\$ 51,470</u>

See accompanying notes to the financial statements.

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# Halifax Regional Water Commission

## Notes to the financial statements

March 31, 2019 (in thousands)

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### 1. Nature of operations

The Halifax Regional Water Commission (the Commission) is a public utility owned and controlled by the Halifax Regional Municipality (HRM). The Commission is responsible for the supply of municipal water, wastewater and stormwater services to the residents of the HRM. The Commission's principal place of business is P.O. Box 8388 Station A, 450 Cowie Hill Road, Halifax, Nova Scotia. The Commission is exempt from income tax.

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### 2. Summary of significant accounting policies

#### (a) Statement of compliance

The financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB). The principal accounting policies applied in the preparation of these financial statements are set out below. These policies have been consistently applied to all years presented, unless otherwise stated.

The financial statements were authorized for issue by the Board on **June 20, 2019**.

#### (b) Basis of measurement

The Commission's financial statements are prepared on the historical cost basis, except for certain financial instruments measured at fair value. The financial statements are presented in Canadian dollars and all values are rounded to the nearest thousand. The financial statements are presented in accordance with International Accounting Standards (IAS) 1 "Presentation of Financial Statements".

#### (c) Regulation

In matters of administrative policy relating to customers, rates, capital expenditures, depreciation rates and accounting matters, the Commission is subject to the jurisdiction of the Nova Scotia Utility and Review Board (NSUARB). Rates charged to and collected from customers are designed to recover costs of providing the regulated services. Halifax Water is required to prepare submissions in accordance with the Handbook issued by the NSUARB. There are differences in the accounting treatment of certain transactions from IFRS including the accounting of principal debt payments, employee future benefits, depreciation and amortization, and gains and losses on the disposal of plant in service and accumulated surplus.

Regulatory assets represent costs incurred that have been deferred as approved by the NSUARB and will be recovered through future rates collected from customers. The Commission's regulatory asset is disclosed in Note 5.

#### (d) Utility plant in service

Utility plant in service (Note 12) is recorded at cost, being the purchase price and directly attributable cost of acquisition or construction, including interest capitalized during construction. Contributions for capital expenditures are treated as deferred contributed capital on the statement of financial position and amortized over the estimated useful lives of the assets. Structures and land taken out of service are removed from utility plant in service and placed in plant not in service at cost less accumulated depreciation. Losses or gains related to assets retired, demolished or sold are charged or credited to the statement of earnings.

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# Halifax Regional Water Commission

## Notes to the financial statements

March 31, 2019 (in thousands)

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### 2. Summary of significant accounting policies (continued)

#### (e) Cash and cash equivalents

Cash and cash equivalents consists of cash on hand and balances with banks.

#### (f) Depreciation

Depreciation is provided using the straight-line method over the estimated useful lives of the assets.

The estimated useful lives for the major classifications of utility plant in service are as follows:

Culverts	25 to 50 years
Hydrants	50 to 80 years
Meters	20 to 25 years
Office equipment and furniture and transportation equipment	3 to 10 years
Pumping equipment	5 to 30 years
Purification and treatment equipment	20 to 50 years
SCADA equipment	5 to 25 years
Services and laterals	50 to 60 years
Structures and improvements	50 to 100 years
Tools and work equipment	5 to 30 years
Water, wastewater and stormwater mains	60 to 100 years

Depreciation commences in the year an asset is put in service and ready for its intended use. In the year of acquisition, depreciation is calculated at 50% of the above rates unless a project is significant, in which case depreciation is prorated for the number of months the asset was in use. The Commission does not maintain a depreciation fund. The Commission has received NSUARB approval for exemption from setting up a depreciation fund as long as net depreciable additions to plant exceed the depreciation charged.

#### (g) Inventory

Cost of inventory is comprised of direct materials and supplies. Inventories are valued at the lower of cost and net realizable value with cost being determined on a weighted average moving cost method.

#### (h) Revenues and expenditures

All revenues and expenditures are recorded on an accrual basis. Revenues relating to supplying water, wastewater and stormwater services are recorded based on cyclical billings and include an accrual for estimated amounts not yet billed. Fire protection revenue is recorded based on approved rates. Other revenues are recorded at the time services are performed, the amount can be measured reliably and collection is reasonably assured.

#### (i) Long term debt

Debt issue costs are deferred and amortized over the term of the debt to which it relates.

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# Halifax Regional Water Commission

## Notes to the financial statements

March 31, 2019 (in thousands)

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### 2. Summary of significant accounting policies (continued)

#### (j) Use of estimates and critical accounting judgments

In preparing the Commission's financial statements, management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements and reported amounts of revenue and expenditures during the period. Significant estimates and assumptions include the following:

- At year end, revenue from water, stormwater and wastewater services has been earned, but not yet billed due to the timing of the billing cycles. Management estimates the unbilled revenue accrual based on historic billing trends.
- Management assumptions are used in the actuarial determination of employee benefit obligations, such as standard rates of inflation, mortality, discount rates, and anticipation of future salary increases.
- Useful lives of utility plant in service are reviewed at each reporting date based on expected patterns of usage and historical information.
- Recognition and measurement of provisions and contingencies.

Actual results could differ from these estimates.

#### (k) Financial instruments

##### *Recognition and derecognition*

Financial assets and financial liabilities are recognized when the Commission becomes a party to the contractual provisions of the financial instrument. Financial assets are derecognized when the contractual rights to the cash flows from the financial asset expire, or when the financial asset and substantially all the risks and rewards are transferred. A financial liability is derecognized when it is extinguished, discharged, cancelled or expires.

##### *Classification and initial measurement of financial assets*

All financial assets are initially measured at fair value and adjusted for transaction costs, where applicable. Financial assets are classified into the following categories: measured at amortized cost, fair value through other comprehensive income ("FVTOCI") and fair value through profit and loss ("FVTPL").

The Commission has classified its financial instruments as follows:

<u>Asset/Liability</u>	<u>Classification</u>
Cash and cash equivalents	Amortized cost
Receivables	Amortized cost
Receivable from HRM	Amortized cost
Payables and accruals	Amortized cost
Long term debt	Amortized cost
Deposits	Amortized cost

The classification is determined by both the Commission business model for managing the financial asset and the contractual cash flow characteristics of the financial asset.

##### *Subsequent measurement of financial assets*

Financial assets are measured at amortized cost if the assets meet the following conditions (and are not designated as FVTPL):

- they are held within a business model whose objective is to hold the financial assets and collect its contractual cash flows
- the contractual terms of the financial assets give rise to cash flows that are solely payments of principal and interest on the principal amount outstanding

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# Halifax Regional Water Commission

## Notes to the financial statements

March 31, 2019 (in thousands)

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### 2. Summary of significant accounting policies (continued)

#### (k) Financial instruments (continued)

After initial recognition, these are measured at amortized cost using the effective interest method. Discounting is omitted where the effect of discounting is immaterial. The Commission's financial assets and liabilities fall into this category. Under IAS 39 cash and receivables were classified as loans and receivables and subsequently measured at amortized cost. Payables, long term debt, and deposits were classified as other financial liabilities and subsequently measured at amortized cost.

#### *Impairment of financial assets*

IFRS 9's impairment requirements use more forward-looking information to recognize expected credit losses – the 'expected credit loss (ECL) model'. This replaces IAS 39's 'incurred loss model'. Financial assets that are subject to the expected credit loss model include cash and cash equivalents, receivables, and receivables from HRM. While cash and cash equivalents, and receivables from HRM are subject to the impairment requirements of IFRS 9, the identified impairment loss was immaterial.

#### Receivables

The Commission makes use of a simplified approach in accounting for receivables and records the loss allowance as lifetime expected credit losses. These are the expected shortfalls in contractual cash flows, considering the potential for default at any point during the life of the financial instrument. In calculating, the Commission uses its historical experience, external indicators and forward-looking information to calculate the expected credit losses using a provision matrix. The Commission assesses impairment of receivables on a collective basis. As they possess shared credit risk characteristics, they have been grouped based on the days past due.

#### (l) Provisions

A provision is recognized in the statement of financial position when the Commission has a legal or constructive obligation as a result of a past event, and it is probable that an outflow of economic benefits will be required to settle the obligation. If the effect is material, provisions are determined by discounting the expected future cash flows at a rate that reflects current market assessment of the time value of money and, where appropriate, the risks specific to the obligation.

#### (m) Impairments

At the end of each reporting period, the Commission reviews the carrying amounts of its tangible and intangible assets to determine whether there is an indication of an impairment loss. If any such indication exists, the recoverable amount of the assets is estimated in order to determine the extent of impairment loss (if any). The recoverable amount of any asset is the higher of its fair value less costs to sell and its value in use. Where it is not possible to estimate the recoverable amount of an individual asset, the impairment test is carried out on the asset's cash-generating unit (CGU), which is the lowest group of assets to which the asset belongs for which there are separately identifiable cash inflows that are largely independent of the cash inflows from other assets. The Commission has three CGU's (water, wastewater and stormwater) for which impairment testing is performed.

If the recoverable amount of the asset is estimated to be less than its carrying amount, the carrying amount of the asset is reduced to its recoverable amount. An impairment loss is recognized immediately in earnings. When an impairment loss is subsequently reversed, the carrying amount of the assets is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset in prior years.

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# Halifax Regional Water Commission

## Notes to the financial statements

March 31, 2019 (in thousands)

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### 2. Summary of significant accounting policies (continued)

#### (n) Intangibles

Intangible assets include land access easements, water removal rights, studies, and capital master plans and are recorded at cost less accumulated amortization. Land rights include payment for easements and right of use over land and have an indefinite useful life. Intangibles with finite useful lives are amortized annually over the estimated useful lives. The expected useful lives are as follows:

Intangible assets	10 to 30 years
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#### (o) Employee benefits obligations

The Commission accrues in its accounts, annually, the estimated liabilities for pensions and other employee benefits.

##### *Pension benefits*

The Commission provides employment, post-retirement and pre-retirement benefits through defined benefit plans and defined contribution plans.

The cost of pension benefits for defined contribution pension plans are expensed at the time active employees are compensated.

The defined benefit plans sponsored by the Commission determine the amount of pension benefits employees will receive on retirement by reference to length of service and salary levels. Obligations associated with defined benefit plans reside with the Commission, even if plan assets for funding the plan are set aside.

The liability recognized in the statement of financial position for defined benefit plans is the present value of the defined benefit obligation at the end of the reporting date less the fair value of plan assets.

Management estimates the defined benefit obligation annually with assistance from an independent actuary using the projected unit credit method. The defined benefit obligation uses estimates for inflation, medical cost trends, mortality, and anticipated salary levels. The discount factor used to present value estimated future cash flows is determined with reference to high quality corporate bonds that have terms to maturity approximating the terms of the related pension liability.

#### (o) Employee benefits obligations (continued)

Gains and losses resulting from re-measurements of the net defined benefit liability are charged to other comprehensive income in the period in which they arise. Service costs are recognized immediately into earnings.

Net interest cost related to pension obligations and returns on plan assets are included in salary and benefits on the statement of earnings.

##### *Short-term employee benefits*

Short-term employee benefit obligations that are due to be settled wholly within twelve months after the end of the annual reporting period in which the employees render the related service are measured on an undiscounted basis and are expensed as the related service is provided.

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# Halifax Regional Water Commission

## Notes to the financial statements

March 31, 2019 (in thousands)

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### 2. Summary of significant accounting policies (continued)

#### (p) Regulatory deferral account balance

The Commission early adopted IFRS 14 Regulatory Deferral Accounts and has continued to apply the accounting policies it applied in accordance with the Handbook for the recognition, measurement and impairment of assets and liabilities arising from rate regulation. These are referred to as regulatory deferral account balances.

#### *Explanation of recognized amounts*

Regulatory deferral account balances are recognized and measured at cost less amortization. Management continually assesses the likelihood of recovery of regulatory assets. If recovery through future rates is no longer considered probable, the amounts would be charged to the results of operations in the period that the assessment is made.

#### (q) Future accounting standards

At the date of authorization of these financial statements, certain new IFRS standards, amendments and interpretations to existing standards have been published by the IASB, but are not yet effective and have not been adopted early by the Commission.

Management anticipates that the relevant pronouncements will be adopted in the Commission's accounting policies for the first period beginning after the effective date of the pronouncement. Information on new standards, amendments and interpretations that may be relevant to the Commission's financial statements is provided below.

#### **IFRS 15 Revenue from Contracts with Customers**

The IASB released a new standard IFRS 15 Revenue from Contracts with Customers which replaces IAS 18 Revenue, IAS 11 Construction Contracts and certain revenue-related interpretations. The new standard provides a single, principle based five-step model to be applied to all contracts with customers requiring an entity to recognize revenue 1) in a manner that depicts the transfer of goods or services to customers and 2) at an amount that reflects the consideration the entity expects to be entitled to in exchange for those goods or services. IFRS 15 is effective for annual periods beginning on or after January 1, 2018. The Commission has adopted and assessed the impact of the new standard and concluded it is not material to the financial statements.

#### **IFRS 9 Financial Instruments**

The IASB has replaced IAS 39 Financial Instruments: Recognition and Measurement in its entirety with a new standard IFRS 9 Financial Instruments. The final version of the standard introduces a new approach to financial asset classification, replaces the "incurred loss" impairment model with a more forward-looking expected loss model and substantially revises hedge accounting.

Management completed their assessment and the Commission has elected to apply the modified retrospective method on transition, which means that comparative periods have not been restated. The Commission adopted IFRS 9 in its financial statements for the annual period beginning April 1, 2018. The adoption of this standard had no financial impact to the Commission.

#### **IFRS 16 Leases**

The IASB issued IFRS 16, Leases, which replaces IAS 17, Leases. IFRS 16 provides a single lessee accounting model, requiring the recognition of assets and liabilities for all leases, unless the lease term is twelve months or less or the underlying asset has a low value. Lessor accounting remains largely unchanged from IAS 17. The new standard IFRS 16 is effective for annual periods beginning on or after January 1, 2019. The Commission is currently assessing the impact of this new standard.



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# Halifax Regional Water Commission

## Notes to the financial statements

March 31, 2019 (in thousands)

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### 3. Contingent liabilities

As a condition of a prior year sale of a property, the Commission indemnified the purchaser from claims or actions resulting from migration of halocarbons. The environmental risk is assessed to be low and the likelihood of any related liability is not determinable.

The Commission has been named along with the contractor for a flooding incident that occurred as a result of an overflow of wastewater at a pumping station associated with the Halifax Harbour Solutions Project (HHSP). The claim is being defended by the Commission's insurer and management believes exposure in this regard is minimal.

There are active claims against the Commission; however, the likelihood of actual liability is not determinable at this time. If the Commission's defense of active claims is unsuccessful, the potential exposure would be \$1,000 - \$2,000.

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### 4. Employee benefit obligations

#### Retirement benefit plan – employees transferred from HRM

The Commission is responsible for funding the employer share of the contributions to the HRM pension plan for certain employees that transferred from HRM as of August 1, 2007. HRM administers this defined benefit pension plan and the Commission reimburses HRM for the pension costs related to the Commission's proportionate share of the employees covered under the plan. Due to the nature of the plan, the Commission does not have sufficient information to account for the plan as a defined benefit; therefore, the multiemployer defined benefit plan is accounted for in the same manner as a defined contribution plan. An expense is recorded in the period when the Commission is obligated to make contributions for services rendered by the employee. During 2019, the Commission funded \$599 (2018 - \$635) in contributions to the plan.

#### Defined benefit plans and other long term employment benefits

For all other employees, the Commission maintains a defined benefit pension plan and offers post-retirement health and insurance benefits. The pension plan provides pensions based upon length of service and best seven years' earnings. This defined benefit pension plan is funded by employer and employee contributions with employees contributing 10.65% of regular employee earnings. The Commission contributes 13.29% of payroll which includes 9.85% toward current service cost and 3.44% toward going concern special payments.

Employees who retired prior to July 1, 1998 have extended health benefits coverage for life and drug coverage until age 65. Employees who retired after July 1, 1998 and before December 31, 2008 have coverage for drug, extended health, dental and life insurance until age 65 on a 50/50 cost shared basis (100% basis for employees who retired after December 31, 2008). Extended health coverage for these retirees and their spouses after the age of 65 is available on an optional basis at 100% retiree cost and drug coverage is available through the provincially managed drug program.

The Commission also has a non-funded pre-retirement benefit that is accrued annually, but is payable on retirement, termination or death if the employee has at least 10 years of continuous service. The benefit is equal to three days' pay for each completed year of service, up to a maximum of six month's salary and can be taken as a lump sum payment at the date of retirement in lieu of pre-retirement leave.

# Halifax Regional Water Commission

## Notes to the financial statements

March 31, 2019 (in thousands)

### 4. Employee benefit obligations (continued)

Information about the Commission's plans, based on an actuarial extrapolation as at March 31, 2019, is as follows:

	Pension Plan		Post-retirement benefits		Pre-retirement benefits	
	2019	2018	2019	2018	2019	2018
<b>Change in accrued benefit obligation</b>						
Balance, beginning of year	\$ 187,181	\$ 168,363	\$ 430	\$ 341	\$ 3,983	\$ 3,824
Current service cost	7,107	6,112	-	-	344	339
Interest cost	6,837	6,484	13	8	141	132
Contributions by plan participants	2,885	2,725	-	-	-	-
Benefit payments	(4,534)	(4,265)	(60)	(63)	(460)	(227)
Re-measurements – actuarial (gains)/ losses from changes in demographic assumptions	-	-	-	(42)	-	-
Re-measurements – actuarial (gains)/ losses from changes in financial/experience assumptions	(514)	7,762	(3)	186	187	(85)
Balance, end of year	<u>198,962</u>	<u>187,181</u>	<u>380</u>	<u>430</u>	<u>4,195</u>	<u>3,983</u>
<b>Change in fair value of plan assets</b>						
Balance, beginning of year	121,695	109,883	-	-	-	-
Interest income	4,412	4,206	-	-	-	-
Administrative expenses	(94)	(69)	-	-	-	-
Actual return on plan assets	3,414	5,952	-	-	-	-
Benefit payments	(4,534)	(4,265)	(60)	(63)	(460)	(227)
Contributions: Employee	2,885	2,725	-	-	-	-
Employer	3,429	3,263	60	63	460	227
Balance, end of year	<u>131,207</u>	<u>121,695</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Accrued benefit liability at March 31	<u>\$ 67,755</u>	<u>\$ 65,486</u>	<u>\$ 380</u>	<u>\$ 430</u>	<u>\$ 4,195</u>	<u>\$ 3,983</u>

# Halifax Regional Water Commission

## Notes to the financial statements

March 31, 2019 (in thousands)

### 4. Employee benefit obligations (continued)

Included in the statement of earnings is pension expense of \$9,388 (2018 - \$8,461).

The significant actuarial assumptions adopted in measuring the Commission's accrued benefit obligations are as follows:

	2019	2018	2019	2018	2019	2018
	Pension Plan	Pension Plan	Post- Retirement Benefits	Post- Retirement Benefits	Pre- Retirement Benefit	Pre- Retirement Benefit
Discount rate	3.40%	3.60%	3.00%	3.20%	3.20%	3.60%
Expected return on plan assets	3.40%	3.60%	N/A	N/A	N/A	N/A
Rate of compensation increase	3.75%	3.75%	N/A	N/A	3.75%	3.75%
Expenses for life benefits as a % of claims	N/A	N/A	10.00%	10.00%	N/A	N/A
Health benefit inflation per year	N/A	N/A	6.60%	6.92%	N/A	N/A
Dental benefit inflation per year	N/A	N/A	4.00%	4.50%	N/A	N/A

The measurement date used to determine the Plan assets and the accrued benefit obligation was March 31, 2019. The most recent valuation was completed January 1, 2019. The next review is scheduled for January 1, 2022.

The estimated employer contributions expected to be paid into the defined benefit plan and supplemental plan for the next fiscal year are \$2,894.

### 5. Regulatory deferral account balance

In 2011, the NSUARB granted the Commission approval to defer depreciation charges on certain assets transferred in 2010 from HRM relating to the Halifax Harbour Solutions Project (HHSP). Depreciation of \$2,078 was deferred in each of fiscal 2011 and 2012. As a result, the Commission recognized a \$4,156 regulatory deferral account. In absence of rate regulation, this regulatory deferral account balance would have been expensed as depreciation in fiscal 2011 and 2012. In 2012, the NSUARB granted approval of the amortization of this deferral account over the remaining useful lives of the underlying assets, beginning in 2014. The expense recognized in 2019 is \$192 (2018 - \$192).

	2019	2018
Beginning balance	\$ 3,196	\$ 3,388
Amortization	<u>(192)</u>	<u>(192)</u>
Ending balance	<u>\$ 3,004</u>	<u>\$ 3,196</u>

# Halifax Regional Water Commission

## Notes to the financial statements

March 31, 2019 (in thousands)

### 6. Commitments

There is an agreement with HRM for renewal of the dividend/grant in lieu of taxes for fiscal years 2015/16 to 2019/20 for water services. Dividend payments are approved as part of revenue requirements by the NSUARB. There is no dividend/grant in lieu of taxes approved for wastewater/stormwater. The Commission is committed to a payment of \$5,078 for the 2020 fiscal year.

At March 31, 2019, the Commission had \$118,025 (2018 - \$85,728) in expenditures from current and past approved capital budgets not yet expended.

### 7. Supplemental cash flow information

	<u>2019</u>	<u>2018</u>
Changes in non-cash operating working capital items		
Receivables, customer charges and unbilled	\$ (285)	\$ (3,655)
Payable to/receivable from HRM, net	1,972	(1,250)
Inventory	(615)	159
Prepays	(53)	(146)
Payables and accruals, trade	778	5,925
Accrued interest on long term debt	21	(71)
Contractor and customer deposits	21	(5)
Unearned revenue	<u>(77)</u>	<u>(203)</u>
	<u>\$ 1,762</u>	<u>\$ 754</u>

Interest paid during the year was \$7,430 (2018 - \$7,884).

### 8. Capital management

The Commission's objective when managing capital is to ensure sufficient liquidity to support its financial obligations and execute its operating and capital plans. The Commission monitors and makes adjustments to its capital structure through additional borrowings of long term debt which are used to finance capital projects.

The Commission considers its total capitalization to include all long term debt and total equity. The calculation is set out as follows:

	<u>2019</u>	<u>2018</u>
Long term debt (current portion)	\$ 24,709	\$ 22,630
Long term debt	<u>182,732</u>	<u>190,871</u>
Funded debt	207,441	213,501
Equity	<u>183,798</u>	<u>167,660</u>
Capital under management	<u>\$ 391,239</u>	<u>\$ 381,161</u>

The Commission is a regulated utility and is subject to the regulations of the NSUARB. As part of this regulation, the Commission must obtain approval by the NSUARB for all borrowings. The Commission has obtained regulatory approval for all borrowings during the fiscal year. The Commission is not subject to financial borrowing covenants other than as outlined in Note 10.

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# Halifax Regional Water Commission

## Notes to the financial statements

March 31, 2019 (in thousands)

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### 9. Financial instruments and risk management

The Commission applies a three-tier hierarchy framework for disclosing fair value of financial instruments, based on whether the inputs into the various valuation techniques are observable or unobservable. Observable techniques reflect market data obtained from independent sources, while unobservable inputs reflect management assumptions. Changes in valuation techniques of financial instruments may result in transfers of assigned levels. The hierarchy of input is as follows:

Level I	Quoted prices in active markets for identical assets or liabilities;
Level II	Inputs other than quoted prices included in Level I that are observable, either directly or indirectly; and
Level III	Inputs that are not based on observable market data.

The carrying values of current assets and current liabilities approximate their fair value due to the relatively short period to maturity of these financial instruments. Loans and receivables are carried at amortized cost. The fair value of variable rate long term debt is assumed to approximate its carrying value. Fair value has been estimated by discounting future cash flows at a rate offered for borrowings of similar maturities and credit quality at year end.

There were no transfers between classes of the fair value hierarchy during the year.

The Commission is exposed to risks as a result of holding financial instruments. Management considers and evaluates those risks on an on-going basis to ensure that the risks are appropriately managed. These potential risks include credit risk, interest risk, market risk and liquidity risk.

#### *Credit risk*

Credit risk arises from the possibility that the Commission's customers may experience financial difficulty and be unable to fulfill their obligations. The Commission's maximum exposure to credit risk corresponds to the cash and customer charges and contractual receivables. However, the Commission's customers are numerous and diverse, which reduces the concentration of credit risk.

An analysis of the Commission's receivables and continuity of the Commission's provision for impairment losses on receivables is as follows:

	<u>2019</u>	<u>2018</u>
Receivables		
Customer charges, contractual and unbilled	\$ 36,921	\$ 36,552
Less: allowance for doubtful accounts	<u>(2,502)</u>	<u>(2,418)</u>
	<u>\$ 34,419</u>	<u>\$ 34,134</u>

The credit quality of financial assets that are neither past due nor impaired are assessed with reference to historical information and includes the following considerations; new customers, existing customers and payment patterns / history.

#### *Interest risk*

Interest risk arises from the possibility that changes in interest rates will cause the Commission a potential loss. All of the Commission's long term debt is at varying fixed rates and has staggered maturity dates which reduce the interest rate risk.

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# Halifax Regional Water Commission

## Notes to the financial statements

March 31, 2019 (in thousands)

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### 9. Financial instruments and risk management (continued)

#### *Market risk*

Market risk arises from the possibility that the value of an investment will fluctuate as a result of changes in market prices. These changes could affect the market value of the investments in the Commission's employees' pension plan and consequently the plan's deficit. The risk is mitigated by the pension plan diversifying the types of investments in its portfolio.

#### *Liquidity risk*

Liquidity risk arises from the possibility of the Commission not being able to meet its cash requirements in a timely and cost effective manner. The Commission manages this risk by closely monitoring the cash on hand in comparison to upcoming cash commitments.

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### 10. Related party transactions

The immediate parent and ultimate controlling party of the Commission is the HRM.

The Commission is obligated to make payments on debt, held in the name of HRM, associated with wastewater and stormwater assets which were transferred to the Commission in 2007 and subsequent years.

Amounts receivable from and payable to HRM have normal credit terms.

The Commission had the following related party transactions with HRM:

- The Commission recorded revenue for provision of water, wastewater and stormwater services to HRM in the amount of \$5,209 (2018 - \$5,097).
- The Commission recorded fire protection revenue from HRM of \$7,074 (2018 - \$7,074).
- The Commission paid a grant in lieu of tax of \$4,999 (2018 - \$4,774).
- The debt issued by the Commission was covered by a blanket guarantee from HRM subject to the Commission maintaining a debt service ratio of less than 35%.

#### **Compensation of key management personnel**

Members of the Board of Commissioners and Executive Management team are deemed to be key management personnel. It is the Board of Commissioners and Executive Management team who have the responsibility for planning, directing and controlling the activities of the Commission.

The following is compensation expense for key management personnel:

	<u>2019</u>	<u>2018</u>
Short term benefits	\$ 1,421	\$ 1,388
Post-employment benefits	<u>313</u>	<u>219</u>
Total compensation	<u>\$ 1,734</u>	<u>\$ 1,607</u>

# Halifax Regional Water Commission

## Notes to the financial statements

March 31, 2019 (in thousands)

11. Intangible assets	<u>2019</u>	<u>2018</u>
Cost		
Beginning balance, April 1	\$ 17,888	\$ 13,213
Additions	<u>2,910</u>	<u>4,675</u>
Total cost, March 31	<u>20,798</u>	<u>17,888</u>
Accumulated amortization		
Beginning balance, April 1	4,011	2,938
Amortization	<u>1,369</u>	<u>1,073</u>
Total accumulated amortization, March 31	<u>5,380</u>	<u>4,011</u>
Net book value	<u>\$ 15,418</u>	<u>\$ 13,877</u>

### 12. Utility plant in service

	<u>Land</u>	<u>Structures and improvements</u>	<u>Treatment and network equipment</u>	<u>Distribution and collection network</u>	<u>Tools and work equipment</u>	<u>Total</u>
Cost						
Beginning balance, April 1, 2018	\$ 21,372	\$ 218,876	\$ 229,808	\$ 862,357	\$ 26,080	\$ 1,358,493
Additions	231	16,739	23,459	33,708	3,610	77,747
Disposals	-	-	(2,325)	-	(855)	(3,180)
Total cost, March 31, 2019	<u>21,603</u>	<u>235,615</u>	<u>250,942</u>	<u>896,065</u>	<u>28,835</u>	<u>1,433,060</u>
Accumulated depreciation						
Beginning balance, April 1, 2018	\$ -	\$ 43,185	\$ 47,080	\$ 59,968	\$ 7,830	\$ 158,063
Depreciation	-	9,552	11,725	17,078	3,202	41,557
Total accumulated depreciation March 31, 2019	-	<u>52,737</u>	<u>58,805</u>	<u>77,046</u>	<u>11,032</u>	<u>199,620</u>
Net book value, March 31, 2019	<u>\$ 21,603</u>	<u>\$ 182,878</u>	<u>\$ 192,137</u>	<u>\$ 819,019</u>	<u>\$ 17,803</u>	<u>\$ 1,233,440</u>

	<u>Land</u>	<u>Structures and improvements</u>	<u>Treatment and network equipment</u>	<u>Distribution and collection network</u>	<u>Tools and work equipment</u>	<u>Total</u>
Cost						
Beginning balance, April 1, 2017	\$ 20,780	\$ 214,875	\$ 218,773	\$ 787,646	\$ 18,322	\$ 1,260,396
Additions	592	4,011	11,464	74,724	7,758	98,549
Disposals	-	(10)	(429)	(13)	-	(452)
Total cost, March 31, 2018	<u>21,372</u>	<u>218,876</u>	<u>229,808</u>	<u>862,357</u>	<u>26,080</u>	<u>1,358,493</u>
Accumulated depreciation						
Beginning balance, April 1, 2017	\$ -	\$ 33,807	\$ 34,671	\$ 43,744	\$ 4,022	\$ 116,244
Depreciation	-	9,378	12,409	16,224	3,808	41,819
Total accumulated depreciation March 31, 2018	-	<u>43,185</u>	<u>47,080</u>	<u>59,968</u>	<u>7,830</u>	<u>158,063</u>
Net book value, March 31, 2018	<u>\$ 21,372</u>	<u>\$ 175,691</u>	<u>\$ 182,728</u>	<u>\$ 802,389</u>	<u>\$ 18,250</u>	<u>\$ 1,200,430</u>

# Halifax Regional Water Commission

## Notes to the financial statements

March 31, 2019 (in thousands)

13. Long-term debt	<u>Interest rates</u>	<u>2019</u>	<u>2018</u>
Payable to Municipal Finance Corporation (MFC)			
Water	1.040% to 6.750%	\$ 61,197	\$ 63,181
Halifax Harbour Solutions	0.900% to 4.329%	7,150	7,800
Wastewater/stormwater	1.040% to 4.500%	87,293	86,209
Stormwater	1.040% to 4.114%	<u>13,643</u>	<u>11,723</u>
		<u>169,283</u>	<u>168,913</u>
Payable to Halifax Regional Municipality			
MFC Wastewater/stormwater	1.200% to 4.940%	<u>39,000</u>	<u>45,500</u>
		208,283	214,413
Less: debt issue costs		<u>(842)</u>	<u>(912)</u>
		207,441	213,501
Less: amount payable within one year		<u>(24,709)</u>	<u>(22,630)</u>
		<u>\$ 182,732</u>	<u>\$ 190,871</u>

The debentures are repayable in fixed annual or semi-annual principal instalments plus interest payable semi-annually. Principal instalments for the next five years are as follows:

2020	\$ 24,709
2021	\$ 19,034
2022	\$ 16,989
2023	\$ 41,702
2024	\$ 38,381

14. Operating expenditures by nature	<u>2019</u>	<u>2018</u>
Salaries and benefits	\$ 44,916	\$ 41,948
Training	728	618
Contract services	14,920	13,619
Electricity	6,601	6,323
Operating supplies	10,979	9,945
Professional services	3,945	4,559
Chemicals	4,961	4,698
Depreciation and amortization	<u>45,736</u>	<u>43,106</u>
	<u>\$ 132,786</u>	<u>\$ 124,816</u>

### 15. Subsequent event

On May 22, 2019 the Collective Agreements that will govern the next five years for for Locals 227 and 1431 were approved by the Board. Retroactive payments required have been reflected in the accruals at year end.



# Halifax Regional Water Commission

## Schedule of utility plant in service

# Schedule A

Year ended March 31, 2019 (in thousands)

### Water

	Land	Structures and improvements	Pumping equipment	Purification equipment	SCADA equipment	Transmission and distribution mains	Services	Meters	Hydrants	Aerotech and small systems	Tools and work equipment	Total
<b>Cost</b>												
Beginning balance, April 1, 2018												
Cost	\$ 16,009	\$ 95,326	\$ 10,303	\$ 25,222	\$ 5,171	\$ 372,794	\$ 37,241	\$ 15,582	\$ 19,917	\$ 9,834	\$ 28,124	\$ 635,523
Additions	231	1,634	200	1,673	436	13,526	2,658	3,530	721	220	1,903	26,732
Disposals	-	-	-	-	-	-	-	(2,325)	-	-	(406)	(2,731)
<b>Total cost, March 31, 2019</b>	<b>16,240</b>	<b>96,960</b>	<b>10,503</b>	<b>26,895</b>	<b>5,607</b>	<b>386,320</b>	<b>39,899</b>	<b>16,787</b>	<b>20,638</b>	<b>10,054</b>	<b>29,621</b>	<b>659,524</b>
<b>Accumulated depreciation</b>												
Beginning balance, April 1, 2018	-	29,560	7,291	16,491	3,860	84,919	6,989	6,075	4,207	3,250	17,395	180,037
Depreciation	-	102	285	1,080	193	4,865	657	(988)	317	38	1,620	8,169
Total accumulated depreciation, March 31, 2019	-	29,662	7,576	17,571	4,053	89,784	7,646	5,087	4,524	3,288	19,015	188,206
<b>Net book value, March 31, 2019</b>	<b>\$ 16,240</b>	<b>\$ 67,298</b>	<b>\$ 2,927</b>	<b>\$ 9,324</b>	<b>\$ 1,554</b>	<b>\$ 296,536</b>	<b>\$ 32,253</b>	<b>\$ 11,700</b>	<b>\$ 16,114</b>	<b>\$ 6,766</b>	<b>\$ 10,606</b>	<b>\$ 471,318</b>
<b>Cost</b>												
Beginning balance, April 1, 2017												
Cost	\$ 15,417	\$ 92,334	\$ 9,720	\$ 23,771	\$ 5,046	\$ 350,101	\$ 35,633	\$ 14,920	\$ 19,332	\$ 9,564	\$ 26,871	\$ 602,709
Additions	592	2,997	593	1,451	125	22,706	1,608	1,501	585	270	4,001	36,429
Disposals	-	(5)	(10)	-	-	(13)	-	(839)	-	-	(2,748)	(3,615)
<b>Total cost, March 31, 2018</b>	<b>16,009</b>	<b>95,326</b>	<b>10,303</b>	<b>25,222</b>	<b>5,171</b>	<b>372,794</b>	<b>37,241</b>	<b>15,582</b>	<b>19,917</b>	<b>9,834</b>	<b>28,124</b>	<b>635,523</b>
<b>Accumulated depreciation</b>												
Beginning balance, April 1, 2017	-	28,034	7,028	15,478	3,689	80,244	6,377	5,950	3,902	2,922	18,309	171,933
Depreciation	-	1,526	263	1,013	171	4,675	612	125	305	328	(914)	8,104
Total accumulated depreciation, March 31, 2018	-	29,560	7,291	16,491	3,860	84,919	6,989	6,075	4,207	3,250	17,395	180,037
<b>Net book value, March 31, 2018</b>	<b>\$ 16,009</b>	<b>\$ 65,766</b>	<b>\$ 3,012</b>	<b>\$ 8,731</b>	<b>\$ 1,311</b>	<b>\$ 287,875</b>	<b>\$ 30,252</b>	<b>\$ 9,507</b>	<b>\$ 15,710</b>	<b>\$ 6,584</b>	<b>\$ 10,729</b>	<b>\$ 455,486</b>

Schedules are presented in accordance with the NSUARB Accounting and Reporting Handbook for Water Utilities (Handbook).

Utility plant in service under IFRS differs from the Handbook due to exclusion of intangible assets, componentization of certain assets and useful lives for depreciation.

# Halifax Regional Water Commission

## Schedule of utility plant in service

# Schedule A

Year ended March 31, 2019 (in thousands)

### Wastewater

	Structures and Land improvements	Pumping equipment	Treatment equipment	SCADA equipment	Collection system	Laterals	Meters	Tools and work equipment	Aerotech and small systems	Total	
<b>Cost</b>											
Beginning balance, April 1, 2018											
Cost	\$ 5,329	\$ 176,206	\$ 20,966	\$ 162,499	\$ 8,407	\$ 319,809	\$ 21,898	\$ 1,501	\$ 32,929	\$ 12,564	\$ 762,108
Additions	-	14,641	501	10,270	2,158	6,525	4,637	3,530	3,898	220	46,380
Disposals	-	-	-	-	-	-	-	(450)	-	-	(450)
<b>Total cost, March 31, 2019</b>	<b>5,329</b>	<b>190,847</b>	<b>21,467</b>	<b>172,769</b>	<b>10,565</b>	<b>326,334</b>	<b>26,535</b>	<b>5,031</b>	<b>36,377</b>	<b>12,784</b>	<b>808,038</b>
<b>Accumulated depreciation</b>											
Beginning balance, April 1, 2018	-	58,016	7,289	55,290	1,869	61,604	1,912	38	13,994	3,893	203,905
Depreciation	-	1,822	815	8,413	619	4,485	488	163	2,412	80	19,297
Total accumulated depreciation, March 31, 2019	-	59,838	8,104	63,703	2,488	66,089	2,400	201	16,406	3,973	223,202
<b>Net book value, March 31, 2019</b>	<b>\$ 5,329</b>	<b>\$ 131,009</b>	<b>\$ 13,363</b>	<b>\$ 109,066</b>	<b>\$ 8,077</b>	<b>\$ 260,245</b>	<b>\$ 24,135</b>	<b>4,830</b>	<b>\$ 19,971</b>	<b>\$ 8,811</b>	<b>\$ 584,836</b>
<b>Cost</b>											
Beginning balance, April 1, 2017											
Cost	\$ 5,329	\$ 175,208	\$ 17,579	\$ 161,122	\$ 8,210	\$ 290,169	\$ 19,108	\$ -	\$ 25,407	\$ 12,089	\$ 714,221
Additions	-	1,003	3,387	1,377	197	29,640	2,790	1,501	7,665	475	48,035
Disposals	-	(5)	-	-	-	-	-	-	(143)	-	(148)
<b>Total cost, March 31, 2018</b>	<b>5,329</b>	<b>176,206</b>	<b>20,966</b>	<b>162,499</b>	<b>8,407</b>	<b>319,809</b>	<b>21,898</b>	<b>1,501</b>	<b>32,929</b>	<b>12,564</b>	<b>762,108</b>
<b>Accumulated depreciation</b>											
Beginning balance, April 1, 2017	-	53,697	6,577	47,255	1,366	57,418	1,502	-	11,573	3,450	182,838
Depreciation	-	4,319	712	8,035	503	4,186	410	38	2,421	443	21,067
Total accumulated depreciation, March 31, 2018	-	58,016	7,289	55,290	1,869	61,604	1,912	38	13,994	3,893	203,905
<b>Net book value, March 31, 2018</b>	<b>\$ 5,329</b>	<b>\$ 118,190</b>	<b>\$ 13,677</b>	<b>\$ 107,209</b>	<b>\$ 6,538</b>	<b>\$ 258,205</b>	<b>\$ 19,986</b>	<b>1,463</b>	<b>\$ 18,935</b>	<b>\$ 8,671</b>	<b>\$ 558,203</b>

Schedules are presented in accordance with the NSUARB Accounting and Reporting Handbook for Water Utilities (Handbook).

Utility plant in service under IFRS differs from the Handbook due to exclusion of intangible assets, componentization of certain assets and useful lives for depreciation.

# Halifax Regional Water Commission

## Schedule of utility plant in service

## Schedule A

Year ended March 31, 2019 (in thousands)

### Stormwater

	Structures and improvements	Collection system	Laterals	Tools and work equipment	Total
<b>Cost</b>					
Beginning balance, April 1, 2018					
Cost	\$ 9,796	\$ 245,447	\$ 4,896	\$ 3,812	\$ 263,951
Additions	464	6,212	150	720	7,546
Disposals	-	-	-	-	-
<b>Total cost, March 31, 2019</b>	<u>10,260</u>	<u>251,659</u>	<u>5,046</u>	<u>4,532</u>	<u>271,497</u>
<b>Accumulated depreciation</b>					
Beginning balance, April 1, 2018	1,579	42,269	396	1,347	45,591
Depreciation	182	6,104	99	540	6,925
Total accumulated depreciation, March 31, 2019	<u>1,761</u>	<u>48,373</u>	<u>495</u>	<u>1,887</u>	<u>52,516</u>
<b>Net book value, March 31, 2019</b>	<u>\$ 8,499</u>	<u>\$ 203,286</u>	<u>\$ 4,551</u>	<u>\$ 2,645</u>	<u>\$ 218,981</u>
<b>Cost</b>					
Beginning balance, April 1, 2017					
Cost	\$ 9,785	\$ 227,751	\$ 4,611	\$ 3,045	\$ 245,192
Additions	11	17,696	285	767	18,759
Disposals	-	-	-	-	-
<b>Total cost, March 31, 2018</b>	<u>9,796</u>	<u>245,447</u>	<u>4,896</u>	<u>3,812</u>	<u>263,951</u>
<b>Accumulated depreciation</b>					
Beginning balance, April 1, 2017	1,402	36,380	301	870	38,953
Depreciation	177	5,889	95	477	6,638
Total accumulated depreciation, March 31, 2018	<u>1,579</u>	<u>42,269</u>	<u>396</u>	<u>1,347</u>	<u>45,591</u>
<b>Net book value, March 31, 2018</b>	<u>\$ 8,217</u>	<u>\$ 203,178</u>	<u>\$ 4,500</u>	<u>\$ 2,465</u>	<u>\$ 218,360</u>

During the year, \$0 of interest was capitalized to Utility Plant in Service (2018 - \$267).

	Water	Wastewater	Stormwater	Total
<b>Cumulative utility plant in service</b>				
Net book value, March 31, 2019	\$ 471,318	\$ 584,836	\$ 218,981	\$ 1,275,135
Net book value, March 31, 2018	\$ 455,486	\$ 558,203	\$ 218,360	\$ 1,232,049

Schedules are presented in accordance with the NSUARB Accounting and Reporting Handbook for Water Utilities (Handbook).

Utility plant in service under IFRS differs from the Handbook due to exclusion of intangible assets, componentization of certain assets and useful lives for depreciation.

# Halifax Regional Water Commission

# Schedule B

## Schedule of long term debt

Year ended March 31, 2019 (in thousands)

	Interest rate	Final Maturity	Balance Remaining	
			2019	2018
<b>Payable to Municipal Finance Corporation</b>				
<b>Water</b>				
Debenture 23 A 1	4.250% to 6.125%	2018	\$ -	\$ 600
Debenture 28 A 1	6.500% to 6.750%	2018	-	1,100
Debenture 98 A 1	3.750% to 5.088%	2019	-	3,671
Debenture 29 A 1	0.900% to 4.329%	2019	225	450
Debenture 30 A 1	1.550% to 3.870%	2020	350	525
Debenture 31 A 1	1.630% to 4.221%	2021	450	600
Debenture 32 A 1	1.636% to 3.480%	2022	800	1,000
Debenture 32 C 1	1.510% to 3.160%	2022	7,514	8,051
Debenture 33 A 1	1.330% to 3.489%	2023	7,584	8,090
Debenture 33 B 1	1.285% to 4.114%	2023	5,559	5,930
Debenture 34 B 1	1.200% to 3.190%	2024	10,938	11,622
Debenture 35 B 1	1.040% to 2.894%	2025	11,447	12,120
Debenture 36 A 1	1.150% to 2.925%	2026	1,600	1,800
Debenture 36 B 1	1.150% to 2.506%	2026	3,905	4,122
Debenture 37 A 1	1.734% to 3.073%	2027	3,325	3,500
Debenture 38 A 1	2.060% to 3.300%	2028	1,500	-
Debenture 38 B 1	2.490% to 3.389%	2028	6,000	-
<b>Halifax Harbour Solutions</b>				
Debenture 29 A 1	0.900% to 4.329%	2019	7,150	7,800
<b>Wastewater/stormwater</b>				
Debenture 30 A 1	1.510% to 4.500%	2020	2,040	2,210
Debenture 32 A 1	1.636% to 3.480%	2022	1,678	1,797
Debenture 32 B 1	1.380% to 3.156%	2022	22,400	24,000
Debenture 32 C 1	1.510% to 3.160%	2022	3,217	3,447
Debenture 33 A 1	1.330% to 3.489%	2023	12,645	13,488
Debenture 33 B 1	1.285% to 4.114%	2023	8,170	8,714
Debenture 34 A 1	1.245% to 3.347%	2024	4,455	4,734
Debenture 34 B 1	1.200% to 3.190%	2024	6,869	7,298
Debenture 35 B 1	1.040% to 2.894%	2025	11,993	12,699
Debenture 36 B 1	1.150% to 2.506%	2026	1,631	1,722
Debenture 37 A 1	1.735% to 3.073%	2027	5,795	6,100
Debenture 38 B 1	2.490% to 3.389%	2028	6,400	-
<b>Stormwater</b>				
Debenture 33 A 1	1.330% to 3.489%	2023	405	432
Debenture 33 B 1	1.285% to 4.114%	2023	1,979	2,111
Debenture 34 B 1	1.200% to 3.190%	2024	4,722	5,017
Debenture 35 B 1	1.040% to 2.894%	2025	2,746	2,907
Debenture 36 B 1	1.150% to 2.506%	2026	811	856
Debenture 37 A 1	1.734% to 3.073%	2027	380	400
Debenture 38 B 1	2.490% to 3.389%	2028	2,600	-
			<u>169,283</u>	<u>168,913</u>
<b>Payable to Halifax Regional Municipality</b>				
<b>Municipal Finance Corporation – Wastewater/stormwater</b>				
Debenture 24 B 1	2.840% to 5.940%	2024	33,000	38,500
Debenture 34 B 1	1.200% to 3.190%	2024	6,000	7,000
			<u>39,000</u>	<u>45,500</u>
			208,283	214,413
Less: debt issue costs			(842)	(912)
			<u>207,441</u>	<u>213,501</u>
Less: amount payable within one year			(24,709)	(22,630)
			<u>\$ 182,732</u>	<u>\$ 190,871</u>

The debentures are repayable in fixed annual or semi-annual principal instalments plus interest payable semi-annually. Principal instalments for the next five years are as follows:

2020	\$ 24,709
2021	\$ 19,034
2022	\$ 16,989
2023	\$ 41,702
2024	\$ 38,381

**Halifax Regional Water Commission**  
**Schedule of operations for water service**

**Schedule C**

Year ended March 31, 2019 (in thousands)

	<u>2019</u>	<u>2018</u>
Operating revenues		
Water service	\$ 48,040	\$ 47,220
Fire protection	7,074	7,074
Private fire protection services	869	856
Other operating revenue		
Bulk water stations	227	304
Customer late payment fees	244	220
Miscellaneous	98	176
	<u>56,552</u>	<u>55,850</u>
Operating expenditures		
Water supply and treatment	9,767	8,645
Water transmission and distribution	10,903	9,410
Engineering and information services	3,749	3,850
Regulatory services	679	496
Customer service	2,524	2,348
Administration and pension	7,153	6,910
Depreciation	9,046	8,550
	<u>43,821</u>	<u>40,209</u>
Earnings from operations before financial and other revenues and expenditures	<u>12,731</u>	<u>15,641</u>
Financial and other revenues		
Interest	521	313
Other	559	485
	<u>1,080</u>	<u>798</u>
Financial and other expenditures		
Interest on long term debt	1,924	2,131
Repayment of long term debt	7,181	8,247
Amortization of debt discount	85	94
Grant in lieu of taxes	4,999	4,774
Other	24	149
	<u>14,213</u>	<u>15,395</u>
(Loss) earnings for the year	<u>\$ (402)</u>	<u>\$ 1,044</u>

Schedules are presented in accordance with the NSUARB Accounting and Reporting Handbook for Water Utilities (Handbook).

**Halifax Regional Water Commission**  
**Schedule of operations for wastewater service**

**Schedule D**

Year ended March 31, 2019 (in thousands)

	<u>2019</u>	<u>2018</u>
Operating revenues		
Wastewater service	\$ 69,901	\$ 69,994
Other operating revenue		
Leachate and other contract revenue	417	417
Septage tipping fees	764	812
Over strength surcharge	75	219
Customer late payment fees	186	169
Miscellaneous	538	471
	<u>71,881</u>	<u>72,082</u>
Operating expenditures		
Wastewater collection	13,125	12,644
Wastewater treatment	19,999	19,647
Engineering and information services	3,783	3,419
Regulatory services	886	929
Customer service	2,057	2,270
Administration and pension	5,859	4,853
Depreciation	12,986	11,905
	<u>58,695</u>	<u>55,667</u>
Earnings from operations before financial and other revenues and expenditures	<u>13,186</u>	<u>16,415</u>
Financial and other revenues		
Interest	520	311
Other	183	3,307
	<u>703</u>	<u>3,618</u>
Financial and other expenditures		
Interest on long term debt	4,939	5,185
Repayment of long term debt	12,015	11,747
Amortization of debt discount	103	98
Other	21	120
	<u>17,078</u>	<u>17,150</u>
(Loss) earnings for the year	<u>\$ (3,189)</u>	<u>\$ 2,883</u>

Schedules are presented in accordance with the NSUARB Accounting and Reporting Handbook for Water Utilities (Handbook).

**Halifax Regional Water Commission**  
**Schedule of operations for stormwater service**

**Schedule E**

Year ended March 31, 2019 (in thousands)

	<u>2019</u>	<u>2018</u>
Operating revenues		
Stormwater site generated service	\$ 5,906	\$ 6,169
Stormwater right-of-way service	3,835	3,847
Other operating revenue		
Customer late payment fees	118	93
Miscellaneous	120	105
	<u>9,979</u>	<u>10,214</u>
Operating expenditures		
Stormwater collection	4,950	4,842
Engineering and information services	624	556
Regulatory services	1,587	1,304
Customer service	335	278
Administration and pension	953	789
Depreciation	974	807
	<u>9,423</u>	<u>8,576</u>
Earnings from operations before financial and other revenue and expenditures	<u>556</u>	<u>1,638</u>
Financial and other revenues		
Investment income	116	70
Financial and other expenditures		
Interest on long term debt	567	568
Repayment of long term debt	1,320	1,253
Amortization of debt discount	11	10
	<u>1,898</u>	<u>1,831</u>
Loss for the year	<u>\$ (1,226)</u>	<u>\$ (123)</u>

Schedules are presented in accordance with the NSUARB Accounting and Reporting Handbook for Water Utilities (Handbook).

# Halifax Regional Water Commission

## Schedule of regulated activities

## Schedule F

Year ended March 31, 2019 (in thousands)

	<u>2019</u>	<u>2018</u>
Operating revenues		
Water service	\$ 48,040	\$ 47,220
Wastewater service	69,901	69,994
Stormwater service	9,741	10,016
Public fire protection	7,074	7,074
Private fire protection services	869	856
Other operating revenue	<u>1,216</u>	<u>1,230</u>
	<u>136,841</u>	<u>136,390</u>
Operating expenditures		
Water supply and treatment	11,009	9,802
Water transmission and distribution	12,402	10,810
Wastewater collection	11,643	11,252
Stormwater collection	4,901	4,793
Wastewater treatment	18,197	18,054
Engineering and information services	8,156	7,265
Regulatory services	3,152	3,291
Customer service	4,881	4,861
Administration and pension	13,921	12,501
Depreciation	<u>22,989</u>	<u>21,241</u>
	<u>111,251</u>	<u>103,870</u>
Earnings from operations before financial and other revenues and expenditures	<u>25,590</u>	<u>32,520</u>
Financial and other revenues		
Interest	1,157	694
Other	<u>213</u>	<u>3,096</u>
	<u>1,370</u>	<u>3,790</u>
Financial and other expenditures		
Interest on long term debt	7,430	7,884
Repayment of long term debt	20,516	21,247
Amortization of debt discount	199	202
Grant in lieu of taxes	<u>4,999</u>	<u>4,774</u>
	<u>33,144</u>	<u>34,107</u>
(Loss) earnings for the year	<u>\$ (6,184)</u>	<u>\$ 2,203</u>

Schedules are presented in accordance with the NSUARB Accounting and Reporting Handbook for Water Utilities (Handbook).



# Halifax Regional Water Commission

## Schedule of unregulated activities

## Schedule F

Year ended March 31, 2019 (in thousands)

	<u>2019</u>	<u>2018</u>
<b>Operating revenues</b>		
Dewatering	\$ 210	\$ 210
Septage tipping fees	764	812
Leachate treatment and contract revenue	417	417
Airplane effluent	143	121
Other operating revenue	<u>203</u>	<u>196</u>
	<u>1,737</u>	<u>1,756</u>
<b>Operating expenditures</b>		
Water supply and treatment	21	18
Wastewater treatment	572	456
Other	78	87
Depreciation	<u>18</u>	<u>21</u>
	<u>689</u>	<u>582</u>
<b>Earnings from operations before financial and other revenues and expenditures</b>	<u>1,048</u>	<u>1,174</u>
<b>Financial and other revenues</b>		
Other	<u>364</u>	<u>696</u>
<b>Financial and other expenditures</b>		
Other	<u>45</u>	<u>269</u>
<b>Earnings for the year</b>	<u>\$ 1,367</u>	<u>\$ 1,601</u>

Schedules are presented in accordance with the NSUARB Accounting and Reporting Handbook for Water Utilities (Handbook).

# Halifax Regional Water Commission Nova Scotia Utility and Review Board information

## Schedule G

Year ended March 31, 2019 (in thousands)

Return on rate base	2019	2018
Rate of return on rate base for water service	2.38%	3.39%
Rate of return on rate base for wastewater service	4.29%	5.65%
Rate of return on rate base for stormwater service	1.38%	3.45%

### Special purpose reserves

	Wastewater & Stormwater Reserves	RDC Water Reserve	RDC Wastewater Reserve	Other Capital Reserves	2019 Total	2018 Total
Reserve, beginning of year	\$ 3,606	\$ 2,332	\$ 21,917	\$ 6	\$ 27,861	\$ 16,912
Contributions and interest	-	888	12,801	-	13,689	11,162
Expenditures	-	-	-	202	202	(213)
Reserve, end of year	\$ 3,606	\$ 3,220	\$ 34,718	\$ 208	\$ 41,752	\$ 27,861

### Summarized consolidated operating results

	Actual 2019	Actual 2018
Operating revenues	\$ 138,413	\$ 138,145
Operating expenditures	106,731	99,437
Earnings from operations before financial and other revenues and expenditures	31,682	38,708
Non-operating revenues	1,898	4,486
Non-operating expenditures	33,190	34,376
Earnings for the year	\$ 390	\$ 8,818

Schedules are presented in accordance with the NSUARB Accounting and Reporting Handbook for Water Utilities (Handbook).

**HALIFAX WATER**  
**UNAUDITED BALANCE SHEET - CONSOLIDATED**  
**AS OF MARCH 31, 2019**

	2019 '000	2018 '000
<b>ASSETS</b>		
Cash	\$51,603	\$51,470
Accounts Receivable	\$38,148	\$40,638
Materials & Supplies	\$2,057	\$1,443
Prepaid Expenses	\$1,065	\$1,013
	<u>\$92,873</u>	<u>\$94,563</u>
Regulatory Asset	\$3,005	\$3,197
Plant in Service	\$1,275,143	\$1,231,848
Assets Under Construction	\$29,605	\$24,550
	<u>\$1,307,752</u>	<u>\$1,259,595</u>
Unamortized Debt Discount & Issue Expense	\$842	\$912
	<u><b>\$1,401,467</b></u>	<u><b>\$1,355,070</b></u>
<b>LIABILITIES &amp; CAPITAL</b>		
Trade Payables & Accrued Liabilities	\$28,409	\$28,413
Deposits & Unearned Revenue	\$713	\$770
Current Portion of Long Term Debt	\$24,709	\$22,630
	<u>\$53,831</u>	<u>\$51,812</u>
Pension & Accrued Retirement Benefits	\$72,330	\$69,899
RDC & Special Purpose Reserves	\$39,361	\$25,470
Long Term Debt	\$183,575	\$191,783
Total Liabilities	<u>\$349,097</u>	<u>\$338,965</u>
Capital Surplus, Committed Reserves, & Accumulated OCI	\$1,036,707	\$995,624
Operating Surplus	\$20,481	\$16,677
Excess (Deficiency) of Revenue over Expenditure - Consolidated	(\$4,818)	\$3,804
Total Capital & Surplus	<u>\$1,052,370</u>	<u>\$1,016,105</u>
	<u><b>\$1,401,467</b></u>	<u><b>\$1,355,070</b></u>

# ITEM # 4.1

HRWC BOARD

June 20, 2019

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**HALIFAX WATER**  
**UNAUDITED INCOME STATEMENT - CONSOLIDATED**  
**APRIL 1/18 - MARCH 31/19 (12 MONTHS)**  
**100.00%**

ACTUAL (CURRENT MONTH)		DESCRIPTION	ACTUAL (YEAR TO DATE)		APR 1/18	APR 1/18	% of FORECAST
THIS YEAR '000	LAST YEAR '000		THIS YEAR '000	LAST YEAR '000	MAR 31/19 BUDGET* '000	MAR 31/19 FORECAST '000	
\$11,559	\$11,667	<b>OPERATING REVENUE</b>	\$138,413	\$138,145	\$135,182	\$137,386	100.75%
\$15,823	\$11,541	<b>OPERATING EXPENSES</b>	\$106,731	\$99,437	\$108,770	\$105,473	101.19%
<b>(\$4,264)</b>	<b>\$126</b>	<b>OPERATING PROFIT</b>	<b>\$31,682</b>	<b>\$38,708</b>	<b>\$26,412</b>	<b>\$31,913</b>	<b>99.28%</b>
<b>FINANCIAL REVENUE</b>							
\$109	\$79	INVESTMENT INCOME	\$1,156	\$694	\$480	\$1,155	100.13%
\$0	\$167	PNS FUNDING HHSP DEBT	\$0	\$2,000	\$0	\$0	0.00%
\$53	\$64	MISCELLANEOUS	\$742	\$1,793	\$526	\$707	104.99%
<b>\$162</b>	<b>\$309</b>		<b>\$1,898</b>	<b>\$4,486</b>	<b>\$1,006</b>	<b>\$1,862</b>	<b>101.97%</b>
<b>FINANCIAL EXPENSES</b>							
\$606	\$628	LONG TERM DEBT INTEREST	\$7,430	\$7,884	\$8,560	\$7,325	101.44%
\$1,546	\$1,795	LONG TERM DEBT PRINCIPAL	\$20,516	\$21,247	\$22,601	\$20,916	98.09%
\$15	\$17	AMORTIZATION DEBT DISCOUNT	\$199	\$202	\$245	\$203	97.91%
\$417	\$398	DIVIDEND/GRANT IN LIEU OF TAXES	\$4,999	\$4,774	\$5,142	\$4,999	100.00%
\$2	\$171	MISCELLANEOUS	\$45	\$269	\$16	\$16	290.51%
<b>\$2,587</b>	<b>\$3,009</b>		<b>\$33,190</b>	<b>\$34,376</b>	<b>\$36,564</b>	<b>\$33,459</b>	<b>99.20%</b>
<b>(\$6,689)</b>	<b>(\$2,573)</b>	<b>NET PROFIT (LOSS) BEFORE OTHER COMPREHENSIVE INCOME</b>	<b>\$390</b>	<b>\$8,819</b>	<b>(\$9,146)</b>	<b>\$316</b>	<b>123.49%</b>
<b>NON NSUARB ITEMS</b>							
(\$443)	(\$430)	PENSION PLAN EXPENSE	(\$5,208)	(\$5,015)	(\$2,940)	(\$5,200)	100.16%
\$3,735	(\$3,771)	OTHER COMPREHENSIVE INCOME	\$3,735	(\$1,750)	\$0	\$0	0.00%
<b>\$3,291</b>	<b>(\$4,201)</b>		<b>(\$1,474)</b>	<b>(\$6,765)</b>	<b>(\$2,940)</b>	<b>(\$5,200)</b>	<b>28.34%</b>
<b>(\$3,397)</b>	<b>(\$6,774)</b>	<b>NET PROFIT (LOSS) AVAILABLE FOR CAPITAL EXPENDITURES</b>	<b>(\$1,083)</b>	<b>\$2,054</b>	<b>(\$12,086)</b>	<b>(\$4,884)</b>	<b>22.18%</b>

**HALIFAX WATER  
UNAUDITED BALANCE SHEET  
AS OF MARCH 31, 2019**

	2019 '000	2018 '000
<b>ASSETS</b>		
Cash	\$51,603	\$51,470
Accounts Receivable		
Customers & Contractual	\$17,407	\$18,723
Customers & Contractual - Unbilled Services	\$17,012	\$16,640
Halifax Regional Municipality	\$3,728	\$5,275
Materials & Supplies	\$2,057	\$1,443
Prepaid Expenses	\$1,065	\$1,013
	<u>\$92,873</u>	<u>\$94,563</u>
Regulatory Asset	\$3,005	\$3,197
Plant in Service - Water	\$659,528	\$635,526
Plant in Service - Wastewater	\$808,038	\$762,108
Plant in Service - Stormwater	\$271,499	\$263,952
Less: Accumulated Depreciation - Water	(\$188,205)	(\$179,463)
Accumulated Depreciation - Wastewater	(\$223,201)	(\$204,664)
Accumulated Depreciation - Stormwater	(\$52,516)	(\$45,611)
	<u>\$1,278,147</u>	<u>\$1,235,045</u>
Assets Under Construction	\$29,605	\$24,550
	<u>\$1,307,752</u>	<u>\$1,259,595</u>
Unamortized Debt Discount & Issue Expense	\$842	\$912
	<u><b>\$1,401,467</b></u>	<u><b>\$1,355,070</b></u>
<b>LIABILITIES &amp; CAPITAL</b>		
Trade Payables	\$23,493	\$23,944
Interest on Long Term Debt	\$2,051	\$2,030
Halifax Regional Municipality	\$2,865	\$2,439
Contractor & Customer Deposits	\$207	\$186
Unearned Revenue	\$507	\$584
Current Portion of Long Term Debt	\$24,709	\$22,630
	<u>\$53,831</u>	<u>\$51,812</u>
Accrued Post-Retirement Benefits	\$380	\$430
Accrued Pre-Retirement Benefit	\$4,195	\$3,983
Deferred Pension Liability	\$67,755	\$65,486
Special Purpose Reserves not allocated to projects	\$1,424	\$1,222
Regional Development Charge	\$37,938	\$24,249
Long Term Debt-Water	\$56,585	\$53,697
Long Term Debt-Wastewater	\$114,157	\$127,043
Long Term Debt-Stormwater	\$12,833	\$11,043
Total Liabilities	<u>\$349,097</u>	<u>\$338,965</u>
Capital Surplus	\$1,063,145	\$1,025,797
Committed Reserves	\$2,391	\$2,391
Accumulated Other Comprehensive Income	(\$41,209)	(\$44,943)
Operating Surplus used to Fund Capital	\$12,380	\$12,380
Operating Surplus	\$20,481	\$16,677
Excess (Deficiency) of Revenue over Expenditure - Consolidated	(\$4,818)	\$3,804
Total Capital & Surplus	<u>\$1,052,370</u>	<u>\$1,016,105</u>
	<u><b>\$1,401,467</b></u>	<u><b>\$1,355,070</b></u>

**HALIFAX WATER**  
**UNAUDITED INCOME STATEMENT - ALL SERVICES**  
**APRIL 1/18 - MARCH 31/19 (12 MONTHS)**  
**100.00%**

ACTUAL (CURRENT MONTH)		DESCRIPTION	ACTUAL (YEAR TO DATE)		APR 1/18	APR 1/18	% of BUDGET*	% of FORECAST
THIS YEAR	LAST YEAR		THIS YEAR	LAST YEAR	MAR 31/19 BUDGET*	MAR 31/19 FORECAST		
'000	'000		'000	'000	'000	'000		
<b>REVENUE</b>								
\$4,004	\$4,011	METERED SALES - WATER	\$48,040	\$47,220	\$46,152	\$47,452	104.09%	101.24%
\$5,923	\$6,014	METERED SALES - WASTEWATER	\$69,901	\$69,994	\$67,601	\$69,001	103.40%	101.30%
\$271	\$338	STORMWATER SITE GENERATED SERVICE	\$5,906	\$6,169	\$6,752	\$6,452	87.47%	91.54%
\$590	\$590	FIRE PROTECTION	\$7,074	\$7,074	\$7,074	\$7,074	100.00%	100.00%
\$320	\$321	STORMWATER RIGHT OF WAY SERVICE	\$3,835	\$3,847	\$3,835	\$3,835	100.00%	100.00%
\$265	\$238	OTHER SERVICES AND FEES	\$2,704	\$2,937	\$2,905	\$2,740	93.09%	98.70%
\$152	\$130	CUSTOMER LATE PAY./COLLECTION FEES	\$549	\$482	\$491	\$436	111.83%	125.93%
\$35	\$26	MISCELLANEOUS	\$403	\$422	\$371	\$395	108.57%	101.98%
<b>\$11,559</b>	<b>\$11,667</b>		<b>\$138,413</b>	<b>\$138,145</b>	<b>\$135,182</b>	<b>\$137,386</b>	<b>102.39%</b>	<b>100.75%</b>
<b>EXPENSES</b>								
\$811	\$605	WATER SUPPLY & TREATMENT	\$8,516	\$7,517	\$8,750	\$9,153	97.33%	93.04%
\$872	\$573	TRANSMISSION & DISTRIBUTION	\$10,014	\$8,591	\$10,323	\$10,283	97.01%	97.38%
\$1,214	\$1,209	WASTEWATER COLLECTION	\$11,676	\$11,287	\$10,622	\$10,801	109.92%	108.09%
\$1,807	\$1,658	WASTEWATER TREATMENT PLANTS	\$18,197	\$18,054	\$19,160	\$17,508	94.97%	103.94%
\$597	\$360	STORMWATER COLLECTION	\$4,901	\$4,797	\$5,239	\$4,924	93.54%	99.54%
\$288	\$294	SMALL SYSTEMS AND OTHER SERVICES	\$3,053	\$2,721	\$3,286	\$3,110	92.91%	98.16%
\$223	\$224	SCADA, CONTROL & PUMPING	\$2,388	\$2,219	\$2,565	\$2,204	93.09%	108.35%
\$799	\$949	ENGINEERING & INFORMATION SERVICES	\$8,156	\$7,265	\$8,177	\$8,009	99.74%	101.84%
\$254	\$248	REGULATORY SERVICES	\$3,152	\$3,291	\$3,763	\$3,335	83.76%	94.52%
\$453	\$522	CUSTOMER SERVICE	\$4,916	\$4,896	\$5,522	\$5,450	89.03%	90.19%
\$2,499	\$1,877	ADMINISTRATION & PENSION	\$8,756	\$7,538	\$7,929	\$7,612	110.43%	115.03%
\$6,006	\$3,022	DEPRECIATION	\$23,007	\$21,262	\$23,434	\$23,084	98.18%	99.67%
<b>\$15,823</b>	<b>\$11,541</b>		<b>\$106,731</b>	<b>\$99,437</b>	<b>\$108,770</b>	<b>\$105,473</b>	<b>98.13%</b>	<b>101.19%</b>
<b>(\$4,264)</b>	<b>\$126</b>	<b>OPERATING PROFIT</b>	<b>\$31,682</b>	<b>\$38,708</b>	<b>\$26,412</b>	<b>\$31,913</b>	<b>119.95%</b>	<b>99.28%</b>
<b>FINANCIAL REVENUE</b>								
\$109	\$79	INVESTMENT INCOME	\$1,156	\$694	\$480	\$1,155	240.93%	100.13%
\$0	\$167	PNS FUNDING HHSP DEBT	\$0	\$2,000	\$0	\$0	0.00%	0.00%
\$53	\$64	MISCELLANEOUS	\$742	\$1,793	\$526	\$707	141.15%	104.99%
<b>\$162</b>	<b>\$309</b>		<b>\$1,898</b>	<b>\$4,486</b>	<b>\$1,006</b>	<b>\$1,862</b>	<b>188.78%</b>	<b>101.97%</b>
<b>FINANCIAL EXPENSES</b>								
\$606	\$628	LONG TERM DEBT INTEREST	\$7,430	\$7,884	\$8,560	\$7,325	86.81%	101.44%
\$1,546	\$1,795	LONG TERM DEBT PRINCIPAL	\$20,516	\$21,247	\$22,601	\$20,916	90.78%	98.09%
\$15	\$17	AMORTIZATION DEBT DISCOUNT	\$199	\$202	\$245	\$203	81.12%	97.91%
\$417	\$398	DIVIDEND/GRANT IN LIEU OF TAXES	\$4,999	\$4,774	\$5,142	\$4,999	97.22%	100.00%
\$2	\$171	MISCELLANEOUS	\$45	\$269	\$16	\$16	290.51%	290.51%
<b>\$2,587</b>	<b>\$3,009</b>		<b>\$33,190</b>	<b>\$34,376</b>	<b>\$36,564</b>	<b>\$33,459</b>	<b>90.77%</b>	<b>99.20%</b>
<b>(\$6,689)</b>	<b>(\$2,573)</b>	<b>NET PROFIT (LOSS) BEFORE OTHER COMPREHENSIVE INCOME</b>	<b>\$390</b>	<b>\$8,819</b>	<b>(\$9,146)</b>	<b>\$316</b>	<b>104.27%</b>	<b>123.49%</b>
<b>NON NSUARB ITEMS</b>								
(\$443)	(\$430)	PENSION PLAN EXPENSE	(\$5,208)	(\$5,015)	(\$2,940)	(\$5,200)	177.15%	100.16%
\$3,735	(\$3,771)	OTHER COMPREHENSIVE INCOME	\$3,735	(\$1,750)	\$0	\$0	0.00%	0.00%
<b>\$3,291</b>	<b>(\$4,201)</b>		<b>(\$1,474)</b>	<b>(\$6,765)</b>	<b>(\$2,940)</b>	<b>(\$5,200)</b>	<b>50.12%</b>	<b>28.34%</b>
<b>(\$3,397)</b>	<b>(\$6,774)</b>	<b>NET PROFIT (LOSS) AVAILABLE FOR CAPITAL EXPENDITURES</b>	<b>(\$1,083)</b>	<b>\$2,054</b>	<b>(\$12,086)</b>	<b>(\$4,884)</b>	<b>8.96%</b>	<b>22.18%</b>

# ITEM # 4.1

HRWC BOARD

June 20, 2019

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**HALIFAX WATER**  
**UNAUDITED INCOME STATEMENT - WATER OPERATIONS**  
**APRIL 1/18 - MARCH 31/19 (12 MONTHS)**  
**100.00%**

ACTUAL (CURRENT MONTH)		DESCRIPTION	ACTUAL (YEAR TO DATE)		APR 1/18	APR 1/18	% of FORECAST
THIS YEAR	LAST YEAR		THIS YEAR	LAST YEAR	MAR 31/19	MAR 31/19	
'000	'000		'000	'000	BUDGET*	FORECAST	
<b>REVENUE</b>							
\$4,004	\$4,011	METERED SALES	\$48,040	\$47,220	\$46,152	\$47,452	101.24%
\$590	\$590	FIRE PROTECTION	\$7,074	\$7,074	\$7,074	\$7,074	100.00%
\$76	\$75	PRIVATE FIRE PROTECTION SERVICES	\$869	\$856	\$860	\$860	101.02%
(\$59)	\$12	BULK WATER STATIONS	\$227	\$304	\$329	\$294	77.12%
\$22	\$21	CUSTOMER LATE PAY./COLLECTION FEES	\$244	\$220	\$233	\$233	104.88%
(\$56)	\$16	MISCELLANEOUS	\$98	\$176	\$154	\$166	58.74%
<b>\$4,576</b>	<b>\$4,725</b>		<b>\$56,552</b>	<b>\$55,850</b>	<b>\$54,803</b>	<b>\$56,080</b>	<b>100.84%</b>
<b>EXPENSES</b>							
\$811	\$605	WATER SUPPLY & TREATMENT	\$8,516	\$7,517	\$8,750	\$9,153	93.04%
\$872	\$573	TRANSMISSION & DISTRIBUTION	\$10,014	\$8,591	\$10,323	\$10,283	97.38%
\$131	\$120	SMALL SYSTEMS (inc. Contract Systems)	\$1,251	\$1,128	\$1,194	\$1,133	110.40%
\$90	\$86	SCADA, CONTROL & PUMPING	\$889	\$819	\$965	\$867	102.49%
\$371	\$421	ENGINEERING & INFORMATION SERVICES	\$3,749	\$3,289	\$3,681	\$3,728	100.58%
\$69	\$52	REGULATORY SERVICES	\$679	\$1,057	\$997	\$890	76.30%
\$250	\$266	CUSTOMER SERVICE	\$2,524	\$2,348	\$2,813	\$2,777	90.89%
\$1,502	\$1,345	ADMINISTRATION & PENSION	\$7,153	\$6,910	\$5,538	\$6,528	109.57%
\$3,365	\$1,112	DEPRECIATION	\$9,046	\$8,550	\$9,229	\$9,129	99.09%
<b>\$7,460</b>	<b>\$4,581</b>		<b>\$43,821</b>	<b>\$40,210</b>	<b>\$43,490</b>	<b>\$44,488</b>	<b>98.50%</b>
<b>(\$2,884)</b>	<b>\$144</b>	<b>OPERATING PROFIT</b>	<b>\$12,731</b>	<b>\$15,640</b>	<b>\$11,313</b>	<b>\$11,593</b>	<b>109.82%</b>
<b>FINANCIAL REVENUE</b>							
\$49	\$36	INVESTMENT INCOME	\$521	\$313	\$216	\$520	100.18%
\$43	\$52	MISCELLANEOUS	\$559	\$485	\$428	\$524	106.66%
<b>\$93</b>	<b>\$88</b>		<b>\$1,080</b>	<b>\$798</b>	<b>\$644</b>	<b>\$1,044</b>	<b>103.43%</b>
<b>FINANCIAL EXPENSES</b>							
\$154	\$155	LONG TERM DEBT INTEREST	\$1,924	\$2,131	\$2,363	\$1,813	106.15%
\$391	\$677	LONG TERM DEBT PRINCIPAL	\$7,181	\$8,247	\$8,227	\$7,477	96.05%
\$5	\$8	AMORTIZATION DEBT DISCOUNT	\$85	\$94	\$108	\$88	96.75%
\$417	\$398	DIVIDEND/GRANT IN LIEU OF TAXES	\$4,999	\$4,774	\$5,142	\$4,999	100.00%
\$0	\$61	MISCELLANEOUS	\$24	\$149	\$11	\$11	225.43%
<b>\$967</b>	<b>\$1,299</b>		<b>\$14,214</b>	<b>\$15,395</b>	<b>\$15,850</b>	<b>\$14,387</b>	<b>98.79%</b>
<b>(\$3,758)</b>	<b>(\$1,067)</b>	<b>NET PROFIT (LOSS) AVAILABLE FOR CAPITAL EXPENDITURES</b>	<b>(\$402)</b>	<b>\$1,043</b>	<b>(\$3,893)</b>	<b>(\$1,751)</b>	<b>22.98%</b>

**HALIFAX WATER**  
**UNAUDITED INCOME STATEMENT - WASTEWATER OPERATIONS**  
**APRIL 1/18 - MARCH 31/19 (12 MONTHS)**  
**100.00%**

ACTUAL (CURRENT MONTH)		DESCRIPTION	ACTUAL (YEAR TO DATE)		APR 1/18	APR 1/18	% of FORECAST
THIS YEAR	LAST YEAR		THIS YEAR	LAST YEAR	MAR 31/19 BUDGET*	MAR 31/19 FORECAST	
'000	'000		'000	'000	'000	'000	
<b>REVENUE</b>							
\$5,923	\$6,014	METERED SALES	\$69,901	\$69,994	\$67,601	\$69,001	101.30%
\$5	\$17	WASTEWATER OVERSTRENGTH AGREEMENTS	\$75	\$219	\$0	\$75	100.12%
\$36	\$35	LEACHATE CONTRACT	\$330	\$328	\$387	\$322	102.41%
\$7	\$8	CONTRACT REVENUE	\$87	\$89	\$86	\$86	101.04%
\$17	\$17	DEWATERING FACILITY/SLUDGE LAGOON	\$210	\$210	\$210	\$210	99.99%
\$63	\$32	AIRLINE EFFLUENT	\$143	\$121	\$118	\$118	121.01%
\$120	\$41	SEPTAGE TIPPING FEES	\$764	\$812	\$915	\$775	98.64%
\$15	\$15	CUSTOMER LATE PAY./COLLECTION FEES	\$186	\$169	\$238	\$183	102.11%
\$55	\$9	MISCELLANEOUS	\$185	\$140	\$128	\$140	132.11%
<b>\$6,241</b>	<b>\$6,187</b>		<b>\$71,881</b>	<b>\$72,081</b>	<b>\$69,683</b>	<b>\$70,910</b>	<b>101.37%</b>
<b>EXPENSES</b>							
\$1,214	\$1,209	WASTEWATER COLLECTION	\$11,676	\$11,287	\$10,622	\$10,801	108.09%
\$1,807	\$1,658	WASTEWATER TREATMENT PLANTS	\$18,197	\$18,054	\$19,160	\$17,508	103.94%
\$108	\$126	SMALL SYSTEMS	\$1,262	\$1,175	\$1,323	\$1,246	101.35%
\$18	\$17	DEWATERING FACILITY/ SLUDGE MGMT	\$226	\$134	\$331	\$299	75.58%
(\$0)	(\$0)	BIOSOLIDS TREATMENT	\$27	\$1	\$101	\$101	27.12%
\$31	\$30	LEACHATE CONTRACT	\$286	\$283	\$337	\$332	86.36%
\$129	\$133	SCADA, CONTROL & PUMPING	\$1,450	\$1,355	\$1,563	\$1,310	110.63%
\$368	\$454	ENGINEERING & INFORMATION SERVICES	\$3,783	\$3,419	\$3,400	\$3,268	115.74%
\$80	\$62	REGULATORY SERVICES	\$886	\$929	\$1,133	\$1,305	67.89%
\$175	\$220	CUSTOMER SERVICE	\$2,057	\$2,270	\$2,455	\$2,425	84.82%
\$1,239	\$827	ADMINISTRATION & PENSION	\$5,859	\$4,853	\$4,585	\$5,405	108.39%
\$2,487	\$1,759	DEPRECIATION	\$12,986	\$11,905	\$13,251	\$12,851	101.05%
<b>\$7,656</b>	<b>\$6,496</b>		<b>\$58,696</b>	<b>\$55,667</b>	<b>\$58,262</b>	<b>\$56,852</b>	<b>103.24%</b>
<b>(\$1,415)</b>	<b>(\$309)</b>	<b>OPERATING PROFIT</b>	<b>\$13,185</b>	<b>\$16,415</b>	<b>\$11,420</b>	<b>\$14,057</b>	<b>93.80%</b>
<b>FINANCIAL REVENUE</b>							
\$49	\$35	INVESTMENT INCOME	\$520	\$311	\$216	\$520	100.00%
\$0	\$167	PNS FUNDING HHSP DEBT	\$0	\$2,000	\$0	\$0	0.00%
\$9	\$12	MISCELLANEOUS	\$183	\$1,307	\$97	\$182	100.18%
<b>\$58</b>	<b>\$213</b>		<b>\$703</b>	<b>\$3,618</b>	<b>\$313</b>	<b>\$702</b>	<b>100.05%</b>
<b>FINANCIAL EXPENSES</b>							
\$401	\$426	LONG TERM DEBT INTEREST	\$4,939	\$5,185	\$5,427	\$4,942	99.94%
\$1,037	\$1,010	LONG TERM DEBT PRINCIPAL	\$12,015	\$11,747	\$12,783	\$12,123	99.10%
\$9	\$8	AMORTIZATION DEBT DISCOUNT	\$103	\$98	\$119	\$104	98.87%
\$2	\$109	MISCELLANEOUS	\$21	\$120	\$5	\$5	427.34%
<b>\$1,450</b>	<b>\$1,554</b>		<b>\$17,077</b>	<b>\$17,149</b>	<b>\$18,334</b>	<b>\$17,174</b>	<b>99.44%</b>
<b>(\$2,806)</b>	<b>(\$1,650)</b>	<b>NET PROFIT (LOSS) AVAILABLE FOR CAPITAL EXPENDITURES</b>	<b>(\$3,190)</b>	<b>\$2,884</b>	<b>(\$6,600)</b>	<b>(\$2,414)</b>	<b>132.12%</b>



**HALIFAX WATER**  
**UNAUDITED INCOME STATEMENT - STORMWATER OPERATIONS**  
**APRIL 1/18 - MARCH 31/19 (12 MONTHS)**  
**100.00%**

<b>ACTUAL (CURRENT MONTH)</b>		<b>DESCRIPTION</b>	<b>ACTUAL (YEAR TO DATE)</b>		<b>APR 1/18 MAR 31/19</b>	<b>APR 1/18 MAR 31/19</b>	<b>% of FORECAST</b>
<b>THIS YEAR '000</b>	<b>LAST YEAR '000</b>		<b>THIS YEAR '000</b>	<b>LAST YEAR '000</b>	<b>BUDGET* '000</b>	<b>FORECAST '000</b>	
<b>REVENUE</b>							
\$271	\$338	STORMWATER SITE GENERATED SERVICE	\$5,906	\$6,169	\$6,752	\$6,452	91.54%
\$320	\$321	STORMWATER RIGHT OF WAY SERVICE	\$3,835	\$3,847	\$3,835	\$3,835	100.00%
\$115	\$95	CUSTOMER LATE PAY./COLLECTION FEES	\$118	\$93	\$21	\$21	575.21%
\$36	\$1	MISCELLANEOUS	\$120	\$105	\$89	\$89	135.47%
<b>\$741</b>	<b>\$755</b>		<b>\$9,980</b>	<b>\$10,214</b>	<b>\$10,696</b>	<b>\$10,396</b>	<b>95.99%</b>
<b>EXPENSES</b>							
\$597	\$360	STORMWATER COLLECTION	\$4,901	\$4,797	\$5,239	\$4,924	99.54%
\$4	\$4	SCADA, CONTROL & PUMPING	\$49	\$45	\$37	\$26	188.16%
\$60	\$74	ENGINEERING & INFORMATION SERVICES	\$624	\$556	\$1,095	\$1,013	61.60%
\$104	\$135	REGULATORY SERVICES	\$1,587	\$1,304	\$1,634	\$1,139	139.27%
\$28	\$36	CUSTOMER SERVICE	\$335	\$278	\$253	\$248	134.85%
\$202	\$135	ADMINISTRATION & PENSION	\$953	\$789	\$746	\$879	108.40%
\$154	\$150	DEPRECIATION	\$974	\$807	\$954	\$1,104	88.27%
<b>\$1,150</b>	<b>\$893</b>		<b>\$9,423</b>	<b>\$8,575</b>	<b>\$9,958</b>	<b>\$9,333</b>	<b>100.96%</b>
<b>(\$408)</b>	<b>(\$139)</b>	<b>OPERATING PROFIT</b>	<b>\$557</b>	<b>\$1,639</b>	<b>\$738</b>	<b>\$1,063</b>	<b>52.40%</b>
<b>FINANCIAL REVENUE</b>							
\$11	\$8	INVESTMENT INCOME	\$116	\$70	\$48	\$115	100.48%
\$0	\$0	MISCELLANEOUS	\$0	\$0	\$0	\$0	0.00%
<b>\$11</b>	<b>\$8</b>		<b>\$116</b>	<b>\$70</b>	<b>\$48</b>	<b>\$115</b>	<b>100.48%</b>
<b>FINANCIAL EXPENSES</b>							
\$51	\$47	LONG TERM DEBT INTEREST	\$567	\$568	\$770	\$570	99.50%
\$119	\$107	LONG TERM DEBT PRINCIPAL	\$1,320	\$1,253	\$1,591	\$1,316	100.33%
\$1	\$1	AMORTIZATION DEBT DISCOUNT	\$11	\$10	\$18	\$11	98.03%
<b>\$170</b>	<b>\$156</b>		<b>\$1,899</b>	<b>\$1,832</b>	<b>\$2,379</b>	<b>\$1,897</b>	<b>100.07%</b>
<b>(\$568)</b>	<b>(\$286)</b>	<b>NET PROFIT (LOSS) AVAILABLE FOR CAPITAL EXPENDITURES</b>	<b>(\$1,226)</b>	<b>(\$124)</b>	<b>(\$1,593)</b>	<b>(\$719)</b>	<b>170.46%</b>

**HALIFAX WATER**  
**UNAUDITED INCOME STATEMENT - REGULATED AND UNREGULATED OPERATIONS**  
**APRIL 1/18 - MARCH 31/19 (12 MONTHS)**  
**100.00%**

DESCRIPTION	ACTUAL (YEAR TO DATE)		APR 1/18	APR 1/18	% of FORECAST
	THIS YEAR	LAST YEAR	MAR 31/19 BUDGET*	MAR 31/19 FORECAST	
<b>REGULATED ACTIVITIES</b>					
<b>REVENUE</b>					
METERED SALES	\$123,847	\$123,383	\$120,505	\$122,905	100.77%
FIRE PROTECTION	\$7,074	\$7,074	\$7,074	\$7,074	100.00%
PRIVATE FIRE PROTECTION	\$869	\$856	\$860	\$860	101.02%
STORMWATER SERVICE	\$3,835	\$3,847	\$3,835	\$3,835	100.00%
OTHER OPERATING REVENUE	\$1,216	\$1,389	\$1,154	\$1,163	104.54%
	<b>\$136,841</b>	<b>\$136,549</b>	<b>\$133,429</b>	<b>\$135,838</b>	<b>100.74%</b>
<b>EXPENSES</b>					
WATER SUPPLY & TREATMENT	\$8,516	\$7,517	\$8,750	\$9,153	93.04%
TRANSMISSION & DISTRIBUTION	\$10,014	\$8,591	\$10,323	\$10,283	97.38%
WASTEWATER & STORMWATER COLLECTION	\$16,544	\$16,046	\$15,753	\$15,617	105.94%
WASTEWATER TREATMENT PLANTS	\$18,197	\$18,054	\$19,160	\$17,508	103.94%
SMALL SYSTEMS	\$2,493	\$2,285	\$2,492	\$2,353	105.96%
SCADA, CONTROL & PUMPING	\$2,388	\$2,219	\$2,565	\$2,204	108.35%
ENGINEERING & INFORMATION SERVICES	\$8,156	\$7,265	\$8,177	\$8,009	101.84%
REGULATORY SERVICES	\$3,152	\$3,291	\$3,763	\$3,335	94.52%
CUSTOMER SERVICE	\$4,881	\$4,864	\$5,487	\$5,415	90.12%
ADMINISTRATION & PENSION	\$13,921	\$12,501	\$10,639	\$12,581	110.65%
DEPRECIATION	\$22,989	\$21,241	\$23,416	\$23,066	99.67%
	<b>\$111,251</b>	<b>\$103,873</b>	<b>\$110,524</b>	<b>\$109,524</b>	<b>101.58%</b>
<b>FINANCIAL REVENUE</b>					
INVESTMENT INCOME	\$1,156	\$694	\$480	\$1,155	100.13%
MISCELLANEOUS	\$213	\$2,951	\$110	\$291	73.08%
	<b>\$1,369</b>	<b>\$3,645</b>	<b>\$590</b>	<b>\$1,446</b>	<b>94.68%</b>
<b>FINANCIAL EXPENSES</b>					
LONG TERM DEBT INTEREST	\$7,430	\$7,884	\$8,560	\$7,325	101.44%
LONG TERM DEBT PRINCIPAL	\$20,516	\$21,247	\$22,601	\$20,916	98.09%
AMORTIZATION DEBT DISCOUNT	\$199	\$202	\$245	\$203	97.91%
DIVIDEND/GRANT IN LIEU OF TAXES	\$4,999	\$4,774	\$5,142	\$4,999	100.00%
	<b>\$33,145</b>	<b>\$34,107</b>	<b>\$36,548</b>	<b>\$33,443</b>	<b>99.11%</b>
<b>NET PROFIT (LOSS) AVAILABLE FOR CAPITAL EXPENDITURES</b>	<b>(\$6,186)</b>	<b>\$2,214</b>	<b>(\$13,053)</b>	<b>(\$5,683)</b>	<b>108.84%</b>
<b>UNREGULATED ACTIVITIES</b>					
<b>REVENUE</b>					
SEPTAGE TIPPING FEES	\$764	\$812	\$915	\$775	98.64%
LEACHATE CONTRACT	\$330	\$328	\$387	\$322	102.41%
CONTRACT REVENUE	\$87	\$89	\$86	\$86	101.04%
DEWATERING	\$210	\$210	\$210	\$210	99.99%
AIRLINE EFFLUENT	\$143	\$121	\$118	\$118	121.01%
ENERGY PROJECTS	\$165	\$159	\$167	\$167	99.06%
MISCELLANEOUS	\$38	\$37	\$37	\$37	102.49%
	<b>\$1,737</b>	<b>\$1,755</b>	<b>\$1,919</b>	<b>\$1,714</b>	<b>101.30%</b>
<b>EXPENSES</b>					
WATER SUPPLY & TREATMENT	\$20	\$18	\$25	\$25	78.29%
WASTEWATER TREATMENT	\$572	\$456	\$877	\$840	68.09%
SPONSORSHIPS & DONATIONS	\$78	\$84	\$266	\$266	29.47%
DEPRECIATION	\$18	\$21	\$18	\$18	0.00%
	<b>\$688</b>	<b>\$578</b>	<b>\$1,186</b>	<b>\$1,149</b>	<b>59.88%</b>
<b>FINANCIAL REVENUE</b>					
MISCELLANEOUS	\$364	\$682	\$249	\$249	146.26%
	<b>\$364</b>	<b>\$682</b>	<b>\$249</b>	<b>\$249</b>	<b>146.26%</b>
<b>FINANCIAL EXPENSES</b>					
MISCELLANEOUS	\$45	\$269	\$16	\$16	290.51%
	<b>\$45</b>	<b>\$269</b>	<b>\$16</b>	<b>\$16</b>	<b>290.51%</b>
<b>NET PROFIT (LOSS) AVAILABLE FOR CAPITAL EXPENDITURES</b>	<b>\$1,368</b>	<b>\$1,590</b>	<b>\$967</b>	<b>\$799</b>	<b>171.18%</b>
<b>NET PROFIT (LOSS) AVAILABLE FOR TOTAL CAPITAL EXPENDITURES (REG &amp; UNREG)</b>	<b>(\$4,818)</b>	<b>\$3,804</b>	<b>(\$12,086)</b>	<b>(\$4,884)</b>	<b>98.65%</b>

# ITEM # 4.1

HRWC BOARD

June 20, 2019

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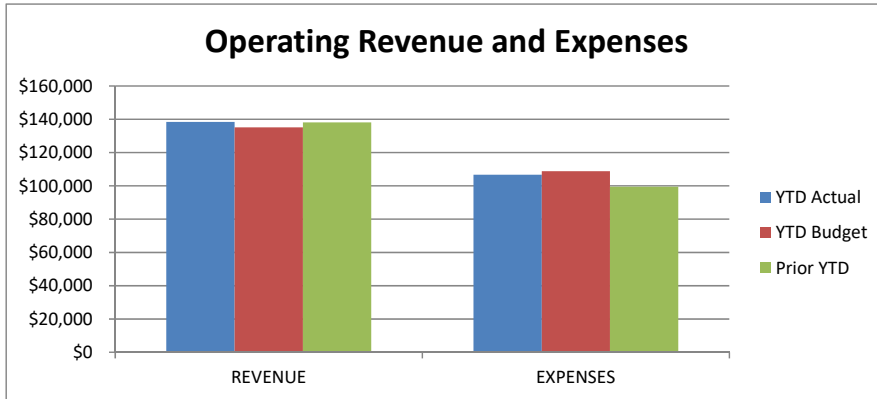
## HALIFAX WATER UNAUDITED BALANCE SHEET - IFRS FORMAT AS OF MARCH 31, 2019

	2019 '000	2018 '000
<b>ASSETS</b>		
Cash	\$51,603	\$51,470
Accounts Receivable		
Customers & Contractual	\$17,407	\$18,723
Customers & Contractual - Unbilled Services	\$17,012	\$16,640
Halifax Regional Municipality	\$3,728	\$5,275
Materials & Supplies	\$2,057	\$1,443
Prepaid Expenses	\$1,065	\$1,013
	<u>\$92,873</u>	<u>\$94,563</u>
Regulatory Asset	\$3,005	\$3,197
Plant in Service - Water	\$659,528	\$635,526
Plant in Service - Wastewater	\$808,038	\$762,108
Plant in Service - Stormwater	\$271,499	\$263,952
Less: Accumulated Depreciation - Water	(\$200,962)	(\$188,838)
Accumulated Depreciation - Wastewater	(\$236,680)	(\$212,836)
Accumulated Depreciation - Stormwater	(\$52,565)	(\$45,605)
	<u>\$1,251,863</u>	<u>\$1,217,504</u>
Assets Under Construction	\$29,605	\$24,550
	<u>\$1,281,468</u>	<u>\$1,242,054</u>
Unamortized Debt Discount & Issue Expense	\$842	\$912
	<u><b>\$1,375,183</b></u>	<u><b>\$1,337,529</b></u>
<b>LIABILITIES</b>		
Trade Payables	\$23,493	\$23,944
Interest on Long Term Debt	\$2,051	\$2,030
Halifax Regional Municipality	\$2,865	\$2,439
Contractor & Customer Deposits	\$207	\$186
Unearned Revenue	\$507	\$584
Current Portion of Deferred Contributed Capital	\$13,846	\$13,405
Current Portion of Long Term Debt	\$24,709	\$22,630
	<u>\$67,677</u>	<u>\$65,217</u>
Accrued Post-Retirement Benefits	\$380	\$430
Accrued Pre-Retirement Benefit	\$4,195	\$3,983
Deferred Pension Liability	\$67,755	\$65,486
Deferred Contributed Capital	\$867,802	\$842,969
Long Term Debt-Water	\$56,585	\$53,697
Long Term Debt-Wastewater	\$114,157	\$127,043
Long Term Debt-Stormwater	\$12,833	\$11,043
Total Liabilities	<u>\$1,191,384</u>	<u>\$1,169,869</u>
<b>EQUITY</b>		
Accumulated Other Comprehensive Income	(\$41,209)	(\$44,943)
Accumulated Surplus	\$212,605	\$190,822
Excess (Deficiency) of Revenue over Expenditure	\$12,403	\$21,781
Total Equity	<u>\$183,799</u>	<u>\$167,660</u>
	<u><b>\$1,375,183</b></u>	<u><b>\$1,337,529</b></u>

**HALIFAX WATER**  
**UNAUDITED INCOME STATEMENT - IFRS FORMAT - ALL SERVICES**  
**APRIL 1/18 - MARCH 31/19 (12 MONTHS)**  
**100.00%**

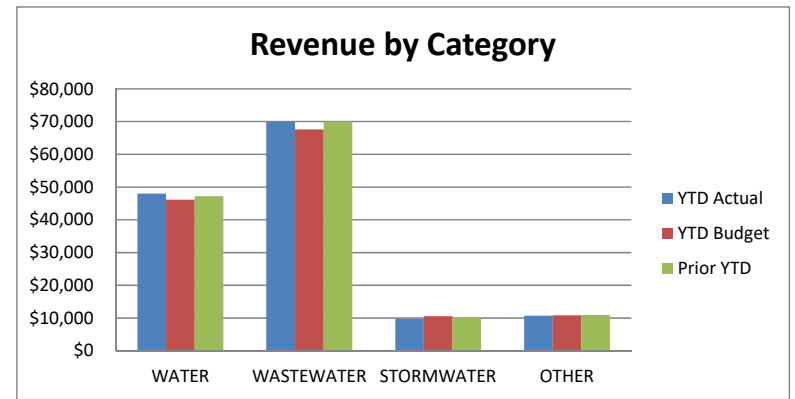
ACTUAL (CURRENT MONTH)		DESCRIPTION	ACTUAL (YEAR TO DATE)		APR 1/18	APR 1/18	% of BUDGET*	% of FORECAST
THIS YEAR	LAST YEAR		THIS YEAR	LAST YEAR	MAR 31/19 BUDGET*	MAR 31/19 FORECAST		
'000	'000		'000	'000	'000	'000		
<b>REVENUE</b>								
\$4,004	\$4,011	METERED SALES - WATER	\$48,040	\$47,220	\$46,152	\$47,452	104.09%	101.24%
\$5,923	\$6,014	METERED SALES - WASTEWATER	\$69,901	\$69,994	\$67,601	\$69,001	103.40%	101.30%
\$271	\$338	STORMWATER SITE GENERATED SERVICE	\$5,906	\$6,169	\$6,752	\$6,452	87.47%	91.54%
\$590	\$590	FIRE PROTECTION	\$7,074	\$7,074	\$7,074	\$7,074	100.00%	100.00%
\$320	\$321	STORMWATER RIGHT OF WAY SERVICE	\$3,835	\$3,847	\$3,835	\$3,835	100.00%	100.00%
\$265	\$238	OTHER SERVICES AND FEES	\$2,704	\$2,937	\$2,905	\$2,740	93.09%	98.70%
\$152	\$130	CUSTOMER LATE PAY./COLLECTION FEES	\$549	\$482	\$491	\$436	111.83%	125.93%
\$35	\$26	MISCELLANEOUS	\$403	\$422	\$371	\$395	108.57%	101.98%
<b>\$11,559</b>	<b>\$11,667</b>		<b>\$138,413</b>	<b>\$138,145</b>	<b>\$135,182</b>	<b>\$137,386</b>	<b>102.39%</b>	<b>100.75%</b>
<b>EXPENSES</b>								
\$811	\$605	WATER SUPPLY & TREATMENT	\$8,516	\$7,517	\$8,750	\$9,153	97.33%	93.04%
\$872	\$573	TRANSMISSION & DISTRIBUTION	\$10,014	\$8,591	\$10,323	\$10,283	97.01%	97.38%
\$1,214	\$1,209	WASTEWATER COLLECTION	\$11,676	\$11,287	\$10,622	\$10,801	109.92%	108.09%
\$1,807	\$1,658	WASTEWATER TREATMENT PLANTS	\$18,197	\$18,054	\$19,160	\$17,508	94.97%	103.94%
\$597	\$360	STORMWATER COLLECTION	\$4,901	\$4,797	\$5,239	\$4,924	93.54%	99.54%
\$288	\$294	SMALL SYSTEMS AND OTHER SERVICES	\$3,053	\$2,721	\$3,286	\$3,110	92.91%	98.16%
\$223	\$224	SCADA, CONTROL & PUMPING	\$2,388	\$2,219	\$2,565	\$2,204	93.09%	108.35%
\$799	\$949	ENGINEERING & INFORMATION SERVICES	\$8,156	\$7,265	\$8,177	\$8,009	99.74%	101.84%
\$254	\$248	REGULATORY SERVICES	\$3,152	\$3,291	\$3,763	\$3,335	83.76%	94.52%
\$453	\$522	CUSTOMER SERVICE	\$4,916	\$4,896	\$5,522	\$5,450	89.03%	90.19%
\$2,942	\$2,307	ADMINISTRATION & PENSION	\$13,964	\$12,553	\$10,869	\$12,812	128.47%	108.99%
\$120	\$4,647	DEPRECIATION	\$44,257	\$41,817	\$23,434	\$35,959	188.86%	123.08%
<b>\$10,380</b>	<b>\$13,596</b>		<b>\$133,190</b>	<b>\$125,007</b>	<b>\$111,710</b>	<b>\$123,548</b>	<b>119.23%</b>	<b>107.80%</b>
<b>\$1,179</b>	<b>(\$1,929)</b>	<b>OPERATING PROFIT</b>	<b>\$5,223</b>	<b>\$13,138</b>	<b>\$23,472</b>	<b>\$13,838</b>	<b>22.25%</b>	<b>37.74%</b>
<b>FINANCIAL REVENUE</b>								
\$109	\$79	INVESTMENT INCOME	\$1,156	\$694	\$480	\$1,155	240.93%	100.13%
\$0	\$167	PNS FUNDING HHSP DEBT	\$0	\$2,000	\$0	\$0	0.00%	0.00%
\$701	\$1,726	MISCELLANEOUS	\$18,885	\$19,165	\$526	\$13,051	3593.34%	144.70%
<b>\$811</b>	<b>\$1,971</b>		<b>\$20,041</b>	<b>\$21,858</b>	<b>\$1,006</b>	<b>\$14,206</b>	<b>1993.05%</b>	<b>141.08%</b>
<b>FINANCIAL EXPENSES</b>								
\$606	\$628	LONG TERM DEBT INTEREST	\$7,430	\$7,884	\$8,560	\$7,325	86.81%	101.44%
\$15	\$17	AMORTIZATION DEBT DISCOUNT	\$199	\$202	\$245	\$203	81.12%	97.91%
\$417	\$398	DIVIDEND/GRANT IN LIEU OF TAXES	\$4,999	\$4,774	\$5,142	\$4,999	97.22%	100.00%
\$389	\$377	MISCELLANEOUS	\$233	\$355	\$12	\$12	1885.79%	1885.79%
<b>\$1,427</b>	<b>\$1,420</b>		<b>\$12,861</b>	<b>\$13,215</b>	<b>\$13,959</b>	<b>\$12,540</b>	<b>92.13%</b>	<b>102.57%</b>
<b>\$562</b>	<b>(\$1,379)</b>	<b>NET PROFIT (LOSS) BEFORE OTHER COMPREHENSIVE INCOME</b>	<b>\$12,403</b>	<b>\$21,781</b>	<b>\$10,518</b>	<b>\$15,504</b>	<b>117.92%</b>	<b>80.00%</b>
\$3,735	(\$3,771)	<b>OTHER COMPREHENSIVE INCOME</b>	\$3,735	(\$1,750)	\$0	\$0	0.00%	0.00%
<b>\$4,297</b>	<b>(\$5,149)</b>	<b>NET PROFIT (LOSS) AVAILABLE FOR CAPITAL EXPENDITURES</b>	<b>\$16,137</b>	<b>\$20,031</b>	<b>\$10,518</b>	<b>\$15,504</b>	<b>153.43%</b>	<b>104.08%</b>

HALIFAX WATER  
 UNAUDITED FINANCIAL INFORMATION  
 APRIL 1/18 - MARCH 31/19 (12 MONTHS)  
 '000



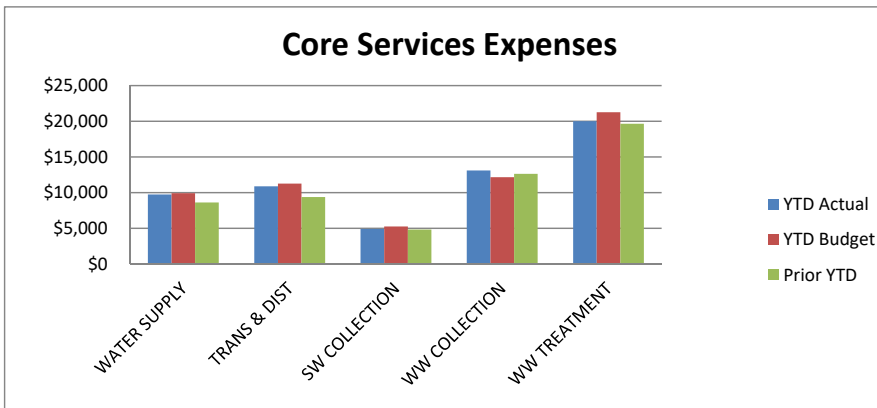
OPERATING REVENUE AND EXPENSES

	YTD Actual	YTD Budget	Prior YTD	% of Budget
REVENUE	\$138,413	\$135,182	\$138,145	102.39%
EXPENSES	\$106,731	\$108,770	\$99,437	98.13%
	<b>\$31,682</b>	<b>\$26,412</b>	<b>\$38,708</b>	<b>119.95%</b>



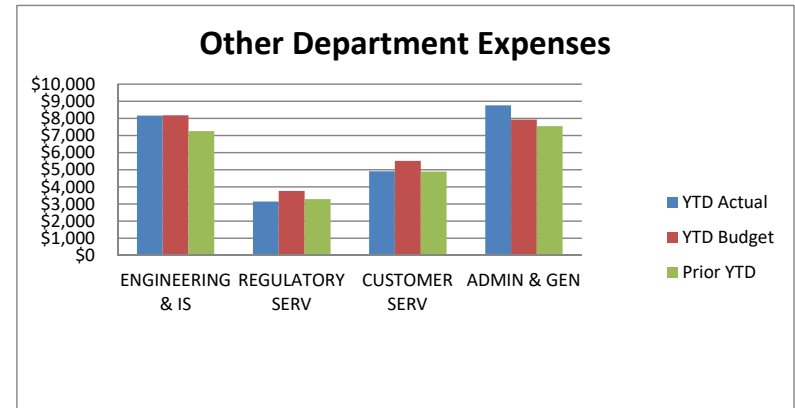
REVENUE BY CATEGORY

	YTD Actual	YTD Budget	Prior YTD
WATER	\$48,040	\$46,152	\$47,220
WASTEWATER	\$69,901	\$67,601	\$69,994
STORMWATER	\$9,741	\$10,587	\$10,015
OTHER	\$10,731	\$10,842	\$10,916
	<b>\$138,413</b>	<b>\$135,182</b>	<b>\$138,145</b>



CORE SERVICES EXPENSES

	YTD Actual	YTD Budget	Prior YTD	% of Budget
WATER SUPPLY	\$9,767	\$9,944	\$8,646	98.22%
TRANS & DIST	\$10,903	\$11,288	\$9,410	96.59%
SW COLLECTION	\$4,950	\$5,276	\$4,842	93.82%
WW COLLECTION	\$13,125	\$12,186	\$12,642	107.71%
WW TREATMENT	\$19,999	\$21,252	\$19,647	94.11%
	<b>\$58,744</b>	<b>\$59,945</b>	<b>\$55,186</b>	<b>98.00%</b>



OTHER DEPARTMENT EXPENSES

	YTD Actual	YTD Budget	Prior YTD
ENGINEERING & IS	\$8,156	\$8,177	\$7,265
REGULATORY SERV	\$3,152	\$3,763	\$3,291
CUSTOMER SERV	\$4,916	\$5,522	\$4,896
ADMIN & GEN	\$8,756	\$7,929	\$7,538
	<b>\$24,980</b>	<b>\$25,391</b>	<b>\$22,989</b>

**TO:** Darlene Fenton, Chair, and Members of the Halifax Regional Water Commission Board

**SUBMITTED BY:** *Original Signed By:*  
\_\_\_\_\_  
Allan Campbell, B.Comm, CPA, CMA, Manager, Finance  
Cathie O'Toole, CPA, CGA, MBA, Director, Corporate Services

**APPROVED:** *Original Signed By:*  
\_\_\_\_\_  
Carl Yates, M.A.Sc., P.Eng., General Manager

**DATE:** June 07, 2019

**SUBJECT:** **Halifax Regional Water Commission Employees' Pension Plan  
Financial Statements for the Year Ended December 31, 2018**

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### **ORIGIN**

The Halifax Regional Water Commission Employees' Pension Plan financial statements are audited annually.

### **RECOMMENDATION**

It is recommended that the Commission Board approve the audited financial statements for the Halifax Regional Water Commission Employees' Pension Plan (the "Plan") for the year ended December 31, 2018.

### **BACKGROUND**

Annually, the Plan's financial statements are prepared by staff and audited by the Commission's auditors, currently Grant Thornton, LLP.

### **DISCUSSION**

Attached are the audited financial statements of the Plan for the year ended December 31, 2018, with comparative figures for 2017. Page numbers or note references in this report refer to the audited financial statements.

## ITEM #4.2

HRWC Board

June 20, 2019

The auditor's report on Page 1 indicates that the financial statements present fairly, in all material respects, the financial position of the Plan as at December 31, 2018, the changes in net assets available for benefits, and changes in pension obligations in accordance with Canadian accounting standards for pension plans.

The Statement of Financial Position for the Plan is reported on page 3 of the financial statements, and the highlights are summarized in Table 1 below. The surplus as at December 31, 2018 of \$2.1 million compares favourably to the deficiency reported the prior year of \$1.7 million, representing a change of \$3.8 million. This is the result of higher reported values at year-end for net assets available for benefits relative to pension obligations. Net assets available for benefits as at December 31, 2018, amounted to \$126.5 million compared to \$119.7 million the prior year, an increase of \$6.7 million or 5.6%. Pension obligations increased \$2.9 million or 2.4% to \$124.4 million as at December 31, 2018, up from \$121.5 million in 2017.

**Table 1:**

Statement of financial position				
December 31				
	2018	2017	Change	
			\$	%
Net assets available for benefits (note 4)	\$126,458,630	\$119,731,882	\$6,726,748	5.6%
Pension obligations (note 5)	\$124,371,400	\$121,473,083	\$2,898,317	2.4%
Surplus (Deficiency)	\$2,087,230	(\$1,741,201)	\$3,828,431	-219.9%

The Statement of Changes in Net Assets Available for Benefits are reported on page 4 of the financial statements, with highlights summarized in Table 2 below. As stated previously, net assets available for benefits as at December 31, 2018 are reported as \$126.5 million, compared to \$119.7 million the previous year, representing an increase of \$6.7 million or 5.6%. The comparable increase in net assets available for benefits in 2017 was reported as \$12.7 million. Further details regarding net assets available for benefits can be found in Note 4 (page 12) of the financial statements.

**Table 2:**

Statement of changes in net assets available for benefits				
December 31				
	2018	2017	Change	
			\$	%
Revenue	\$4,536,454	\$11,188,063	(\$6,651,609)	-59.5%
Expenses	\$4,059,538	\$4,436,982	(\$377,444)	-8.5%
Increase in Net Revenue	\$476,916	\$6,751,081	(\$6,274,165)	-92.9%
Contributions (note 7)	\$6,249,833	\$5,912,805	\$337,028	5.7%
Increase in net assets available for benefits	\$6,726,748	\$12,663,886	(\$5,937,138)	-46.9%

Of the \$6.7 million increase in net assets available for benefits in the current year, reported net revenue accounted for \$0.5 million, compared to contributions, which accounted for the remaining \$6.2 million. Revenue consists of changes in the fair value of investment assets of \$1.8 million, and net investment income of \$2.8 million. In comparison to 2017, the change in the fair value of investment assets decreased by \$6.9 million (79.8%), and net investment income increased \$0.3 million (12.0%). Assets of the Plan are invested as part of the Halifax Regional Municipality Master Trust, and represent 6.2% (2017, 6.1%) of the Master Trust's assets. The gross fund rate for 2018 was 4.1% (2017-11.3%), and the net fund rate after expenses was 3.8% (2017-10.9%). Additional information related to net investment income can be found in Note 6 (page 13) of the financial statements, and later in this report.

Contributions also factor into the increase in net assets available for benefits. Combined contributions from employees and Halifax Water are reported at \$6.2 million for 2018. In comparison to 2017, contributions increased by \$0.3 million or 5.7%. This increase was due to new hires within Halifax Water and increases in remuneration of existing employees either through normal pay increases or movements within individual bands. Additional information related to contributions can be found in Note 7 (page 14) of the financial statements, and later in this report.

Expenses reduce net assets available for benefits, with expenses driven mainly by benefit payments. Expenses in 2018 are reported as \$4.1 million, and compared to \$4.4 million from the previous year, resulted in a favourable variance of \$0.4 million or 8.5%. This reduction can be directly attributed to lower termination benefits and death benefits paid in 2018 compared to 2017. Additional information related to expenses can be found in Note 8 and 9 (page 14) of the financial statements, and later in this report.

Further details regarding net assets available for benefits can be found in Note 4 (page 12) of the financial statements.



## ITEM #4.2

HRWC Board

June 20, 2019

The Statement of Changes in Pension Obligations is reported on page 5 of the financial statements, and summarized in Table 3 below. Pension obligations increased to \$124.4 million in 2018 compared to \$121.5 million the prior year, an increase of \$2.9 million or 2.4%.

The valuation of pension obligations for 2018 was the result of an actuarial valuation performed as at January 1, 2019, compared to 2017 where the amounts reported were based on an extrapolation.

Increases to pension obligations came from two (2) sources, benefits accrued of \$5.4 million and interest on accrued benefits of \$7.1 million which were comparable to 2017, with reported increases of \$0.3 million (6.6%) and \$0.4 million (6.0%) respectively. Interest rates continue to be low, which increases liabilities.

Reductions to the pension obligations totaled \$9.9 million, and are directly related to changes in actuarial assumptions from the previous actuarial valuation on January 1, 2016 of \$5.4 million, and also benefit payments made to pensioners in pay during 2018 of \$3.9 million. Changes in actuarial assumptions can be attributed to experience gains or losses between the January 1, 2016 and the January 1, 2019 actuarial valuations related mortality, retirement, salary growth and indexing, etc. Further details with respect to pension obligations can be found in Note 5 (page 13), and additional information related to benefit payments can be found in Note 8 (page 14) of the financial statements, and later in this report.

**Table 3:**

Statement of changes in pension obligations				
December 31				
	2018	2017	Change	
			\$	%
Pension obligations, beginning of year	\$121,473,083	\$114,046,900	\$7,426,183	6.5%
Changes in actuarial assumptions	(\$5,383,916)	\$0	(\$5,383,916)	n/a
Miscellaneous sources of decrease	(\$277,700)	\$0	(\$277,700)	n/a
Interest accrued on benefits	\$7,087,500	\$6,637,300	\$450,200	6.8%
Benefits accrued	\$5,400,500	\$5,084,900	\$315,600	6.2%
Benefits paid (note 8)	(\$3,928,067)	(\$4,296,017)	\$367,950	-8.6%
	\$2,898,317	\$7,426,183	(\$4,527,866)	-61.0%
Pension obligations, end of year	\$124,371,400	\$121,473,083	\$2,898,317	2.4%

## ITEM #4.2

HRWC Board

June 20, 2019

Additional notes in the financial statements include line-by-line comparisons of various categories. Table 4 below is a summary of each category, and details are provided for Notes 6 through 9 inclusive of the financial statements.

**Table 4:**

Summary of various categories December 31				
	2018	2017	Change	
			\$	%
Net investment income (note 6)	\$2,773,356	\$2,475,604	\$297,752	12.0%
Contributions (note 7)*	\$6,249,833	\$5,912,805	\$337,028	5.7%
Benefit payments (note 8)	\$3,928,067	\$4,296,017	(\$367,950)	-8.6%
Administrative expenses (note 9)	\$131,472	\$140,965	(\$9,493)	-6.7%
* Employees' Contributions	\$2,845,791	\$2,665,078	\$180,713	6.8%
Employer's Contributions	\$3,404,042	\$3,247,727	\$156,315	4.8%
	\$6,249,833	\$5,912,805	\$337,028	5.7%

Note 6 (page 13) of the financial statements reports net investment income of \$2.8 million for 2018. This represents an increase of \$0.3 million or 12.0% over 2017, with the increase being reflective of the returns experienced by the HRM Master Trust in 2018. Investment manager fees are comparable to 2017, showing only a moderate increase.

Note 7 (page 14) shows contribution details from employees and the employer, with combined contributions of \$6.2 million reported for 2018. Compared to 2017, this represents an increase of \$0.3 million or 5.7%. Higher contributions in 2018 are reflective of expected increases associated with new hires in 2018, as well as normal salary/wage increases and movements within bands for existing employees.

Note 8 (page 14) details the benefit payments of \$3.9 million for 2018. Total benefit payments decreased by \$0.4 million or 8.6% compared to 2017. Actual retirement benefit payments increased in 2018 to \$3.8 million compared to \$3.7 million in 2017, which represents new retirees from Halifax Water during the year. A decrease in total benefit payments was experienced under the categories of termination benefits and death benefit payments. Combined, these expenditures were lower by \$0.5 million compared to 2017, and tend to be less certain year-over-year, since they are contingent upon varying circumstances.

## ITEM #4.2

HRWC Board

June 20, 2019

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Note 9 (page 14) summarizes administrative expenses of the Plan, with expenditures totaling \$131.5 thousand for 2018. This represents a reduction in expenses compared to 2017 of \$9.5 thousand or 6.7%, with the decrease impacted primarily by lower actuarial and consulting fees. The actuarial and consulting fees reported in 2018 of \$50.4 thousand were \$17.0 thousand lower than those of 2017. Bank custodian fees increased approximately \$12.2 thousand in 2018 compared to 2017. These fees are charged to Plan through the Master Trust, so the Plan has little control over their incurrence. Other expenses were relative when compared to the prior year, with no significant dollar variances to report.

Solvency funding is not required as the Plan received a solvency funding exemption effective June 1, 2015. Currently the ratio of solvency assets to solvency liabilities is greater than the “solvency concerns” threshold of 85%, under Nova Scotia pension legislation. Should the solvency ratio fall below the 85% threshold, the Plan would be required to file a valuation within one (1) year, rather than the usual three (3) year period. The next actuarial valuation is scheduled for January 1, 2019.

### **BUDGET IMPLICATIONS**

There are no budget implications associated with the audited financial statements of the pension plan. Budget implications arise from the Actuarial Valuations.

### **ALTERNATIVES**

None

### **ATTACHMENT**

Halifax Regional Water Commission Employees’ Pension Plan Financial Statements as at December 31, 2018

Report Prepared by: *Original Signed By:*

\_\_\_\_\_  
Allan Campbell, B.Comm, CPA, CMA, Manager, Finance  
902-490-4288

## Financial Statements

Halifax Regional Water Commission

Employees' Pension Plan

December 31, 2018

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Statement of changes in pension obligations	5
Notes to the financial statements	6-18

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**Halifax Regional Water Commission  
Employees' Pension Plan  
Statement of financial position**

December 31	2018	2017
<b>Assets</b>		
Investment assets	\$ 126,419,604	\$ 119,713,036
Contributions receivable	<u>67,261</u>	<u>43,194</u>
	<b>126,486,865</b>	<b>119,756,230</b>
<b>Liabilities</b>		
Payables and accruals		
Trade	<u>28,235</u>	<u>24,348</u>
Net assets available for benefits (note 4)	<b>126,458,630</b>	<b>119,731,882</b>
Pension obligations (page 5)	<u>124,371,400</u>	<u>121,473,083</u>
Surplus (deficiency)	<b>\$ 2,087,230</b>	<b>\$ (1,741,201)</b>

On behalf of the Board

\_\_\_\_\_  
Trustee

\_\_\_\_\_  
Trustee

See accompanying notes to the financial statements.

**Halifax Regional Water Commission**  
**Employees' Pension Plan**  
**Statement of changes in net assets available for benefits**

Year Ended December 31 2018 2017

Revenue		
Net investment income (note 6)	\$ 2,773,356	\$ 2,475,604
Changes in the fair value of investment assets	<u>1,763,098</u>	<u>8,712,459</u>
	<u>4,536,454</u>	<u>11,188,063</u>
Contributions (note 7)		
Participants	2,845,791	2,665,078
Sponsor	<u>3,404,042</u>	<u>3,247,727</u>
	<u>6,249,833</u>	<u>5,912,805</u>
Expenses		
Benefit payments (note 8)	3,928,067	4,296,017
Administrative (note 9)	<u>131,472</u>	<u>140,965</u>
	<u>4,059,539</u>	<u>4,436,982</u>
Increase in net assets available for benefits	<u>\$ 6,726,748</u>	<u>\$ 12,663,886</u>
Net assets available for benefits, beginning of year	\$ 119,731,882	\$ 107,067,996
Increase in net assets available for benefits	<u>6,726,748</u>	<u>12,663,886</u>
Net assets available for benefits, end of year	<u>\$ 126,458,630</u>	<u>\$ 119,731,882</u>

See accompanying notes to the financial statements.

**Halifax Regional Water Commission  
Employees' Pension Plan  
Statement of changes in pension obligations**

Year Ended December 31	2018	2017
Pension obligations, beginning of year	<u>\$ 121,473,083</u>	<u>\$ 114,046,900</u>
Change in pension obligations		
Changes in actuarial assumptions (Note 5)	(5,383,916)	-
Miscellaneous sources of decrease	(277,700)	-
Interest accrued on benefits	7,087,500	6,637,300
Benefits accrued	5,400,500	5,084,900
Benefits paid (note 8)	<u>(3,928,067)</u>	<u>(4,296,017)</u>
	<u>2,898,317</u>	<u>7,426,183</u>
Pension obligations, end of year	<u>\$ 124,371,400</u>	<u>\$ 121,473,083</u>

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See accompanying notes to the financial statements.



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# Halifax Regional Water Commission

## Employees' Pension Plan

### Notes to the financial statements

December 31, 2018

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#### 1. Description of the Plan

The Halifax Regional Water Commission Employees' Pension Plan (the "Plan") is registered under the Pension Benefits Act of Nova Scotia (Registration Number 0344614). The following description of the Plan is a summary only. For more complete information, reference should be made to the Plan agreement restated as at January 1, 2011 as amended and consolidated, in addition to Amendment #9 and Amendment #10, both effective January 1, 2016, and Amendment #11, effective retroactively to June 1, 2015.

##### (a) General

The Halifax Regional Water Commission maintains a contributory defined benefit pension plan for all employees, and participation in the Plan is compulsory for full-time and part-time employees. The pension plan provides pensions based upon length of service and best seven consecutive years' earnings.

The employees who transferred to the Halifax Regional Water Commission on August 1, 2007 with the transfer of the wastewater/stormwater operations have remained members of the Halifax Regional Municipality Pension Plan. The Halifax Regional Water Commission is responsible for funding the employer share of the contributions for these employees. All new employees hired after August 1, 2007 join the Halifax Regional Water Commission Employees' Pension Plan.

Plan Amendment #11 was approved during 2018, effective retroactively to June 1, 2015. This amendment formally brought the Plan into compliance with the June 1, 2015 changes to the Nova Scotia *Pension Benefits Act* and its *Regulations*. The Plan has been administered in accordance with the June 1, 2015 changes to the Nova Scotia *Pension Benefits Act* and its *Regulations* as required, even though formal changes to the Plan were completed in 2018. The amendment was administrative in nature, and dealt with certain changes to the minimum standards for member benefits, the most notable being:

- Definition of spouse;
- Small benefit;
- Vesting, and
- Pre-retirement death benefit.

##### (b) Funding policy

Employees' required contributions in 2018 were 10.65% (2017 – 10.65%) of pensionable earnings. Pensionable earnings are capped temporarily to a maximum of \$140,945 through 2023, and will be indexed at a rate of 1% per annum thereafter. The Halifax Regional Water Commission matches employee contributions up to 9.85% (2017 – 9.85%). Basic contributions from employers and members due to the Plan at the end of the year are recorded on an accrual basis.

In addition, the Plan and the Pension Benefits Act of Nova Scotia require that the Halifax Regional Water Commission, from time to time, make contributions to the Plan of such amounts which are required as special payments in accordance with the provisions of the Plan as determined by the actuary (see note 5).

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# Halifax Regional Water Commission

## Employees' Pension Plan

### Notes to the financial statements

December 31, 2018

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#### 1. Description of the Plan (continued)

##### (c) Retirement benefits

Employees are entitled to annual pension benefits of an amount equal to 2.0% of their best earnings averaged over the highest seven consecutive years of earnings for each year of credited service up to the maximum permitted by the Canada Revenue Agency. For credited service prior to January 1, 2016, the best average earnings cannot be less than the best average five consecutive years of earnings paid to an employee prior to 2016.

Benefits are adjusted each year. Adjustments are based on the increase in the Consumer Price Index over the previous calendar year to a maximum of 2% for benefits earned prior to January 1, 2016, and to a maximum of 1% for benefits earned after December 31, 2015.

##### (d) Disability pensions

Disabled employees continue to accrue credited service without having to continue their contributions. The employer and employees fund the actuarial cost of the pensions for disabled employees annually. Disabled employees are eligible for a pension if they meet the following criteria:

- a) they have completed 10 years of continuous participation in the Plan;
- b) they are not in receipt of a salary continuance benefit under an insured plan to which the Halifax Regional Water Commission contributes; and
- c) they are totally and permanently disabled as certified by a medical practitioner.

##### (e) Death benefits

In the event a pensioner dies after the commencement of their pension payments, the death benefit will be in accordance with the normal or optional form of pension elected at the time of retirement.

In the event a member dies before their retirement date, a survivor pension is payable to the member's surviving spouse at the rate of 60% of the member's pension credits accrued prior to June 1, 1998. The beneficiary of a single employee who dies before retirement will be entitled to the member's contributions and interest up to the month preceding death during that same period. In respect of pension credits accrued after June 1, 1998, the commuted value of the normal retirement benefits shall be paid to the member's surviving spouse, beneficiary or estate. Amendment #11 provides provisions relating to member pension credits accrued between January 1, 1988 and May 31, 1998 whereby a survivor pension payable to the member's surviving spouse is calculated as the greater of: 1) 60% of the survivor pension, or 2) the commuted value of the normal retirement benefits. The beneficiary or estate of a single employee who dies during this same time period, January 1, 1988 and May 31, 1998, would be entitled to the commuted value of the normal retirement benefits.

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# Halifax Regional Water Commission

## Employees' Pension Plan

### Notes to the financial statements

December 31, 2018

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#### 1. Description of the Plan (continued)

##### (f) Termination of employment

Subject to any statutory limitations and as provided in Amendment #11, Plan members become vested immediately upon joining the Plan. Vesting previously occurred after two years of Plan membership. Members may elect to receive one of the following options upon termination:

- a) a paid-up deferred pension commencing on the member's normal retirement date in an amount equal to the pension accrued to date of termination; or
- b) transfer the value of benefit to the member's new employer's pension plan, a Retirement Savings Plan, or purchase a deferred annuity.

##### (g) Voluntary contributions

Members of the Plan may make additional voluntary contributions up to the deductible limit provided under the Income Tax Act. The non locked-in additional voluntary contributions may be withdrawn from the Plan by a member prior to termination or retirement, either in the form of a lump sum cash payment or transferred directly to the member's Retirement Savings Plan.

Members of the Plan may transfer non locked-in or locked-in benefits from a previous employer. Non locked-in benefits are administered as outlined in the previous paragraph. Locked-in benefits can be withdrawn within ten years of the normal retirement date. Upon retirement, the locked-in and non locked-in contributions may be used to purchase an annuity.

##### (h) Income taxes

The Plan is not subject to income taxes since it is a Registered Pension Trust as defined by the Income Tax Act.

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# Halifax Regional Water Commission

## Employees' Pension Plan

### Notes to the financial statements

December 31, 2018

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#### 2. Statement of compliance with Canadian accounting standards for pension plans and summary of significant accounting policies

The financial statements are presented in accordance with Canadian accounting standards for pension plans in Part IV of the Chartered Professional Accountants of Canada (CPA) Handbook, Section 4600 – Pension Plans. Section 4600 provides specific accounting guidance on pension obligations and investments, with investments complying with international financial reporting standards (“IFRS”) in Part I of the CPA Canada Handbook. For accounting policies that do not relate to either investments or pension obligations, the plan must consistently comply with either IFRS or Canadian accounting standards for private enterprises (“ASPE”) in Part II of the CPA Canada Handbook. The Plan has elected to comply on a consistent basis with ASPE. To the extent that ASPE is inconsistent with Section 4600, Section 4600 takes precedence.

##### (a) Financial instruments

Financial assets and financial liabilities are recognized when the Plan becomes a party to the contractual provisions of the financial instrument.

Financial assets are derecognized when the contractual rights to the cash flows from the financial assets expire, or when the financial asset and all substantial risks and rewards are transferred.

A financial liability is derecognized when it is extinguished, discharged, cancelled or expires.

All financial assets and financial liabilities are initially measured at fair value. Fair value is an estimate of the amount of consideration that would be agreed upon in an arm's length transaction between knowledgeable, willing parties who are under no compulsion to act.

Financial assets and liabilities are subsequently measured as described below:

##### *Investment assets*

All investment assets are measured at fair value at the date of the statement of financial position in accordance with IFRS 13: Fair Value Measurement Part I of the CPA Canada Handbook. Fair values of investment assets are determined as follows:

- Pooled funds are valued at the unit value supplied by the Master Trust administrator and which represent the Plan's proportionate share of underlying net assets at fair value determined using closing bid prices.

Transaction costs are not included in the fair value of investment assets either on initial recognition or on subsequent re-measurement. Transaction costs are included in the statement of changes in net assets available for benefits as part of expenses incurred in the period.

Investment income, excluding changes in the fair value of investment assets, is presented in the statement of changes in net assets available for benefits.

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# Halifax Regional Water Commission

## Employees' Pension Plan

### Notes to the financial statements

December 31, 2018

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#### 2. Statement of compliance with Canadian accounting standards for pension plans and summary of significant accounting policies (continued)

##### (a) Financial instruments (continued)

###### *Financial liabilities*

Financial liabilities are measured subsequently at amortized cost using the effective interest method.

##### (b) Pension obligations

The Plan is a defined benefit plan established for members. The pension obligations recognized in the statements of financial position are the actuarial present value of accrued pension benefits determined by applying best estimate assumptions and the projected benefit method prorated on services.

##### (c) Net investment income

Income from investments is recognized on an accrual basis and includes dividend income (recognized on ex-dividend date), interest income, and is net of investment manager fees.

##### (d) Changes in the fair value of investment assets and liabilities

This includes both realized gains or losses on sale of investments and unrealized gains or losses on investments.

Realized gains or losses on sale of investments are the difference between the proceeds received and the average cost of investments sold.

Unrealized gains or losses on investments represent the difference between the carrying value at the year end and the carrying value at the previous year end or purchase value during the year, less the reversal of previously recognized unrealized gains and losses in respect of disposals during the year.

##### (e) Contributions

Required employee and employer contributions are recorded the month following when the payroll deductions are made. Employee and employer contributions, as well as special payments due to the Plan at the end of the year are recorded on an accrual basis. Cash received from pension plan transfers or members for service purchases are recorded when received.

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# Halifax Regional Water Commission

## Employees' Pension Plan

### Notes to the financial statements

December 31, 2018

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#### 2. Statement of compliance with Canadian accounting standards for pension plans and summary of significant accounting policies (continued)

##### (f) Benefits

Benefit payments to retired members, commuted value payments and refunds to former members are recorded in the period paid. Accrued benefits are recorded as part of the accrued pension benefit obligation.

##### (g) Estimation uncertainty

When preparing the financial statements, management undertakes a number of judgments, estimates and assumptions about recognition and measurement of assets, liabilities, revenue and expenses. The actual results are likely to differ from the judgments, estimates and assumptions made by management and will seldom equal the estimated results. Information about the significant judgments, estimates and assumptions that have the most significant effect on the recognition and measurement of assets, liabilities, revenue and expenses are discussed below:

###### *Fair value of financial instruments*

Management uses valuation techniques in measuring the fair value of financial instruments, where active market quotes are not available. Details of the assumptions used are given in the notes regarding financial assets and liabilities. In applying the valuation techniques, management makes maximum use of market inputs, and uses estimates and assumptions that are, as far as possible, consistent with observable data that market participants would use in pricing the instrument. Where applicable data is not observable, management uses its best estimate about the assumptions that market participants would make. These estimates may vary from the actual prices that would be achieved in an arm's length transaction at the reporting date.

###### *Pension obligations*

Management estimates the pension obligations annually with the assistance of an independent actuary; however, the actual outcome may vary due to estimation uncertainties. The estimate of the pension obligation of \$124,371,400 (2017 - \$121,473,083) is based on assumed rates of retirement, mortality, breaks in service and contributory hours. Discount factors are determined at or near year-end to reflect the long term expectation of investment returns that are denominated in the currency in which the benefits will be paid and that have terms to maturity approximating the terms of the related pension obligation.

# Halifax Regional Water Commission

## Employees' Pension Plan

### Notes to the financial statements

December 31, 2018

#### 3. Investment assets

The investment in the Halifax Regional Municipality Master Trust (the "HRM Master Trust") is recorded at its fair value. The Plan's interest in the HRM Master Trust represents 6.24% (December 31, 2017 – 6.11%) of the HRM Master Trust units. The remaining units are held by the Halifax Regional Municipality ("HRM"). The co-mingling of investments does not affect the actuarial liabilities or the net assets available for benefits of the Plan.

The fair value of the investment in the HRM Master Trust is determined as at the date of the statements of financial position as described in note 2(a). The fair value of the investment in the HRM Master Trust is categorized as a Level 2 investment under fair value hierarchy measurement.

Section 67 (3) of the *Pension Benefits Act Regulations* requires disclosure of each investment asset that has a fair value greater than two percent (2%) of the fair value of all the investment assets of the Plan. The following schedule reports all investments having a fair value greater than 2% of the fair value of all investment assets of the Plan.

<u>Investment</u>	<u>Asset Class</u>	<u>Market value</u>
Wellington Management Global Total Return Fund	Foreign Bonds <sup>1</sup>	\$ 5,135,296
Wellington Emerging Markets Local Equity Fund	Emerging Market Equities <sup>1</sup>	3,179,579
Putnam Canadian Fixed Income Global Alpha Fund	Canadian Bonds <sup>1</sup>	3,083,827
Minto Multi-Residential Income Partners I, L.P.	Limited Partnership	2,935,516
UBS (UK) Real Estate Funds Selection Global Ex Canada, L.P.	Limited Partnership	2,685,726
Blackrock Active Canadian Equity Fund	Canadian Equities <sup>1</sup>	<u>2,540,701</u>
		\$ <u>19,560,645</u>

1 – Denotes Pooled Fund

#### 4. Net assets available for benefits

##### Allocation of net assets available for benefits

	<u>2018</u>	<u>2017</u>
To pension plan	\$ 125,961,206	\$ 119,238,702
To extra voluntary contribution benefits	270,793	245,513
To individual locked in amounts	<u>226,631</u>	<u>247,667</u>
	\$ <u>126,458,630</u>	\$ <u>119,731,882</u>

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# Halifax Regional Water Commission

## Employees' Pension Plan

### Notes to the financial statements

December 31, 2018

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#### 5. Pension obligations

An actuarial valuation of the Halifax Regional Water Commission Employees' Pension Plan was performed as at January 1, 2019.

The actuarial value of accrued benefits, determined periodically by the Plan's actuary, is the amount that results from applying actuarial assumptions to adjust the Plan benefits to reflect the time value of money between the valuation date and the expected date of payment. The significant actuarial assumptions used include:

- a) 40% of members will retire at the age of 65, and 60% will retire at the earliest date of eligibility for an unreduced pension;
- b) interest rate assumption of 5.80% per annum (2017 – 5.80%);
- c) salary scale assumption of 3.90% per annum (2017 – 3.90%); and
- d) life expectancy of participants based upon the CPM-2014 Combined mortality table, with Scale CPM-B improvements.

The January 1, 2016 actuarial valuation resulted in an unfunded liability of \$7,620,900, and the Halifax Regional Water Commission was required to make special payments which were being amortized over 15 years. This resulted in an unfunded liability payment of \$825,200 (2017 - \$825,200) as shown in note 7.

As a result of the January 1, 2019 actuarial valuation, special payments in respect of going concern liabilities are no longer required. The next actuarial valuation for the Halifax Regional Water Commission Employees' Pension Plan is required to be performed no later than January 1, 2022.

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<b>6. Net investment income</b>	<u>2018</u>	<u>2017</u>
Income from investment funds	\$ 2,939,026	\$ 2,622,024
Investment manager fees	<u>(165,670)</u>	<u>(146,420)</u>
	<u>\$ 2,773,356</u>	<u>\$ 2,475,604</u>



# Halifax Regional Water Commission Employees' Pension Plan Notes to the financial statements

December 31, 2018

<b>7. Contributions</b>	<b><u>2018</u></b>	<b><u>2017</u></b>
Participants' contributions		
Required	\$ 2,788,280	\$ 2,619,586
Voluntary	<u>57,511</u>	<u>45,492</u>
	<b><u>\$ 2,845,791</u></b>	<b><u>\$ 2,665,078</u></b>
Sponsor's contributions		
Required	\$ 2,578,842	\$ 2,422,527
Unfunded liability – special payment	<u>825,200</u>	<u>825,200</u>
	<b><u>\$ 3,404,042</u></b>	<b><u>\$ 3,247,727</u></b>

<b>8. Benefit payments</b>	<b><u>2018</u></b>	<b><u>2017</u></b>
Retirement benefit payments	\$ 3,848,218	\$ 3,738,659
Termination benefit payments	79,849	314,591
Death benefit payments	<u>-</u>	<u>242,767</u>
	<b><u>\$ 3,928,067</u></b>	<b><u>\$ 4,296,017</u></b>

During 2018, there were 6 termination benefit payments (2017 – 18) and no death benefit payments (2017 – 1). Termination benefits are paid out as described in note 1(f) and death benefit payments are paid out as described in note 1(e).

<b>9. Administrative expenses</b>	<b><u>2018</u></b>	<b><u>2017</u></b>
Actuarial and consulting fees	\$ 50,409	\$ 67,394
Audit and accounting fees	8,441	9,283
Bank custodian fees	32,303	20,132
Insurance	8,347	8,347
Miscellaneous	16,195	18,965
Professional fees	13,440	14,623
Registration fees	<u>2,337</u>	<u>2,221</u>
	<b><u>\$ 131,472</u></b>	<b><u>\$ 140,965</u></b>

## 10. Related party transactions

The Halifax Regional Water Commission, the Plan's sponsor, collects the Plan's contributions and pays certain expenses on behalf of the Plan. These items are then credited or charged back to the Plan.

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# Halifax Regional Water Commission

## Employees' Pension Plan

### Notes to the financial statements

December 31, 2018

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#### 11. Financial instruments

##### Financial instruments risk exposure and management

The Plan is exposed to various risks in relation to its investment in the HRM Master Trust, consisting of investment assets. The Plan's financial assets are categorized in Level 2. The main types of risks are market risk, credit risk and liquidity risk.

The Plan's risk management policy is derived from the HRM Master Trust in which the Plan holds units. The HRM Master Trust has formal policies and procedures placed upon it that establish an asset mix among equity and fixed income investments, required diversification of investments within categories, a set limit on the size of exposure to individual investments, and a requirement to use A-rated counterparties.

The Plan does not actively engage in the trading of financial assets for speculative purposes nor does it write options. The most significant financial risks to which the Plan is exposed are described below:

##### (a) Market risks

Market risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. For purposes of this disclosure, the Plan segregates market risk into three categories: interest rate risk, currency risk and other price risk.

##### *i. Interest rate risk*

Interest rate risk refers to the fact that the value of the Plan's assets is affected by changes in nominal interest rates and equity markets.

##### *ii. Currency risk*

The Plan's functional currency is Canadian dollars and all of the Plan's transactions are carried out in Canadian dollars.

##### *iii. Other price risk*

Other price risk is the risk that the fair value or future cash flows of financial instruments will fluctuate because of changes in market prices, other than those arising from interest rate risk or currency risk, whether those changes are caused by factors specific to the individual investment or factors affecting all securities traded in the market.

All investments have a risk of loss of capital. The maximum risk resulting from the investments is determined by the fair value of these instruments, which total \$126,419,604 at December 31, 2018 (2017 - \$119,713,036). A one percent (1%) change in market risk (holding all variables constant) will impact the fair value of these investments by approximately \$1,264,196 (2017 - \$1,119,713).

# Halifax Regional Water Commission

## Employees' Pension Plan

### Notes to the financial statements

December 31, 2018

#### 11. Financial instruments (continued)

##### (b) Credit risk

Credit risk on financial instruments is the risk of financial loss occurring as a result of default or insolvency of a counterparty on its obligations to the Plan. The Plan's credit risk is primarily attributable to the underlying assets of the HRM Master Trust. Credit risk is mitigated through the management of the HRM Master Trust assets with generally accepted parameters of safety and prudence, using a diversified investment program. Investments in the HRM Master Trust must adhere to specific limitations as outlined in the Halifax Regional Municipality's Statement of Investment Policies and Procedures for the Defined Benefit Pension Plan ("the Statement of Investment Policies and Procedures").

##### (c) Liquidity risk

Liquidity risk is the risk of not being able to meet the Plan's cash requirements in a timely and cost effective manner. Liquidity requirements are managed through income generated from investments and monthly contributions made by members and participating employers. The sources of funds are used to pay pension benefits, make additional investments and fund operating expenses. The Plan's primary future liabilities include the accrued benefit obligation of the Plan. The Plan's main asset, the investment in the HRM Master Trust, is liquid as cash is available to make required payments.

The following are the contractual maturities of financial liabilities:

Payments due year ending December 31, 2018

	<u>Total</u>	<u>Less than 1 year</u>	<u>1 - 3 years</u>	<u>4 - 5 years</u>	<u>After 5 years</u>
Payables and accruals	\$ 28,235	\$ 28,235	\$ -	\$ -	\$ -

Payments due year ending December 31, 2017

	<u>Total</u>	<u>Less than 1 year</u>	<u>1 - 3 years</u>	<u>4 - 5 years</u>	<u>After 5 years</u>
Payables and accruals	\$ 24,348	\$ 24,348	\$ -	\$ -	\$ -

# Halifax Regional Water Commission

## Employees' Pension Plan

### Notes to the financial statements

December 31, 2018

#### 11. Financial instruments (continued)

##### Fair value disclosure

The financial instruments recognized at fair value on the statement of financial position must be classified as one of three fair value hierarchy levels. This hierarchy groups financial assets and liabilities into three levels based on the significance of inputs used in measuring the fair value of the financial assets and liabilities. The fair value hierarchy has the following levels:

- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly (i.e. as prices) or indirectly (i.e. derived from prices); and
- Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

The level within which the financial asset or liability is classified is determined based on the lowest level of significant input to the fair value measurement. The financial assets and liabilities measured at fair value in the statement of financial position are grouped into the fair value hierarchy as follows:

Financial assets at fair value as at December 31, 2018

	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Total</u>
Assets				
Pooled fund	\$ -	\$ 126,419,604	\$ -	\$ 126,419,604

There were no transfers between the three levels between December 31, 2017 and December 31, 2018.

Financial assets at fair value as at December 31, 2017

	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Total</u>
Assets				
Pooled fund	\$ -	\$ 119,713,036	\$ -	\$ 119,713,036

The methods and valuation techniques used for the purpose of measuring fair value are unchanged compared to the previous reporting period.

There were no transfers between the three levels between December 31, 2016 and December 31, 2017.

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# Halifax Regional Water Commission

## Employees' Pension Plan

### Notes to the financial statements

December 31, 2018

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#### 12. Capital management

The Plan defines its capital as the deficiency of the Plan, as determined annually based on the fair value of net assets and actuarial liabilities, provided by the actuarial valuation prepared by the Plan's independent actuary (note 5).

The overall objectives in investing the assets of the Plan are to ensure sufficient liquidity to support its financial obligations, to continue to provide benefits in the best interest of its members, to remain financially self-sufficient and to preserve and enhance the value of capital through adequate diversification in high quality investments and achieve the highest investment return that can be obtained with the assumption of an acceptable degree of risk. The Plan holds units with the HRM Master Trust which has formal policies and procedures that establish asset mix, require diversification within different categories, set a limit on the exposure to individual investments and provides a requirement to use A-rated counterparties.

DRAFT

**TO:** Darlene Fenton, Chair and Members of the Halifax Regional Water Commission Board

**SUBMITTED BY:** Original Signed By:  
Cathie O'Toole, MBA, CPA, CGA, ICD.D, Director, Corporate Svcs.

**APPROVED:** Original Signed By:  
Carl Yates, M.A.Sc., P.Eng., General Manager

**DATE:** June 8, 2019

**SUBJECT:** **Halifax Regional Water Commission (HRWC) Employees' Pension Plan January 1, 2019 Actuarial Valuation**

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### **ORIGIN**

N.S. Pension Benefits Act: Board motion of January 1, 2019

### **RECOMMENDATION**

It is recommended the Board approve the recommendations contained in the "Report on Actuarial Valuation (hereinafter called the "Valuation") as at January 1, 2019", including:

1. Approve changing the employer and employees' rate of pension current service contributions effective immediately upon updating the payroll software to accommodate, and retroactive to January 1, 2019;

and

2. Endorse the release the Actuarial Report to the Pension and Benefits Committee, and to all employee groups.

### **BACKGROUND**

Section 13(1) Pension Benefits Regulations requirement for defined benefit pension plans to file an actuarial valuation report and Cost Certificate every three years.

**DISCUSSION**

At the January 31, 2019 meeting of the HRWC's Board of Directors, the Board was asked to approve the assumptions to be used in the January 1, 2019 Valuation for the HRWC Employees' Pension Plan (hereinafter called the "Plan"). Key actuarial assumptions, such as the discount rate and mortality table, were not changing compared to the previous Valuation (January 1, 2016); the expectation was final Valuation conclusions would not result in significant changes to required Plan contributions for Halifax Water, or its employees. In its role as Trustee of the Plan, the HRWC Board of Directors approved the assumptions to be used in the January 1, 2019 Valuation, as well as the results derived from the Valuation.

On June 6, 2019 HRWC's actuary, Eckler Ltd., released its "Report on the Actuarial Valuation as at January 1, 2019" (see attached). A summary of the financial results can be found immediately following the Table of Contents of the full report, the highlights of which are outlined below:

**Going Concern Financial Position:**

The Plan has seen a significant improvement from the last valuation having gone from a deficit position of \$7.6 million in 2016 to a surplus position of \$2.1 million for 2019, resulting in a funded status of 101.7%. The last time the Plan experienced a surplus was January 1, 2000. The Plan was re-designed in January, 2016 with a view to improve its financial position, and sustainability over the long-term. Another contributing factor to the success is the improved investment performance, particularly in 2016 and 2017, of the Halifax Regional Municipality Pension Plan Master Trust, in which the Plan's funds are co-mingled.

<b>Going Concern Financial Position</b>	<b>January 1, 2016</b>	<b>January 1, 2019</b>
Going concern value of assets	100,434,400	126,429,100
Going concern liability	(108,055,300)	(124,371,400)
Going concern excess / (unfunded liability)	(7,620,900)	2,057,700

**Solvency Financial Position:**

The Plan received a solvency funding exemption effective June 1, 2015, however the calculation of the solvency ratio is still relevant. Under Nova Scotia pension legislation, should the solvency ratio fall below the 85% threshold, the Plan would be required to file a valuation within one (1) year, rather than the usual three (3) year period. The solvency ratio for the Plan as at January 1, 2019 is 97.3%, therefore the next actuarial valuation is not required until January 1, 2022.

## ITEM # 4.3

HRWC Board

June 20, 2019

Solvency Financial Position	January 1, 2016	January 1, 2019
Market value of assets	100,434,400	126,429,100
Present value of special payments	3,871,800	0
Estimated wind-up expenses	(200,000)	(250,000)
Solvency assets	104,106,200	126,179,100
Solvency liabilities	(106,610,600)	(129,681,300)
Solvency excess / (deficiency)	(2,504,400)	(3,502,200)

### Funding Requirements:

- **Current Service Contributions**  
The combined current service rates will increase slightly to 20.68% from 20.50%. Employees' contributions in 2019 would be 10.34% of pensionable earnings, which would be matched by the Halifax Water. Prior to January 1, 2019 employees' contributions were 10.65%, with the Plan sponsor matching up to 9.85%.
- The unfunded liability special payment of \$825,500 annually required for the Plan, identified in the January 1, 2016 Actuarial Valuation, will be no longer be required. This is a direct result of the Plan reporting an actuarial surplus on a going concern basis (see above).

Funding Requirements (annualized)		January 1, 2019
	% of Payroll	\$
Estimated contributory payroll for 2019 service		28,124,700
Total value of benefits for active Members	20.68%	5,816,200
Employee contributions (from active Members)	10.34%	2,908,100
Matching employer contributions	10.34%	2,908,100
Minimum special payments in 2019 towards amortization of unfunded actuarial liabilities		\$0
Total employer cost in 2019		\$2,908,100

### Communications:

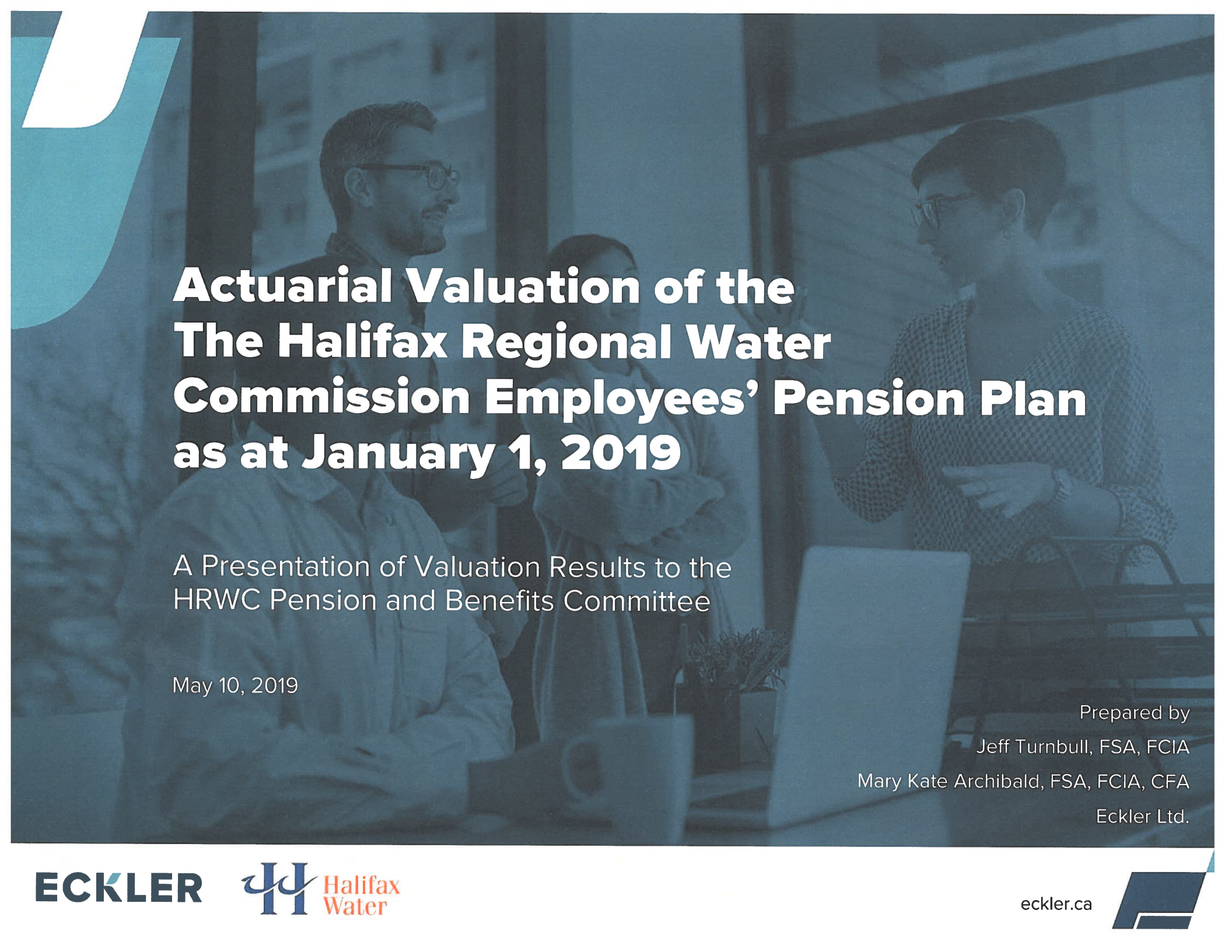
The communication strategy with respect to the Plan (and Valuation) will include the release of the Valuation to the Pension and Benefits Committee, and to all employee groups. This will be supplemented with scheduled Plan sessions at various Halifax Water facilities in August and September to provide employees with an update to the Plan on a face-to-face basis, as well as keep them apprised of upcoming changes in pension plan funding requirements in Nova Scotia.



**ATTACHMENT**

Report on the Actuarial Valuation as at January 1, 2019

Report Prepared by:	<i>Original Signed By:</i>
	_____ Allan Campbell, B.Comm, CPA, CMA Manager, Finance, 902-490-4288



# **Actuarial Valuation of the The Halifax Regional Water Commission Employees' Pension Plan as at January 1, 2019**

A Presentation of Valuation Results to the  
HRWC Pension and Benefits Committee

May 10, 2019

Prepared by  
Jeff Turnbull, FSA, FCIA  
Mary Kate Archibald, FSA, FCIA, CFA  
Eckler Ltd.

**ECKLER**



eckler.ca





# Quality Assurance

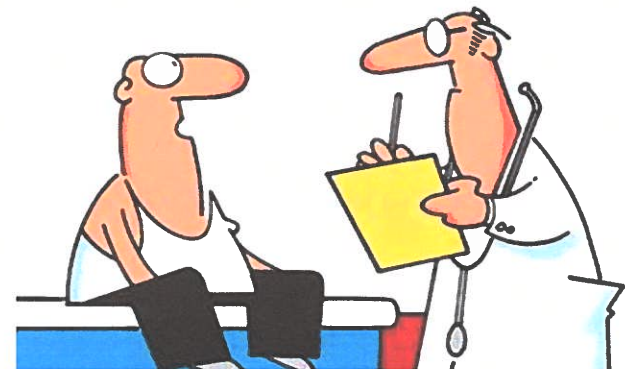
Not valid without commentary

# Snapshot

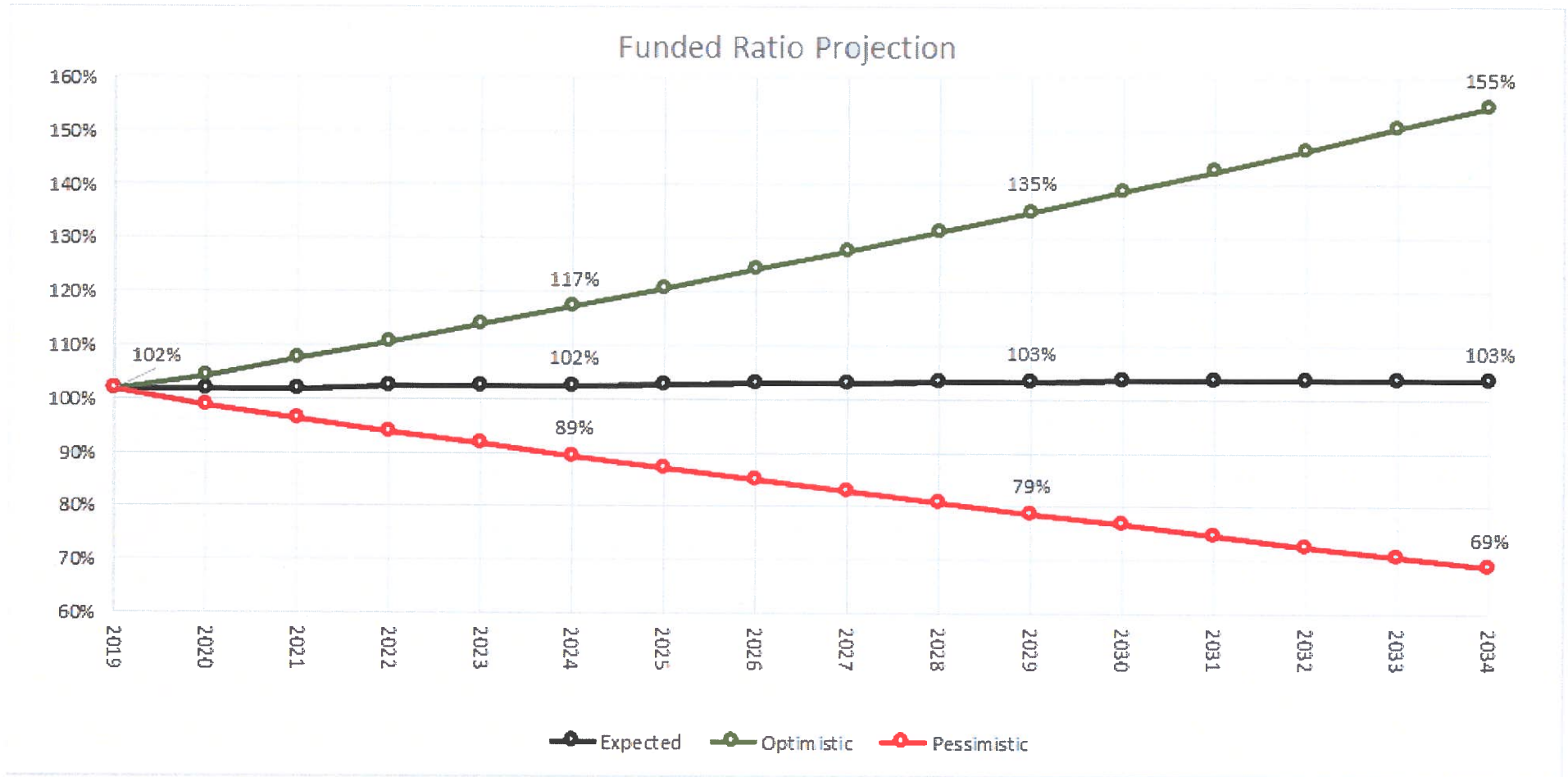
- Defined Benefit Pension Plan
- At January 1, 2019:
  - 420 Active Members
    - Average age is 42.8 years
  - 11 Members on LTD
    - Average age is 57.8 years
  - 145 pensioners (including survivors)
    - Average age is 70.5 years
  - \$126.4 million in assets
  - \$6.2 million in contributions (2018)
  - \$3.8 million in pension payments (2018)

# Valuation Objectives

- Determine the health of the Plan
  - Going concern and wind-up / solvency funded positions
- Determine future contribution requirements
  - Current service cost (future service)
  - Deficit funding (past service)
- Meet statutory filing requirements
  - CRA (to maintain tax status)
  - Provincial (to ensure Plan is being funded)



# Valuation is a Snapshot



# Modeling a Plan Member ...

- \$20,000 per year in 1989 ...
- Starts at age 30 ...
- What does life hold?



*A pension of \$37,000 per year  
starting at age 60*

# Membership Profile

## Active Members

	Number	Average Age	Average Credited Service	Expected Salary, Next Year	Average Accumulated Contributions
Jan 1, 2019	420	42.8	8.9	\$66,964	\$56,010
Jan 1, 2016	360	42.9	8.9	\$66,676	\$51,030
Jan 1, 2014	351	42.3	8.6	\$61,062	\$41,976

## Pensioners/Survivors

	Category	Number	Average Age	Average Monthly Pension
Jan 1, 2019	Pensioners	114	68.4	\$2,641
	Survivors	31	77.9	\$910
Jan 1, 2016	Pensioners	103	68.4	\$2,544
	Survivors	27	79.6	\$960
Jan 1, 2014	Pensioners	92	67.8	\$2,451
	Survivors	28	79.9	\$946



# Key Assumptions

Economic assumptions	Used in the 2019 valuation
Investment return (or discount rate)	5.80% per annum
Indexing	2.00% per annum <sup>1</sup> 1.00% per annum <sup>2</sup>
Increases in pensionable earnings	3.90% per annum
Demographic assumptions	
Termination of employment	None assumed
Retirement age	60% at the earliest age eligible for an unreduced pension (e.g., Rule of 85), and 40% at age 65
Mortality	None prior to retirement; in accordance with CPM 2014 Combined Mortality Table (CPM-2014) with CPM Improvement Scale B (CPM-B) in the post-retirement period

<sup>1</sup> Pensions earned up to January 1, 2016 are indexed at the rate of change in the Consumer Price Index to a maximum of 2% per annum.

<sup>2</sup> Pensions earned after December 31, 2015 are indexed at the rate of change in the Consumer Price Index to a maximum of 1% per annum. Our assumption for indexing effectively assumes that inflation will exceed 2%.

# Secondary Assumptions

Economic assumptions	Used in the 2019 valuation
Maximum Pension (service prior to 2016)	\$3,026 for 2019 retirements
Maximum Pension (service after 2015)	\$2,819 for 2019 retirements
Rate of increase in the maximum pension	For service prior to 2016, 3.00% per annum. For service after 2015, 0% per annum until 2023 and 1% thereafter
Demographic assumptions	
Percent married	100% for active members Actual marital status for pensioners
Age of spouse	Male spouses are assumed to be three years older than their female counterparts

# Balance Sheet

	January 1, 2016		January 1, 2019	
	Going Concern	Solvency	Going Concern	Solvency
<b>Assets</b>				
Market value of assets as at valuation date:	\$100,434,400	\$100,434,400	\$126,429,100	\$126,429,100
Wind-up expenses:	n/a	(200,000)	n/a	(250,000)
<b>Actuarial value of assets:</b>	<b>\$100,434,400</b>	<b>\$100,234,400</b>	<b>\$126,429,100</b>	<b>\$126,179,100</b>
<b>Liabilities</b>				
Active members:	\$56,183,300	\$50,151,700	\$64,565,300	\$65,211,900
LTD members:	3,900,100	4,620,300	3,947,600	4,801,200
Member pensions:	43,970,100	47,586,600	50,685,100	54,263,500
Survivor pensions:	2,746,200	2,932,100	3,497,600	3,687,000
Deferred pensions:	843,000	907,300	1,127,800	1,430,700
Additional voluntary contributions *	412,600	412,600	548,000	548,000
<b>Total liabilities:</b>	<b>\$108,055,300</b>	<b>\$106,610,600</b>	<b>\$124,371,400</b>	<b>\$129,942,300</b>
Surplus / (deficit) before special payments:	(\$7,620,900)	(\$6,376,200)	\$2,057,700	(\$3,763,200)
Present value of special payments (solvency only):	n/a	3,871,800	n/a	n/a
<b>Actuarial surplus / (deficit):</b>	<b>(\$7,620,900)</b>	<b>(\$2,504,400)</b>	<b>\$2,057,700</b>	<b>(\$3,763,200)</b>
<b>Funded Ratio / Solvency Ratio</b>	<b>92.9%</b>	<b>94.2%</b>	<b>101.7%</b>	<b>97.3%</b>

\* Includes Conversion Accounts

# Sources of Gain/Loss Since Previous Valuation

Reconciliation of Going Concern Excess / (Unfunded Liability)	
<b>Going Concern Excess / (Unfunded Liability) at January 1, 2016</b>	<b>(\$7,620,900)</b>
<b>Add:</b>	
Investment income greater than expected	2,724,600
Special payments plus interest	2,696,900
Salary increases less than assumed in valuation	4,563,100
Pension indexing less than assumed in valuation	755,100
Pensioner mortality experience	1,145,300
<b>Deduct:</b>	
Interest on unfunded liability at valuation rate	(1,404,400)
Termination experience	(314,200)
Retirement experience	(210,100)
Miscellaneous sources of gain / (loss)	(277,700)
<b>Going Concern Excess / (Unfunded Liability) at January 1, 2019</b>	<b>\$2,057,700</b>

# Funding Requirements

Current Service Cost for Year Following Valuation	January 1, 2016		January 1, 2019	
	%	\$	%	\$
<b>Funding</b>				
Estimated contributory payroll for year following valuation		\$24,003,500		\$28,124,700
Total value of benefits for actives	20.50%	4,918,800	20.68%	5,816,200
Employee contributions (from active members)	10.65%	2,555,400	10.34%	2,908,100
Employer contributions	9.85%	2,363,400	10.34%	2,908,100
<b>Minimum Special Payments</b>				
January 1, 2014 unfunded liability special payment	3.44%	\$825,500	n/a	n/a
<b>Total employer cost:</b>	<b>13.29%</b>	<b>\$3,188,600</b>	<b>10.34%</b>	<b>2,908,100</b>

# Summary

- Employee Current Service Contributions revised:
  - From 10.65% of payroll to 10.34% of payroll
- Employer Current Service Contributions revised:
  - From 9.85% of payroll to 10.34% of payroll
- Special payments in respect of going concern liabilities are no longer required (i.e., fully funded)
- Next Valuation is due effective no later than January 1, 2022
  - “Solvency Concerns” requires annual valuation if Solvency Funded Ratio is < 85% (current ratio: 97.3%)

# DB Pension Update/Trends

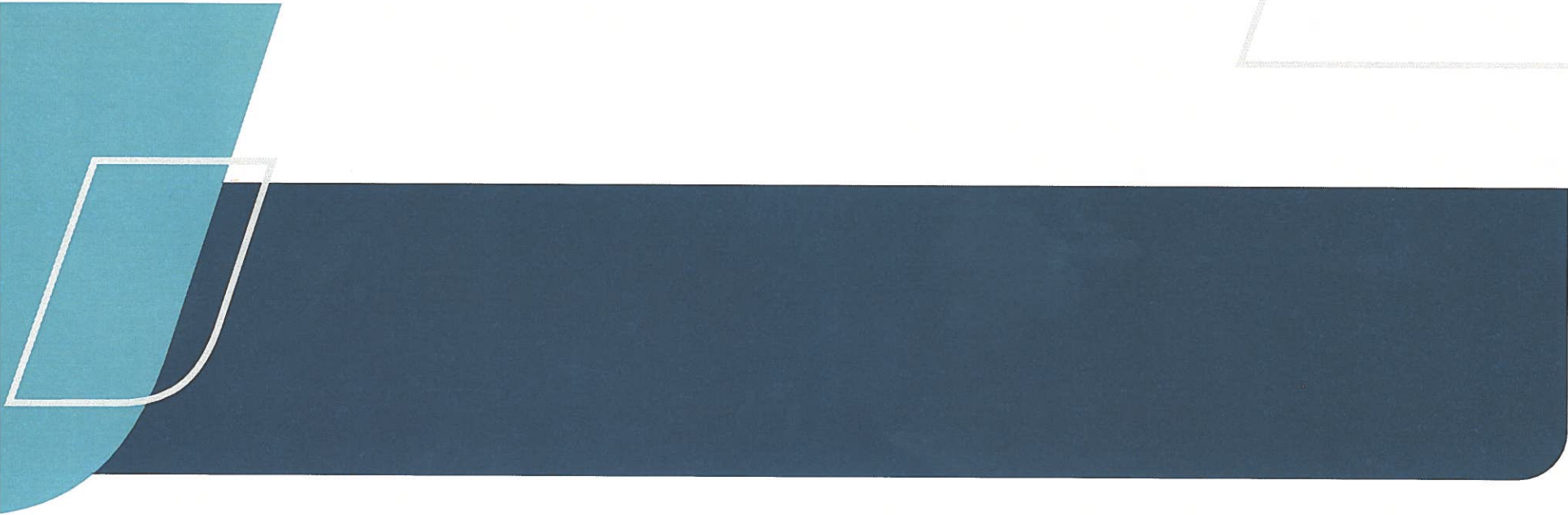
- Bill 109 - New N.S. Pension Legislation
  - Amendment to the Pension Benefits Act
- Accompanying Regulations to Follow
  - Likely will include something in response to the Funding Framework Review
  - Strengthened Going Concern Funding?
  - e.g., fund to 110%-120% or have more conservatism in assumptions
- Many DB Plans are considering change to reflect CPP changes
  - Many in DB Plans already have adequate replacement rates
  - CPP costs are increasing over next few years

# Questions





**ECKLER**



**TO:** Darlene Fenton, Chair, and Members of the Halifax Regional Water Commission Board

**SUBMITTED BY:** *Original Signed By:*  
\_\_\_\_\_  
Cathie O’Toole, MBA, CPA, CGA, ICD.D, Director of Corporate Services

**APPROVED:** *Original Signed By:*  
\_\_\_\_\_  
Carl Yates, M.A.Sc., P.Eng., General Manager

**DATE:** June 13, 2019

**SUBJECT:** **Group Extended Health Plan Enhancements and Annual Renewal**

---

### **ORIGIN**

Halifax Water’s Group Extended Health Plan (hereinafter called the “Plan”) and Annual Renewal.

### **RECOMMENDATION**

This is to recommend that effective August 1, 2019, Halifax Water enhance the current Plan to include the following:

- Add Glucose Monitoring Systems
- Increase the calendar year maximum from \$400 to \$600 for Speech Therapist, Psychologist, Occupational Therapist and Chiropracist/Podiatrist
- Extended Health Benefit maximums do not change for retirees after the age of 65

### **BACKGROUND/DISCUSSION**

Plan members have formally requested the Pension and Benefit Committee consider adding Continuous Glucose Monitoring systems, increasing the calendar year maximum from \$400 to \$600 for Speech Therapist, Psychologist, Occupational Therapist and Chiropracist/Podiatrist, and that the maximums on Extended Health Benefits do not change for retirees after the age of 65.

**ITEM # 5**  
**HRWC Board**  
**June 20, 2019**

It was confirmed by Medavie Blue Cross that these benefits are eligible to be added to the Plan at an additional cost of 1.33% annually.

The current Plan has been in a surplus state for the past several years. The recent annual renewal was completed and results showed that our plan members continue to generate surplus in the plan. The total surplus in the plan is currently \$450,350 or 32% of deposits. The recommended surplus for rate stabilization is 25% in surplus or \$347,000. It was therefore recommended by the Pension and Benefit Committee, and approved by all three employee groups (CUPE Local 1431 , CUPE Local 227 and Non-Union), that the above noted enhancements would be funded by increasing rates by 1.00%, with the remaining 0.33% being absorbed through surplus.

The results from the recent annual renewal also suggest that the rates for the medical and travel components increase in line with the suggested annual trend factor. It is recommended that group medical rates increase by 3.0% and travel rates increase by 5.0% for an overall renewal increase of 2.4%. Dental rates would remain unchanged.

The total increase to add the plan enhancements, along with the recommended annual renewal rate increase, would be 3.4% increase to the plan.

**BUDGET IMPLICATIONS**

The impact on the 2019/20 operating budget as a result of these changes would be an increase in costs of approximately \$9600. Any impact on future budgets cannot be determined, as the Plan is negotiated annually and subject to decision-making regarding funding alternatives.

**ALTERNATIVES**

Maintain the status quo for services

Report Prepared by: \_\_\_\_\_  
*Original Signed By:*  
Rochelle Bellemare, Manager, Human Resources, 902-490-4807

Financial Reviewed by: \_\_\_\_\_  
*Original Signed By:*  
Cathie O'Toole, MBA, CPA, CGA, ICD.D, Director, Corporate Services  
902-490-3685

**TO:** Darlene Fenton, Chair and Members of the Halifax Regional Water Commission Board

**SUBMITTED BY:** *Original Signed By:*  
\_\_\_\_\_  
Jamie Hannam, P. Eng.  
Director, Engineering & Information Services

**APPROVED:** *Original Signed By:*  
\_\_\_\_\_  
Carl Yates M.A.Sc., P. Eng., General Manager

**DATE:** June 18, 2019

**SUBJECT:** **Quarry Road Integrated Project Additional Funding  
Component - Water**

---

**ORIGIN**

2019-2020 Capital Budget – Integrated Projects

**RECOMMENDATION**

The Halifax Water Board approve additional funding in the amount of \$193,000 for the water component of the Quarry Road Integrated Project for a total revised cost of \$464,000.

**BACKGROUND & DISCUSSION**

The Quarry Road Integrated project includes the renewal of water, wastewater and stormwater assets, and received funding approval earlier this year. The project was recently tendered by HRM. Based on the low bid, additional funding is required for the water component of the project. It is worth noting that the total water, wastewater, and stormwater projects combined is approximately equal to the original funding approval cost estimate.

A total of \$271,000 was previously approved for the water portion of the integrated project. An additional \$193,000 is requested to complete the work.

**BUDGET IMPLICATIONS**

Funding in the amount of \$70,000 is available from SAP #3-2611 Bennery Low Lift VFD Pump (project was recently completed under budget). An additional \$123,000 is available from the water component of the proposed Romans Federal Sewer Separation Project. This project was identified in the 2019-2020 Capital Budget; however, based on the current design process is trending towards 2020 construction. Additional funds for this project will be included within the 2020/2021 Capital Budget if required.

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 "Ensures integrity and safety".

**ATTACHMENT**

Cost Share Estimate

Report Prepared by: *Original Signed By:*  
Tom Gorman, Manager, Water Infrastructure 902-490-4176

Financial Reviewed By: *Original Signed by Allan Campbell, Manager of Finance for:*  
Cathie O'Toole, MBA, CPA, CGA, ICD.D.,  
Director of Corporate Services, 902-490-3685

Cost Estimate Quarry Road  
 Total Cost Vs Budget

Description	Cost	Budget
Water System (including Edgehill & Herbert)	\$ 339,310.00	\$ 271,000.00
Sanitary Sewer	\$ 319,022.00	\$ 474,000.00
Storm Sewer	\$ 69,744.00	\$ 57,000.00
Cost Shared Items	\$ 69,592.70	
Additional Items (Rock and Unsuitables Estimated)	\$ 30,600.00	
Sub-total	\$ 828,268.70	
I/OH (1.5%)	\$ 12,424.03	
Net HST (4.286%)	\$ 35,499.60	
Material Testing (Stantec)	\$ 15,000.00	
HRWC Staff	\$ 50,000.00	
<b>Total</b>	<b>\$ 941,192.33</b>	<b>\$ 802,000.00</b>

**WATER ONLY**

Water System	\$ 339,310.00
Cost Shared Items	\$ 34,796.35
Additional Items (Rock and Unsuitables Estimated)	\$ 15,300.00
Sub-total	\$ 389,406.35
Construction Contingency (5%)	\$ 19,470.32
Sub-total	\$ 408,876.67
I/OH (1.5%)	\$ 5,841.10
Net HST (4.286%)	\$ 16,689.96
Material Testing (Stantec)	\$ 7,500.00
HRWC Staff	\$ 25,000.00
<b>TOTAL</b>	<b>\$ 463,907.72</b>
<b>ROUNDED TOTAL</b>	<b>\$464,000.00</b>

**TO:** Darlene Fenton, Chair, and Members of the Halifax Regional Water Commission Board

**SUBMITTED BY:**

*Original Signed By:*

\_\_\_\_\_  
Cathie O'Toole, MBA, CPA, CGA, ICD.D, Director, Corporate Services

*Original Signed By:*

\_\_\_\_\_  
Reid Campbell, P.Eng. Director, Water Services

*Original Signed By:*

\_\_\_\_\_  
Susheel Arora, M.A.Sc., P.Eng. Director, Wastewater & Stormwater Services

*Original Signed By:*

\_\_\_\_\_  
Kenda MacKenzie, P.Eng. Director, Regulatory Services

**APPROVED:** *Original Signed By:*

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

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

**INFORMATION REPORT**

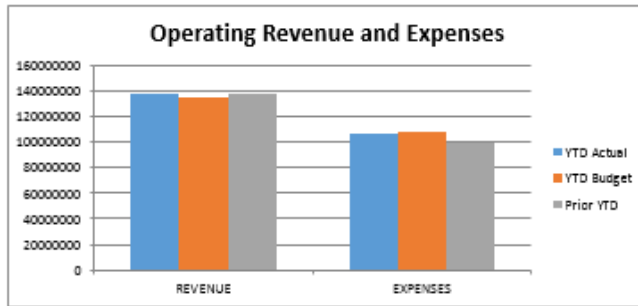
**ORIGIN:**

Regular 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.

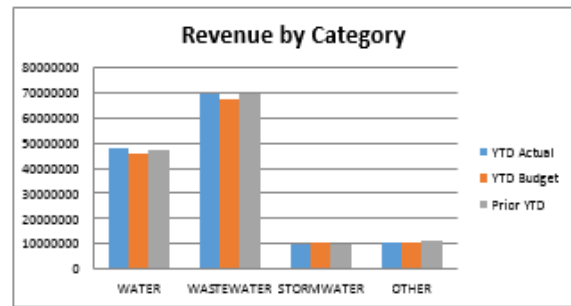
FINANCIAL

HALIFAX WATER  
 UNAUDITED FINANCIAL INFORMATION  
 APRIL 1/18 - MARCH 31/19 (12 MONTHS)  
 \*000



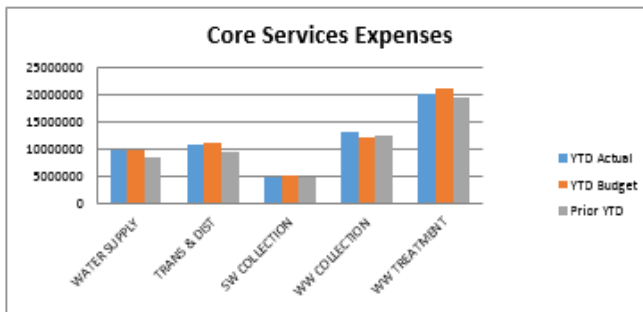
OPERATING REVENUE AND EXPENSES

	YTD Actual	YTD Budget	Prior YTD	% of Budget
REVENUE	\$138,413	\$135,182	\$138,145	102.33%
EXPENSES	\$106,731	\$108,710	\$98,437	98.13%
	<b>\$138,413</b>	<b>\$135,182</b>	<b>\$138,708</b>	<b>119.95%</b>



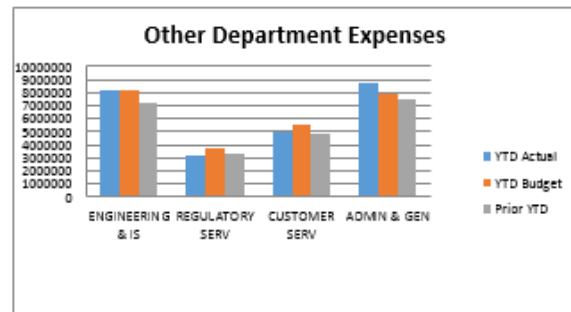
REVENUE BY CATEGORY

	YTD Actual	YTD Budget	Prior YTD
WATER	\$48,040	\$46,152	\$47,220
WASTEWATER	\$63,301	\$67,601	\$63,334
STORMWATER	\$3,741	\$10,587	\$10,015
OTHER	\$10,731	\$10,842	\$10,316
	<b>\$138,413</b>	<b>\$135,182</b>	<b>\$138,145</b>



CORE SERVICES EXPENSES

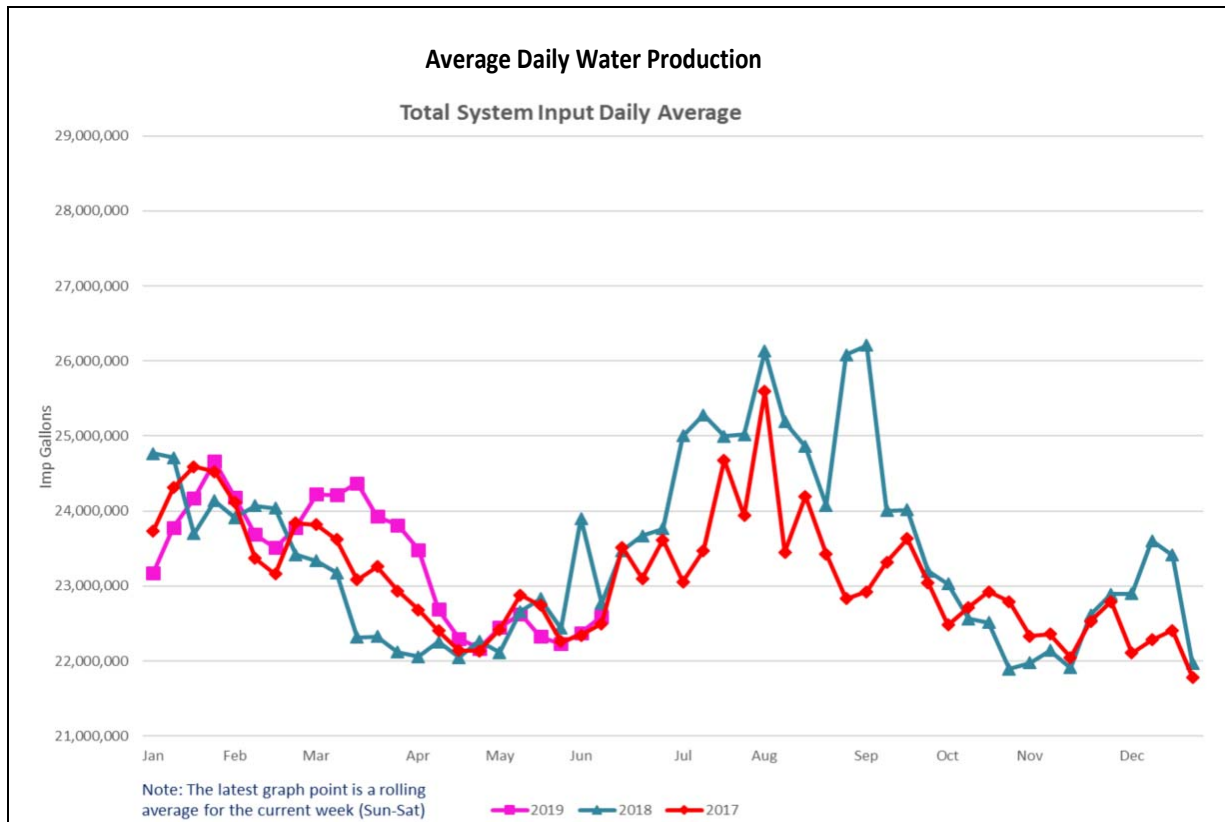
	YTD Actual	YTD Budget	Prior YTD	% of Budget
WATER SUPPLY	\$3,767	\$3,344	\$8,646	98.22%
TRANS & DIST	\$10,903	\$11,288	\$3,410	96.53%
SW COLLECTION	\$4,950	\$5,276	\$4,842	93.82%
W/W COLLECTION	\$13,125	\$12,186	\$12,642	107.71%
W/W TREATMENT	\$19,339	\$21,252	\$19,647	94.11%
	<b>\$58,744</b>	<b>\$59,945</b>	<b>\$55,186</b>	<b>98.00%</b>



OTHER DEPARTMENT EXPENSES

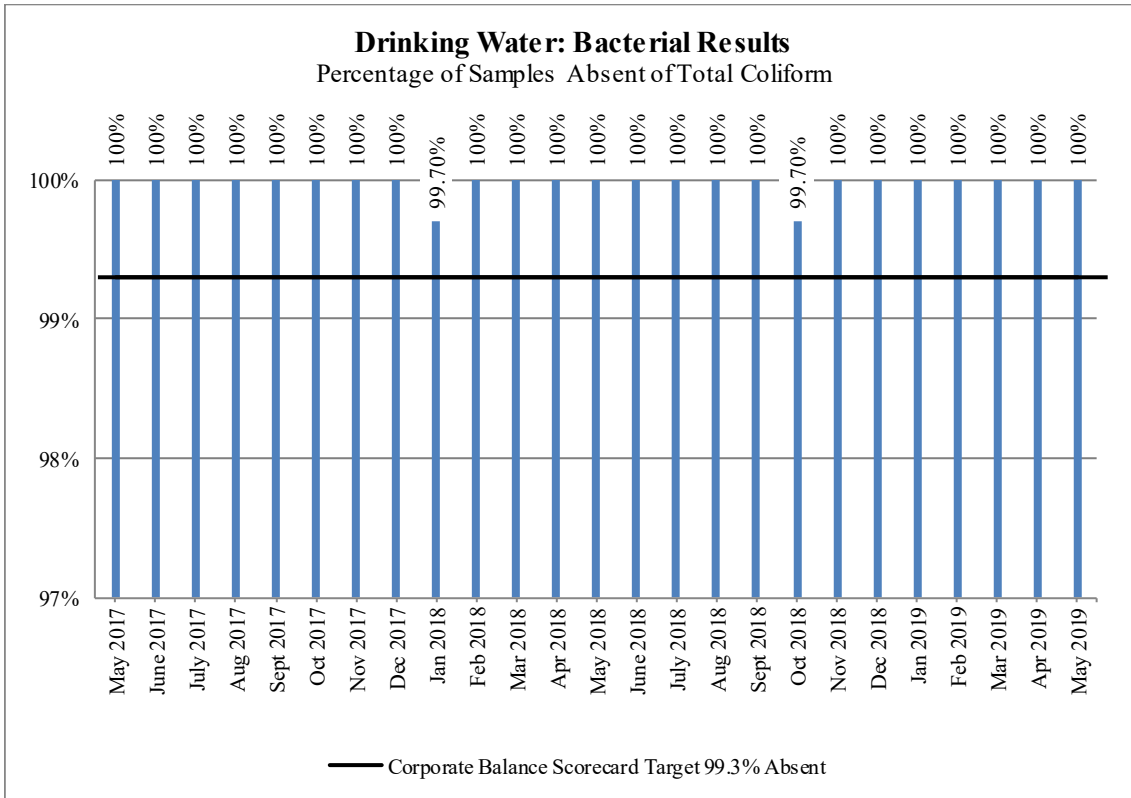
	YTD Actual	YTD Budget	Prior YTD
ENGINEERING & IS	\$8,156	\$8,177	\$7,265
REGULATORY SERV	\$3,152	\$3,763	\$3,291
CUSTOMER SERV	\$4,916	\$5,522	\$4,896
ADMIN & GEN	\$8,756	\$7,923	\$17,538
	<b>\$24,980</b>	<b>\$25,391</b>	<b>\$22,989</b>





Regional Water Main Break/Leak Data		
Year	Total Breaks/Leaks	Current 12 Month Rolling Total (up to June 2019)
2017/18	206	199
2016/17	216	
2015/16	226	
2014/15	210	
2013/14	213	
<b>Total</b>	<b>1071</b>	
<b>Yr. Avg.</b>	<b>214.2</b>	

Water Accountability
<b>Losses per Service Connection/Day (International Water Association Standard)</b>
<i>Period Ending March 31, 2019</i>
Real Losses: 171 litres
CBS Target: 180



<b>Water Quality Master Plan Objectives</b>				
<b>2018-2019 Q4</b>				
Objective	Total Sites	% Sites Achieving Target	All Sites: 90th Percentile < 15 µg/L	CBSC Awarded Points
Disinfection	66	98%	---	18
Total Trihalomethanes	25	76%	---	0
Haloacetic Acids	21	86%	---	8
Particle Removal	5	96%	---	16
Corrosion Control	69	---	3.96	20
Summary Total				62

In this report each facility is assessed using monthly or quarterly averages, depending on the averaging period specified in its Approval to Operate.

Wastewater Treatment Facility	Wastewater Treatment Facility Compliance Summary																Toxicity	Trend
	Rolling Averages - March, April and May 2019																	
	CBOD <sub>5</sub> (mg/L)		TSS (mg/L)		E. coli (counts/100mL)		pH		Ammonia (mg/L)		Phosphorous (mg/L)		TRC (mg/L)		Dissolved Oxygen (mg/L)			
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	29	40	24	5000	678	6-9	7.0	-	-	-	-	-	-	-	Not acutely lethal	Continued	
Dartmouth	50	34	40	55	5000	171	6-9	6.8	-	-	-	-	-	-	-	Not acutely lethal	Continued	
Herring Cove	50	18	40	18	5000	9	6-9	7.2	-	-	-	-	-	-	-	Not acutely lethal	Continued	
Eastern Passage	25	7	25	7	200	3	6-9	7.0	-	-	-	-	-	-	-	Not acutely lethal	Continued	
Mill Cove	25	11	25	16	200	30	6-9	7.0	-	-	-	-	-	-	-	Not acutely lethal	Continued	
Springfield	20	8	20	27	200	32	6-9	6.7	-	-	-	-	-	-	-	-	Continued	
Frame	20	7	20	1	200	21	6-9	6.6	-	-	-	-	-	-	-	-	Continued	
Middle Musq.	20	13	20	13	200	126	6-9	7.7	-	-	-	-	-	-	-	-	Continued	
Uplands	20	8	20	8	200	34	6-9	6.9	-	-	-	-	-	-	-	-	Continued	
Aerotech	5	3	5	1	200	10	6-9	7.4	5.7 W 1.2 S	3.0	0.13	0.09	-	6.5	8.2	Not acutely lethal	Continued	
North Preston	10	7	10	13	200	10	6-9	6.8	3	1.1	1.5	0.3	-	-	-	-	Continued	
Lockview	20	7	20	5	200	16	6.5-9	6.9	8.0 S	6.3	1.2 S	0.2	-	-	-	-	Continued	
Steeves (Wellington)	20	8	20	1	200	10	6.5-9	7.1	14.4 S	2.1	1.0 S	0.1	-	-	-	-	Continued	
BLT	15	7	20	20	200	16	6-9	7.0	5 W 3 S	3	3 W 1 S	2	0.02 *	0.10	-	Not acutely lethal	Continued	
Avg. of all Facilities	12		15		83		7.0		3.1		0.5		0.18		8.2			

**NOTES & ACRONYMS:**

CBOD<sub>5</sub> - Carbonaceous 5-Day Biochemical Oxygen Demand

TSS - Total Suspended Solids

\* TRC - Total Residual Chlorine - Maxxam can only measure 0.10 mg/L residual; results of 0.1 mg/L are compliant

BDL - Below Detection Limit

W / S - Winter / Summer compliance limits

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., Frame, BLT, Uplands, North

Preston, Steeves, Springfield)

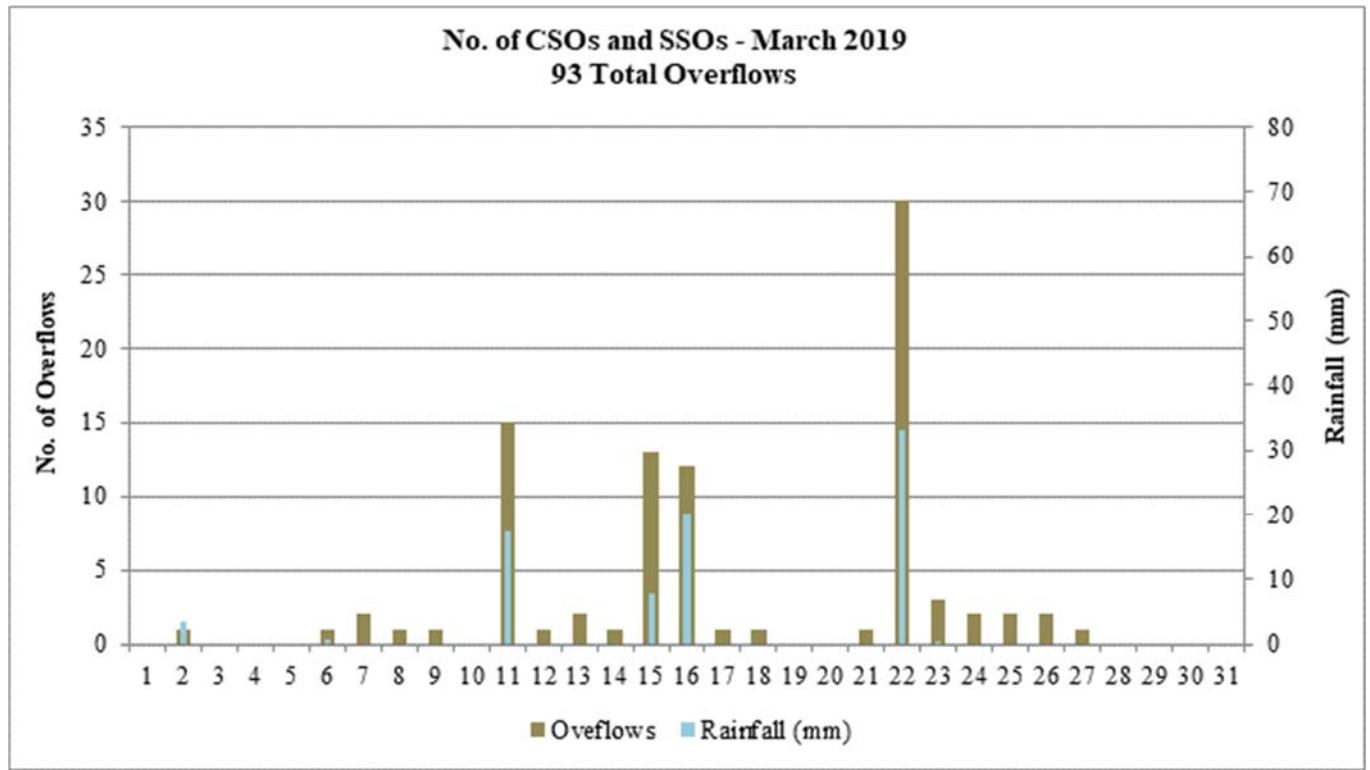
Continued - All parameters remain essentially unchanged since the last report

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

**LEGEND**

	NSE Compliant
	NSE Non-Compliant



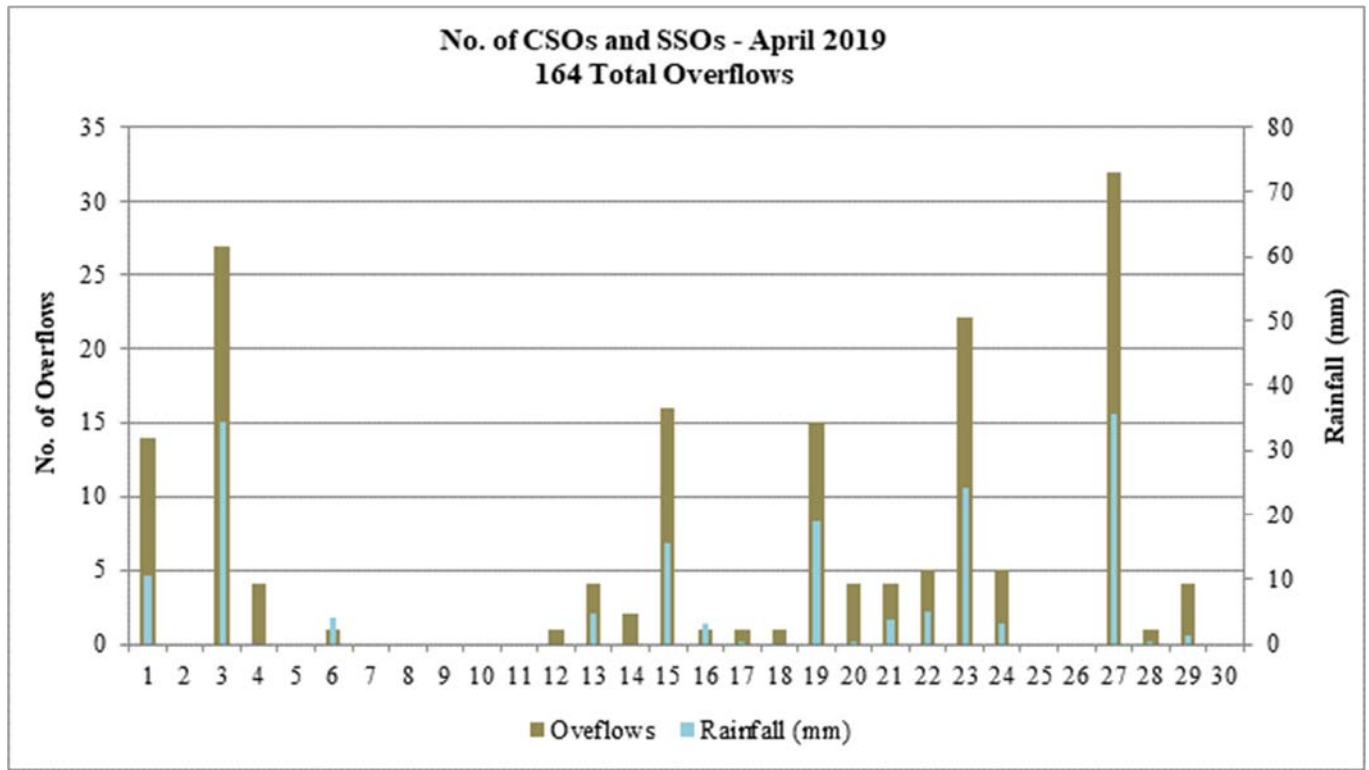
NOTES & ACRONYMS: CSO - Combined Sewer Overflow SSO - Sanitary Sewer Overflow

- Rainfall data is from Halifax Water’s rain gauge at the Halifax WWTF.
- There were thirteen overflows on days when there was no recorded rainfall, as follows:
  1. March 7: The CSOs at the Chain Rock PS & CSO were the result of blockages caused by debris.
  2. March 8: The CSO at the Chain Rock PS & CSO were the result of blockages caused by debris.
  3. March 9: The CSO at the Duffus St PS was due to rain on previous days and snow melt.
  4. March 12: The SSO at Valleyford Ave Lift Station was due to rain on the previous day.
  5. March 13: The CSO at the Duffus St PS was due to rain on previous days. The CSO at the Sackville St CSO was the result of blockages caused by debris.
  6. March 14: The CSO at the Sackville St CSO was the result of blockages caused by debris.
  7. March 17: The CSO at the Maitland St PS & CSO was due to rain on the previous da
  8. March 18: The CSO at the Chain Rock PS & CSO was the result of blockages caused by debris.
  9. March 21: The CSO at the Chain Rock PS & CSO was the result of blockages caused by debris.

# **ITEM# 1-I**

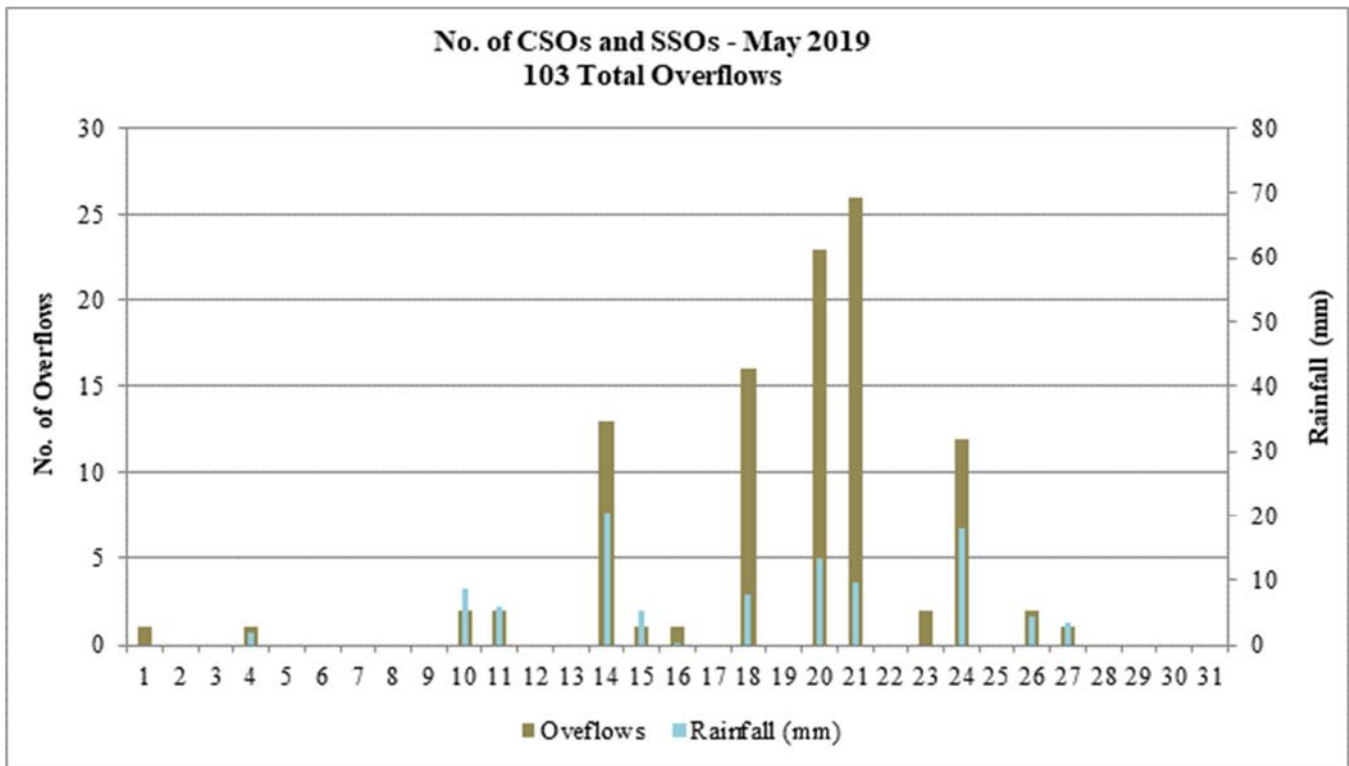
**Page 7 of 17**  
**HRWC Board**  
**June 20, 2019**

10. March 24: The CSOs at the Maitland St PS & CSO was the result of caused by debris.
11. March 25: The CSO at the Duffus St PS was due to rain on previous days. The CSO at the Maitland St PS & CSO was the result of blockages caused by debris.
12. March 26: The CSOs at the Chain Rock PS & CSO and the Maritime Museum CSO was the result of blockages caused by debris.
13. March 27: The CSO at the Chain Rock PS & CSO was the result of blockages caused by debris.



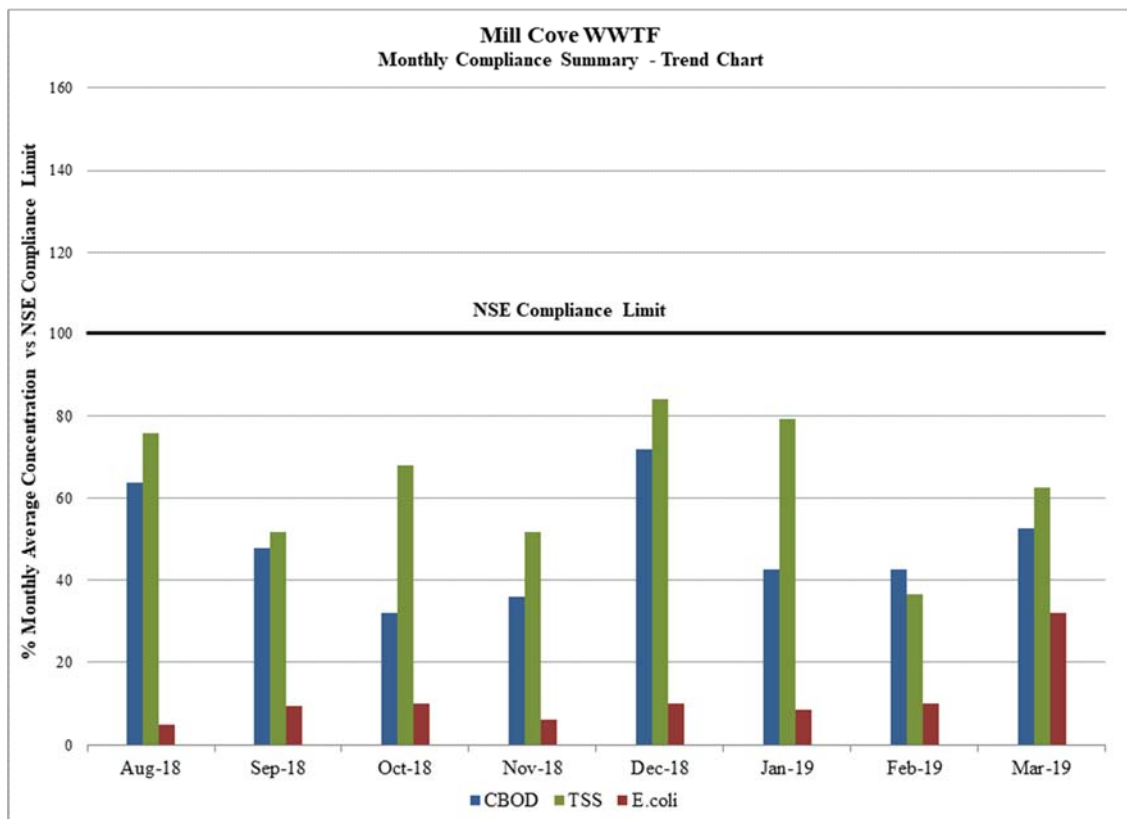
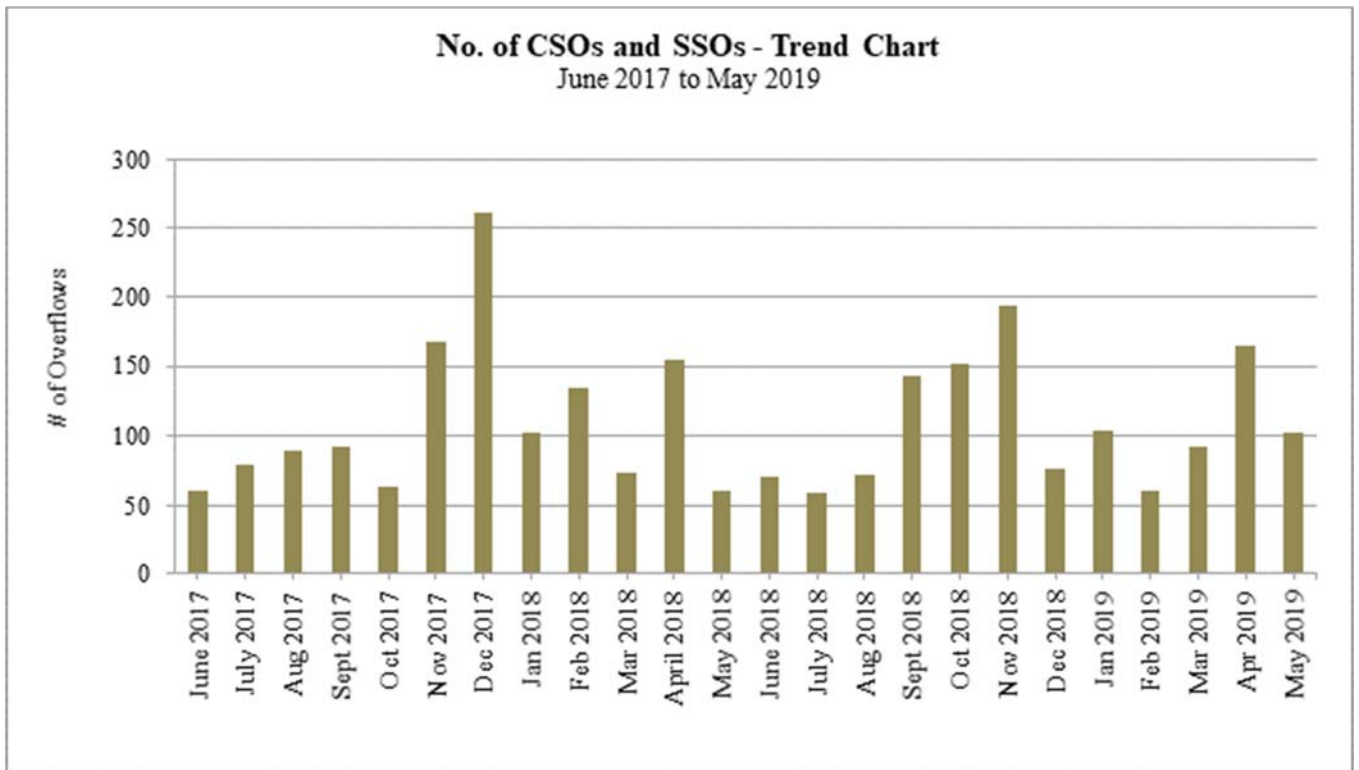
NOTES & ACRONYMS: CSO - Combined Sewer Overflow SSO - Sanitary Sewer Overflow

- 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. April 4: The CSOs at the Lyle St CSO and the Maitland St PS & CSO and the SSO at the Herring Cove PS were due to rain on the previous day.
  2. April 12: The SSO at the Amos Walter Lift Station was the result of a blockage caused by debris.
  3. April 14: The CSOs at the Sackville St CSO and the Maitland St PS & CSO were the result of blockages caused by debris.
  4. April 18: The CSO at the Sackville St CSO was the result of a blockage caused by debris.

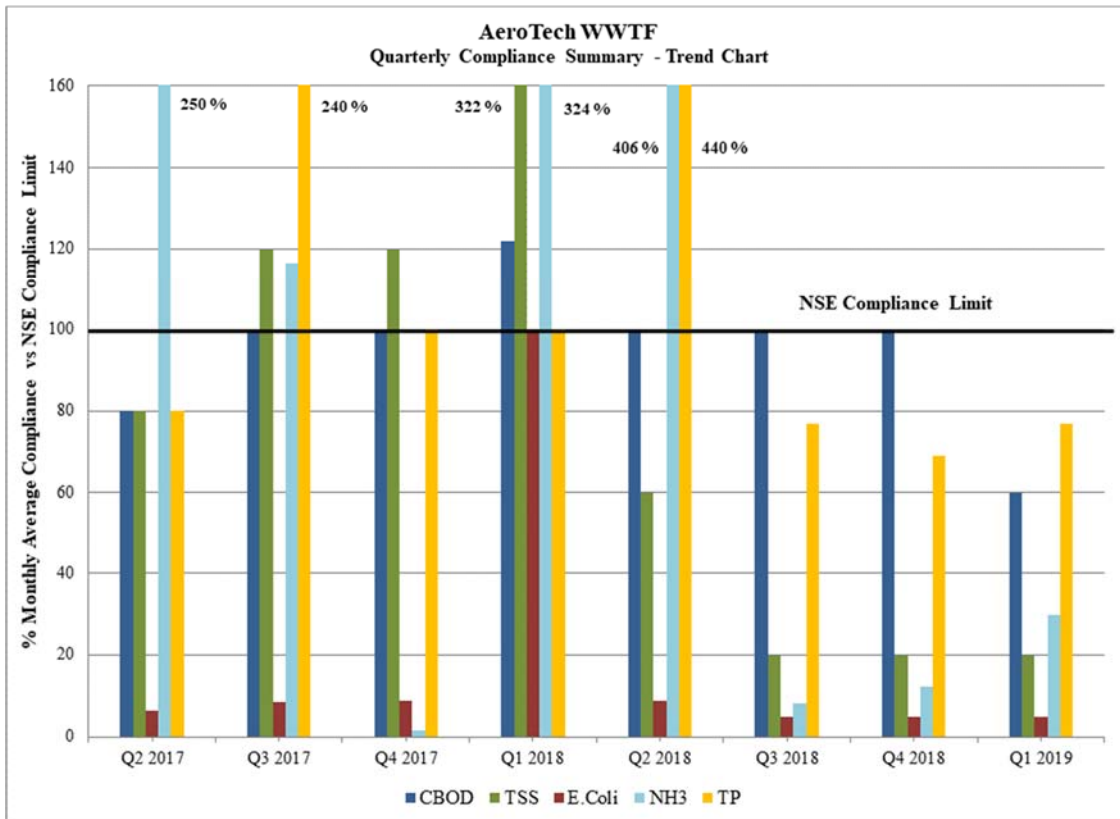


NOTES & ACRONYMS: CSO - Combined Sewer Overflow SSO - Sanitary Sewer Overflow

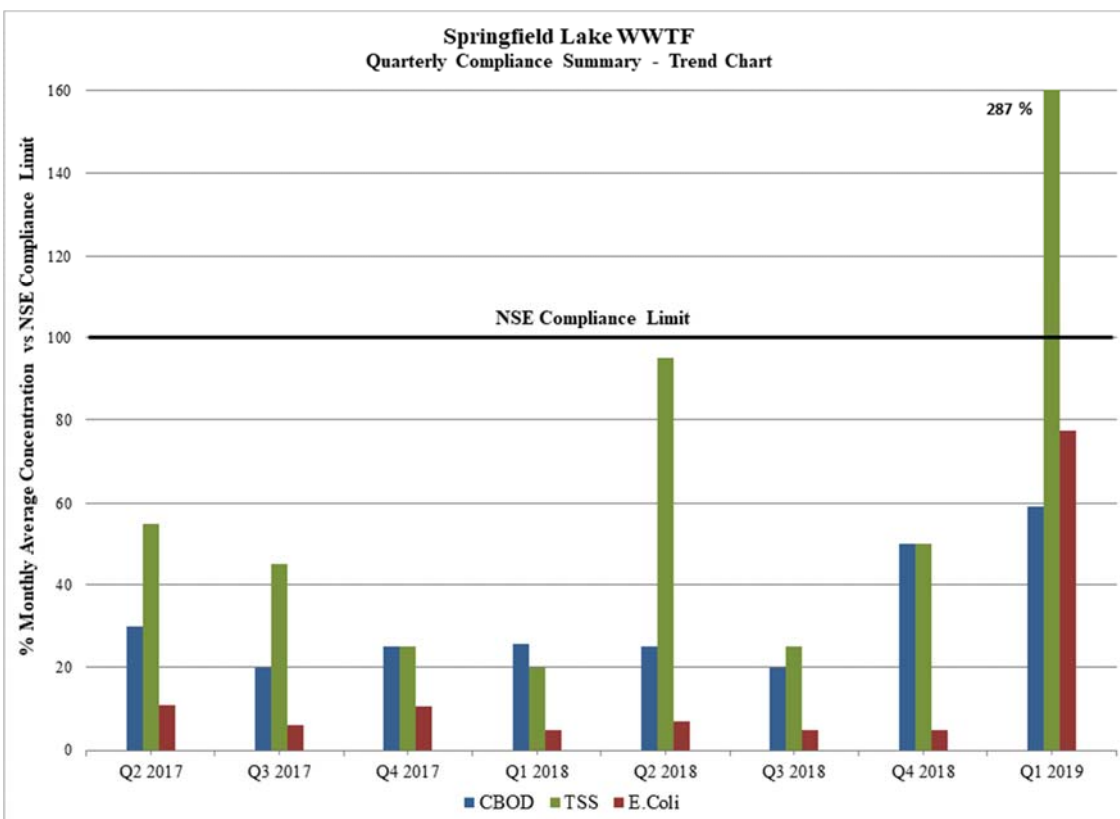
- Rainfall data is from Halifax Water’s rain gauge at the Halifax WWTF.
- There were two overflows on days when there was no recorded rainfall, as follows:
  1. May 1: The CSO at the Duffus St PS was due to rain on the previous days.
  2. May 23: The CSOs at the Duffus St PS were due to a mechanical failure of the pumping station.



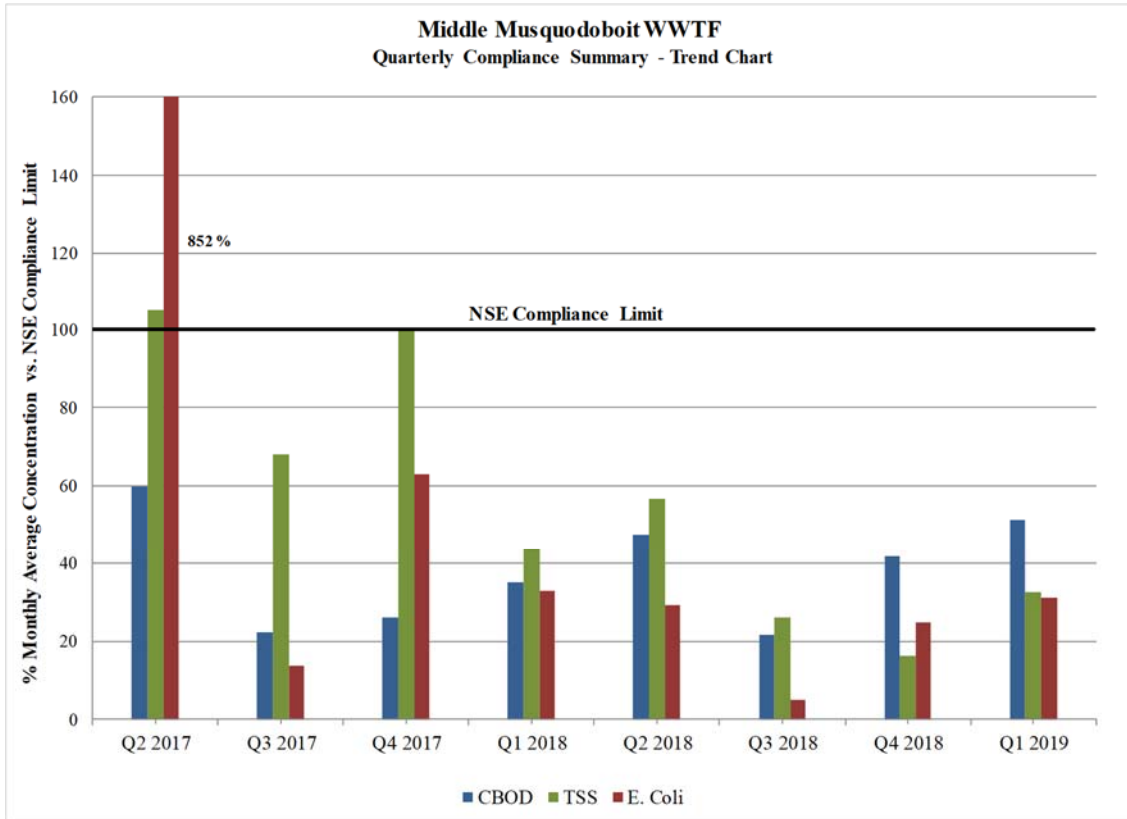




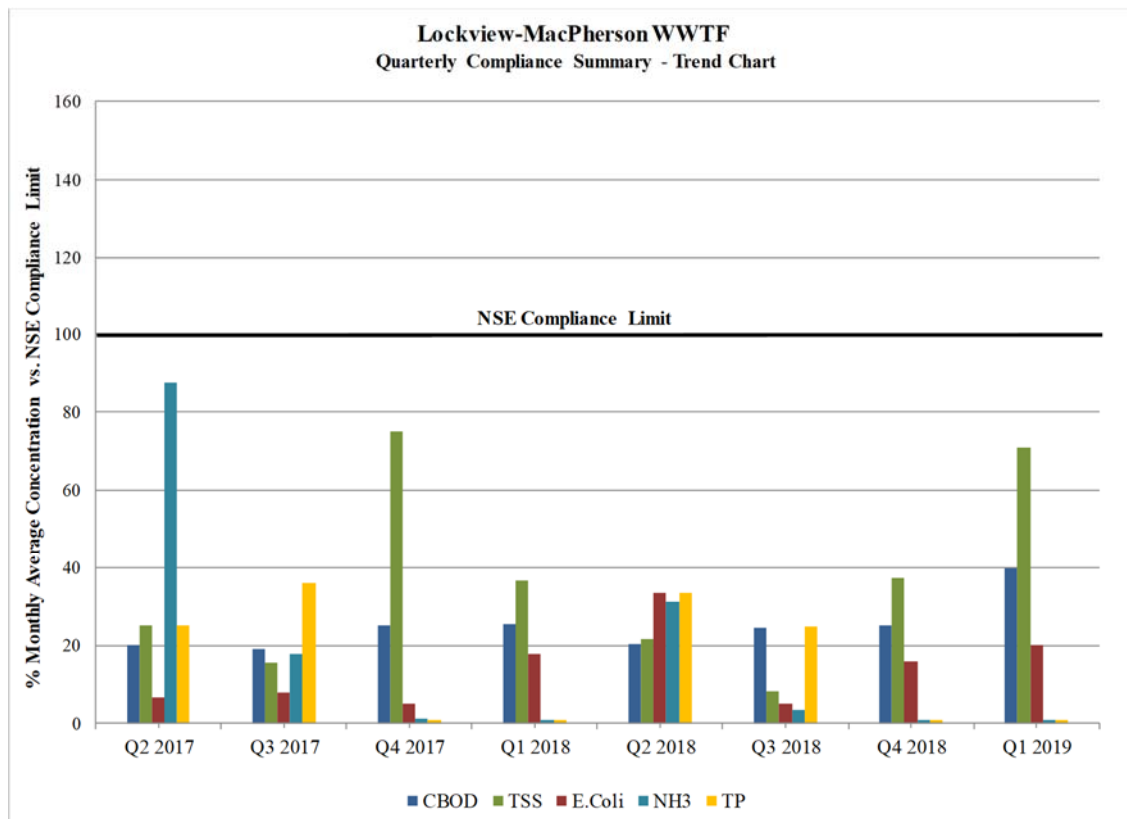
Lower numbers represent better performance.



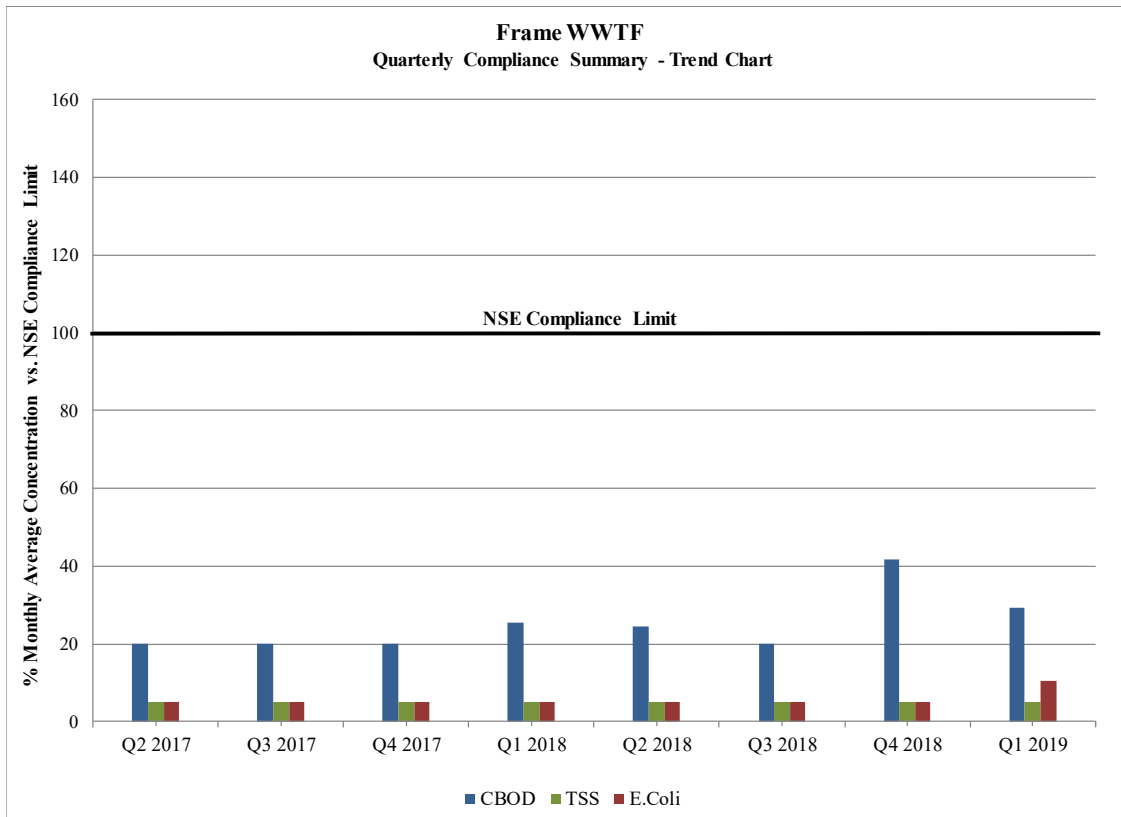
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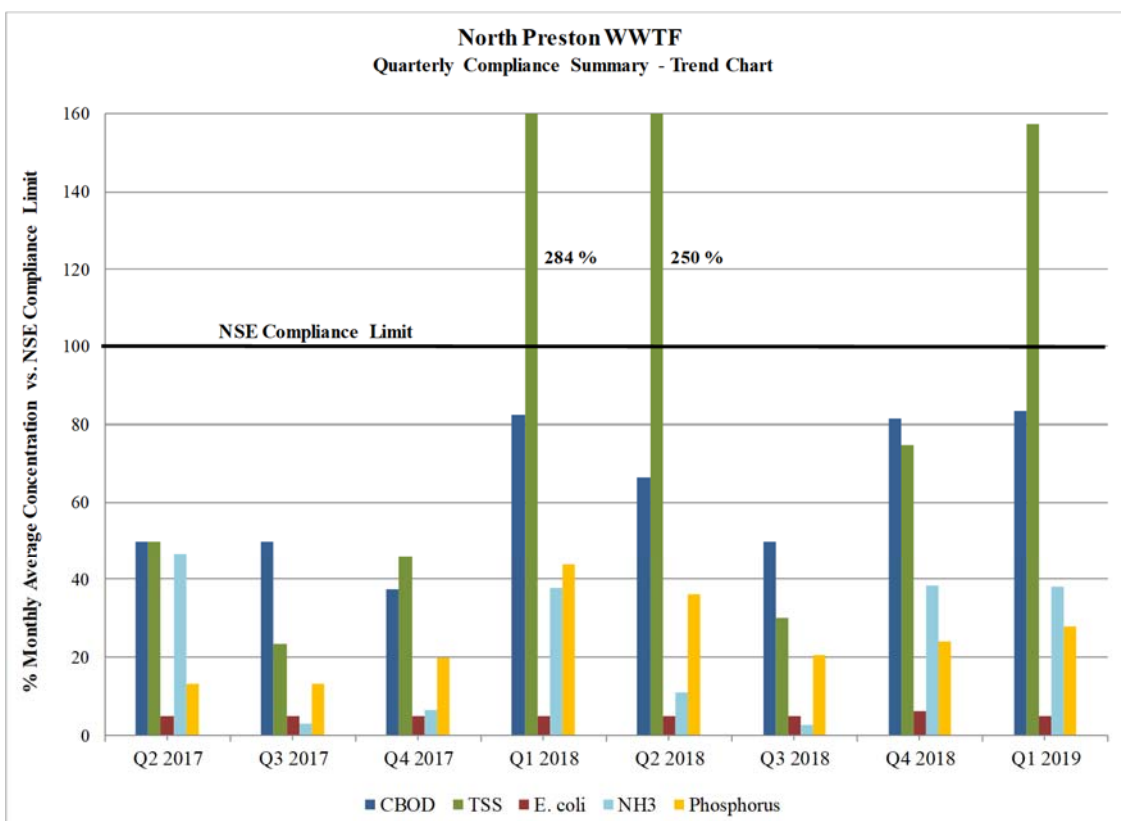
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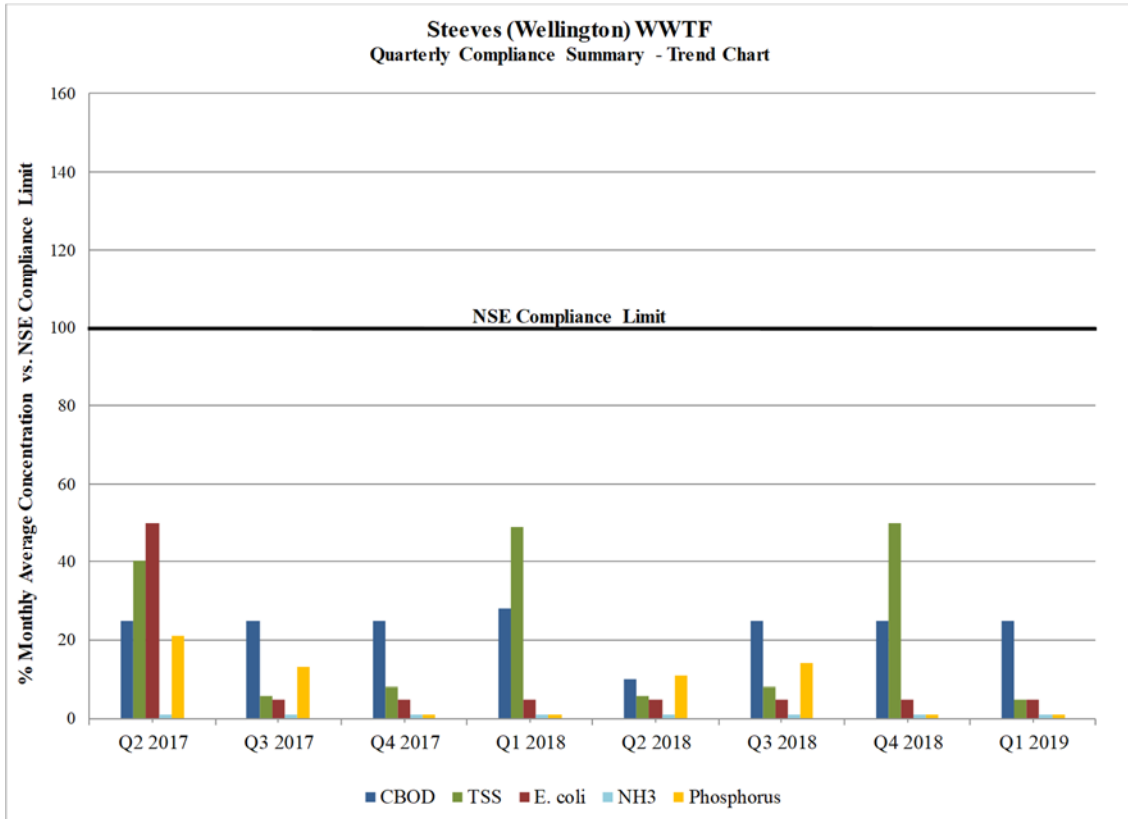
Lower numbers represent better performance.



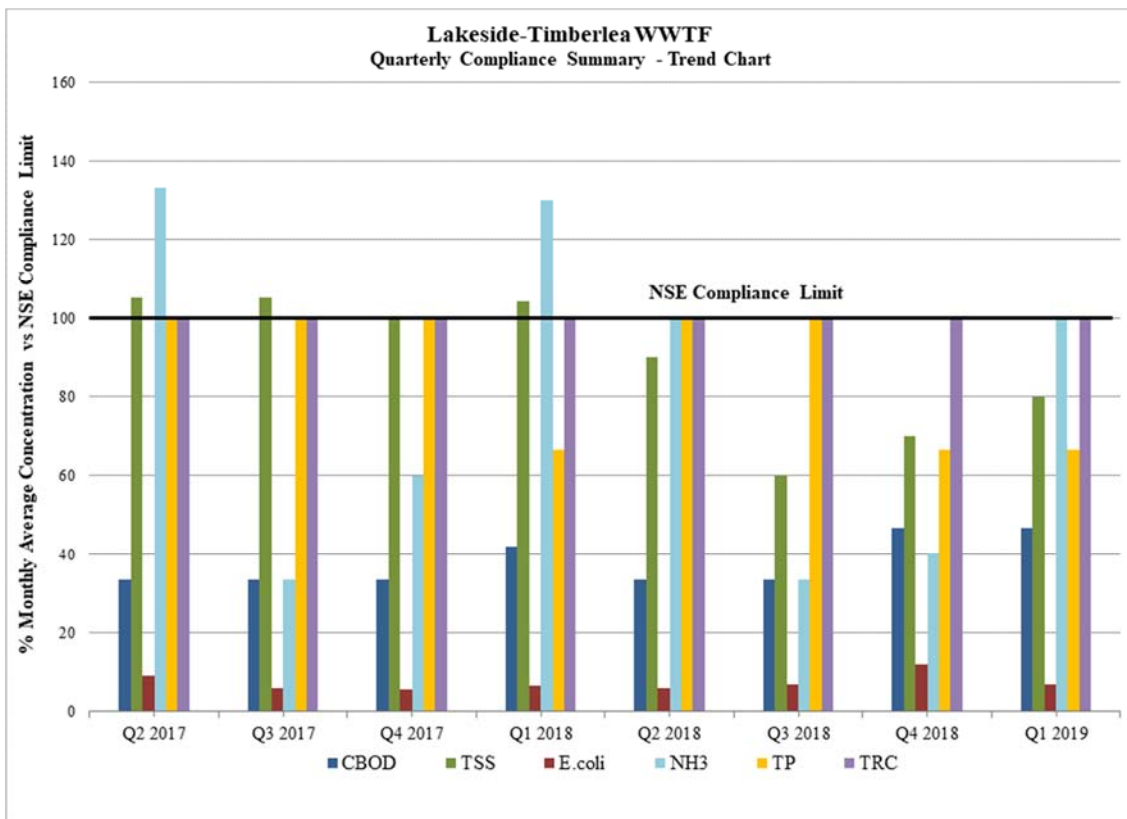
Lower numbers represent better performance.



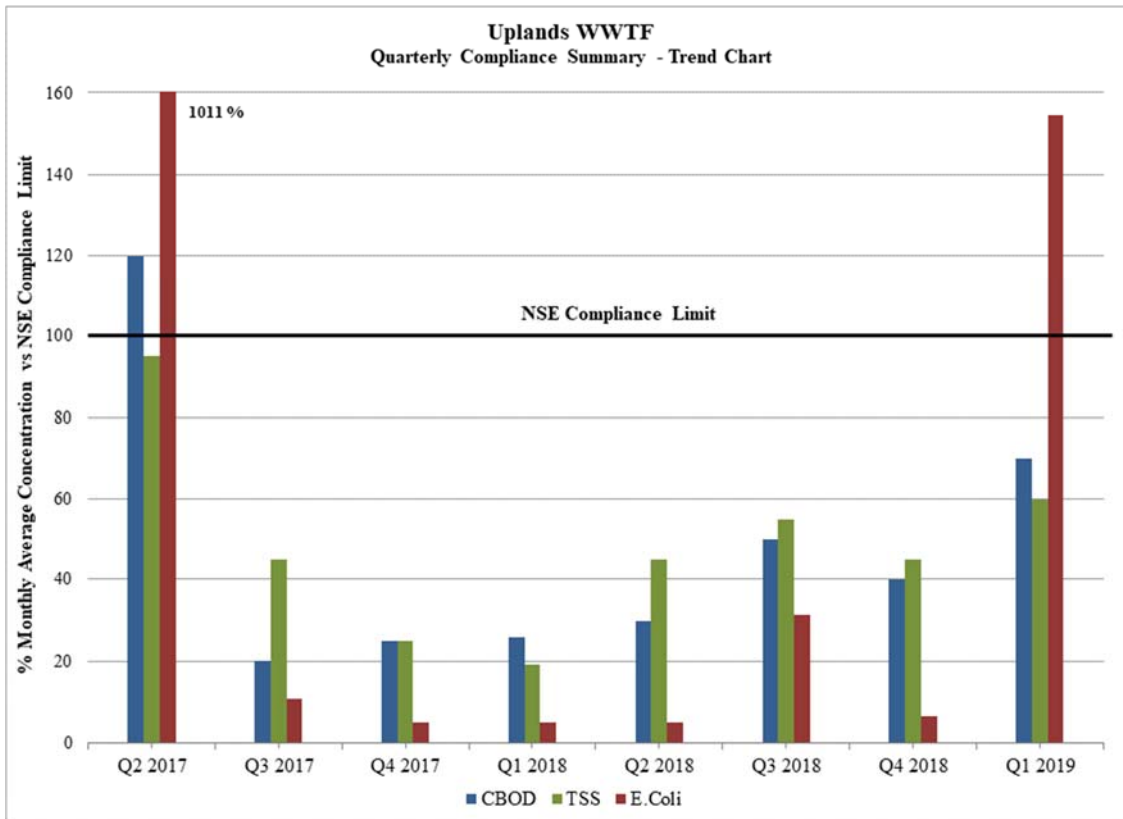
Lower numbers represent better performance.



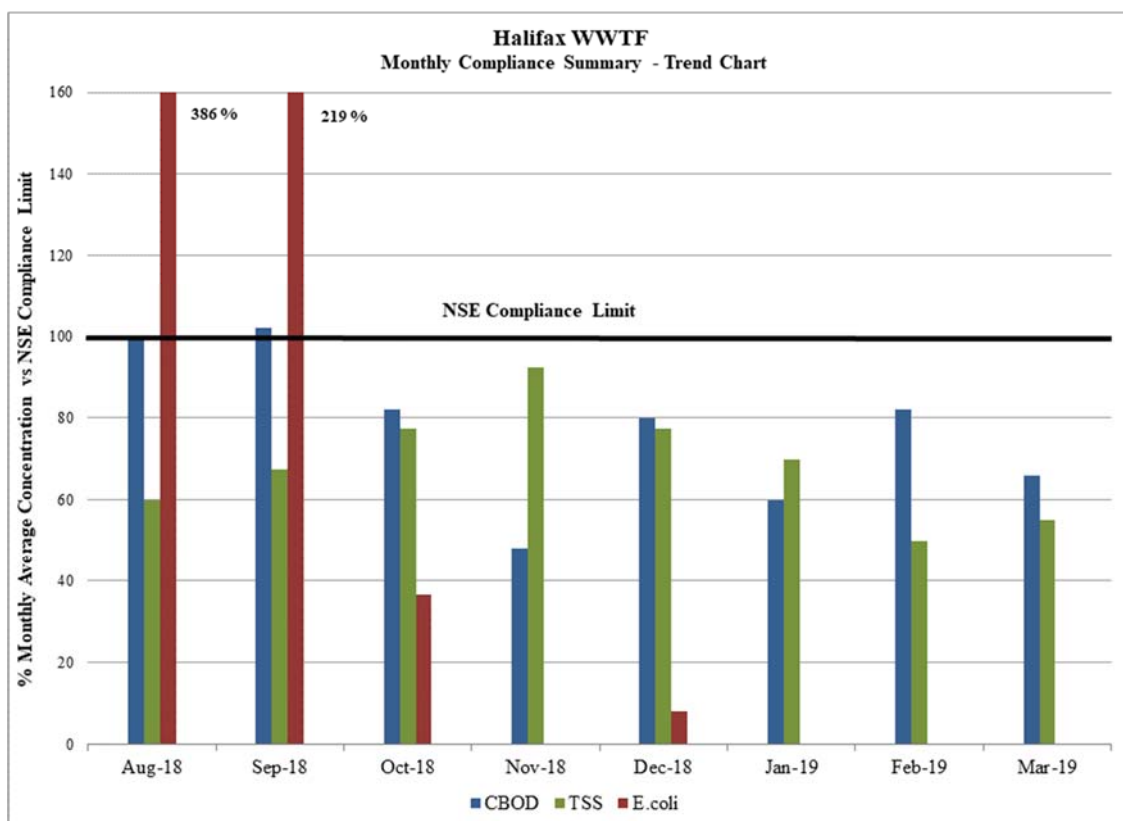
Lower numbers represent better performance.



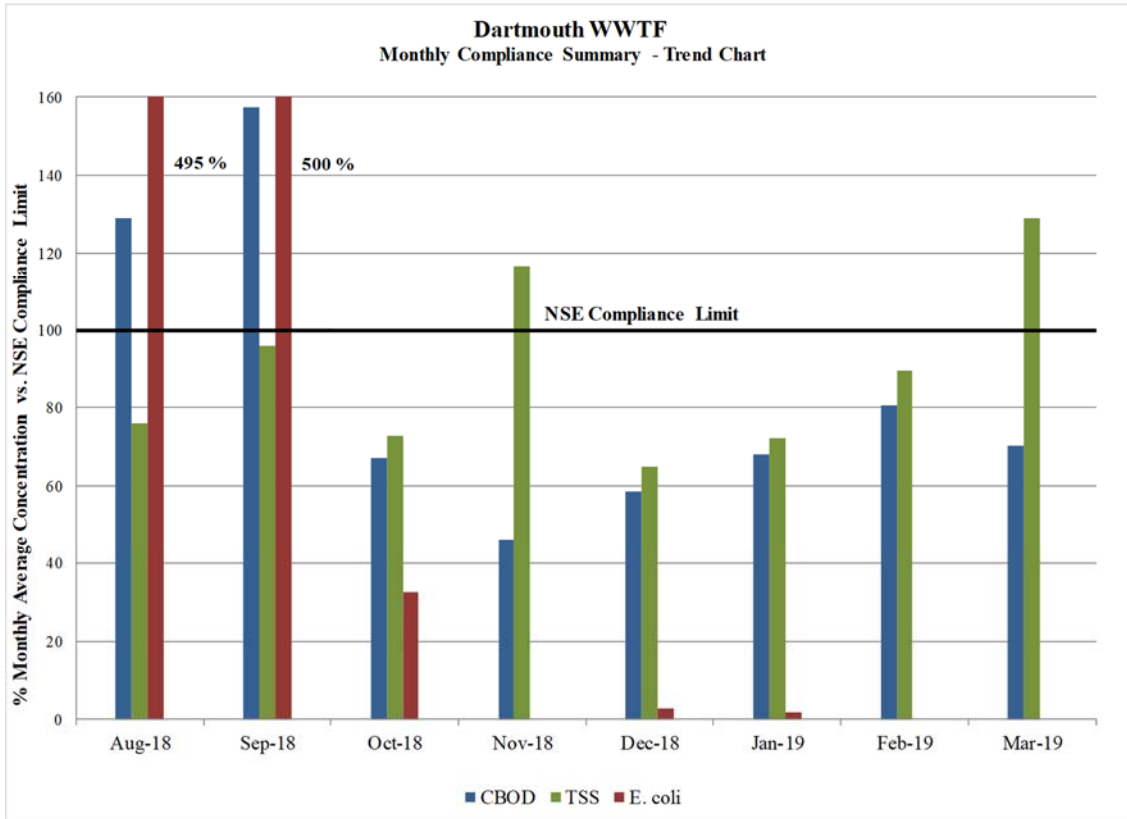
Lower numbers represent better performance.



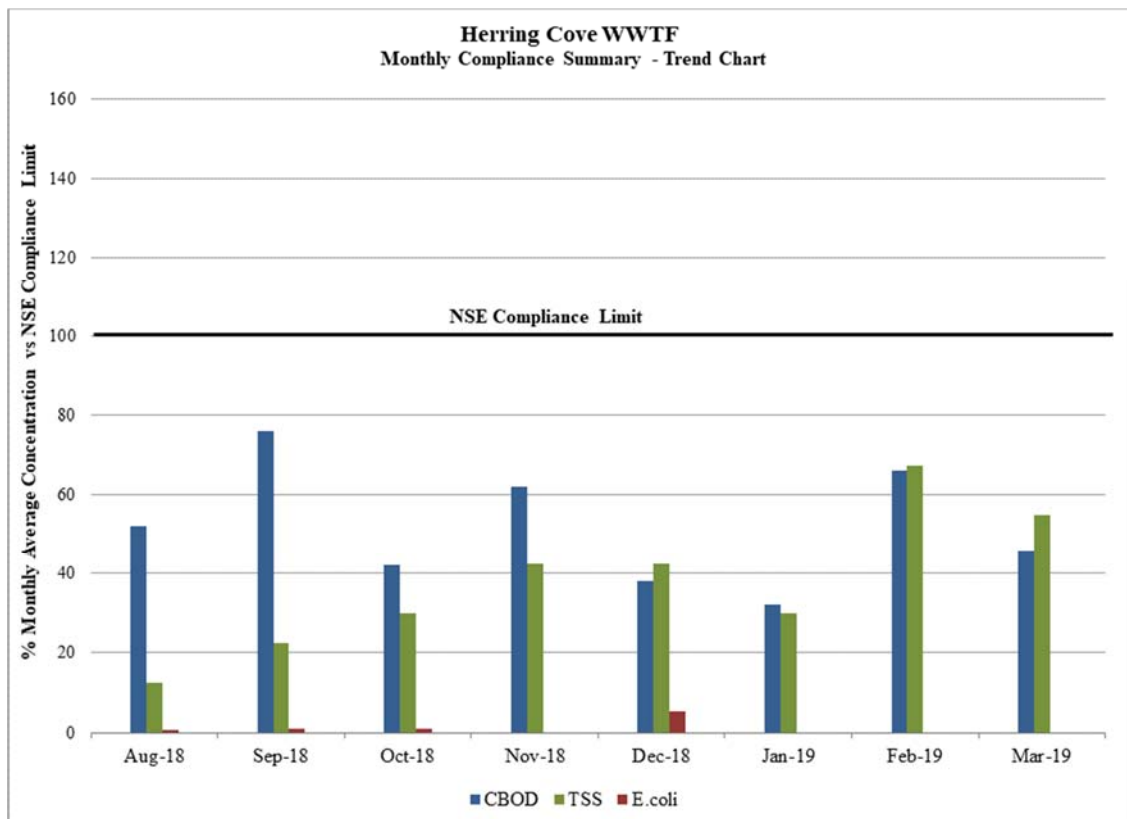
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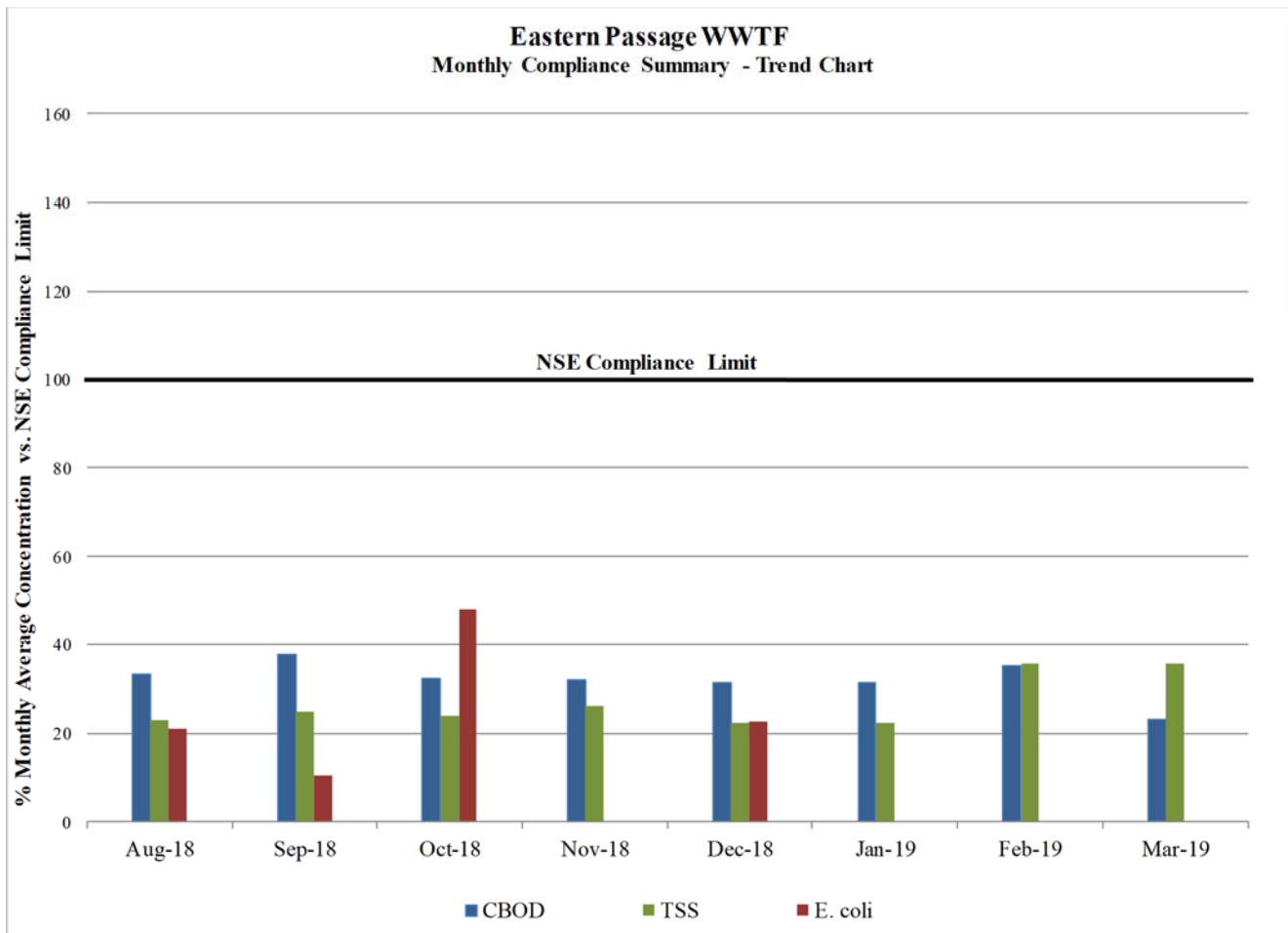
Lower numbers represent better performance.



Lower numbers represent better performance.

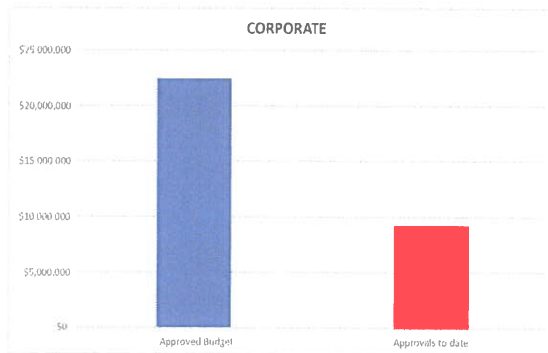
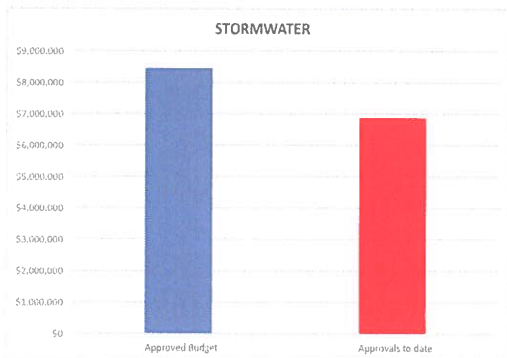
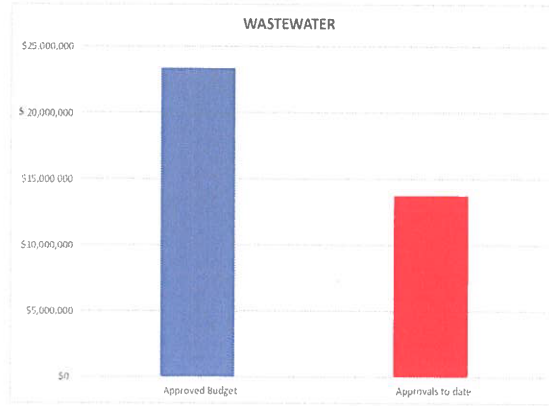


Lower numbers represent better performance.



Lower numbers represent better performance.

**CAPITAL BUDGET APPROVALS TO DATE - 2019 -2020**



**WATER**

Approved Budget      \$23,147,000  
 Approvals to date      **\$14,520,920**

**CORPORATE PROJECTS**

Approved Budget      \$22,427,000  
 Approvals to date      **\$9,249,000**

**WASTEWATER**

Approved Budget      \$23,336,000  
 Approvals to date      **\$13,712,000**

**Total Budget:**      \$77,348,000  
**Total To Date:**      **\$44,353,920**

**STORMWATER**

Approved Budget      \$8,438,000  
 Approvals to date      **\$6,872,000**

**Total %                      56%**

Original Signed By:

Report Approved:  
 Jamie Hannam

Date  
 Jan 14/19



**HRWC Board Report #2-1  
Capital Projects Funding Approvals 2019-2020**

<b>Category</b>	<b>Total Approved</b>	<b>Net Impact on Budget</b>	<b>Approval Date</b>
<b>Water</b>			
<b>Distribution</b>			
Automated Flushing Program	\$20,000	\$20,000	18-Mar-19
Coburg Road Bridge Watermain Replacement			
Hydrants	\$75,000	\$75,000	3-May-19
Lead Service Line Replacement Program	\$1,000,000	\$1,000,000	3-May-19
Service Lines Renewals	\$100,000	\$100,000	3-May-19
Valve Renewal	\$125,000	\$125,000	3-May-19
Water Distribution - Main Renewal Program	\$1,839,000	\$1,839,000	28-Feb-19
Watermain Renewal Program (taking money for Wanda Lane and Tobin Drive)	\$940,920	\$940,920	5-Jun-19
<b>Energy</b>			
Bennery Lake WSP - Tank Insulation Repairs			
Bennery Lake WSP MCC Replacement			
Lake Major WSP Process Area HVAC Upgrades			
<b>Equipment</b>			
Miscellaneous Equipment Replacement	\$50,000	\$50,000	3-May-19
<b>Land</b>			
Bennery Lake Watershed Land			
Lake Major Watershed - Glasgow Lands			
Watershed Land Acquisition			
<b>Security</b>			
Security Upgrade Program			
<b>Structures</b>			
Dam Safety Review			
Lake Major Dam Monitoring Program			
Robie 2 Emergency Pump Meter Installation	\$21,000	\$21,000	1-Apr-19
<b>Transmission</b>			
Bedford West CCC - Various Phases			
Cogswell Interchange Water Transmission Main Realignment			
Critical Valve Replacements 2019	\$225,000	\$225,000	18-Mar-19
Halifax Peninsula Transmission Main Project			
Lakeside Timberlea CCC			
Lucasville Road Transmission Main - Phase 1	\$6,799,000	\$6,799,000	15-Apr-19
MacIntosh Estates Phase 1 Oversizing	\$100,000	\$100,000	15-Apr-19
Port Wallace Transmission Main - Caledonia Section	\$120,000	\$120,000	27-Mar-19
<b>Treatment Facilities</b>			
Aerotech Booster Station Capital Upgrades			
Bennery Lake Access Road Upgrade	\$100,000	\$100,000	17-Apr-19
Bennery Lake Filter Influent Valves	\$64,000	\$64,000	18-Mar-19
Bennery Lake Sludge Valve Replacement Program	\$7,000	\$7,000	18-Mar-19
Bennery Lake Surge Anticipator Valve Replacement	\$20,000	\$20,000	18-Mar-19
Chlorine Analyzer Replacement Program	\$16,000	\$16,000	18-Mar-19
JD Kline Back Up Power Supply Study			
JD Kline Building Envelope Upgrades			
JD Kline Caustic Tank Liner Replacements	\$16,000	\$16,000	20-Mar-19
JD Kline Effluent Valve Actuator Replacement Program	\$200,000	\$200,000	20-Mar-19
JD Kline Low Lift Pump #3			
JD Kline Low Lift Station Crane Renewal	\$75,000	\$75,000	20-Mar-19
JD Kline Low Lift Station Roof Fan Shroud Replacement	\$21,000	\$21,000	20-Mar-19
JD Kline New Alum Chemical Supply	\$15,000	\$15,000	20-Mar-19
JD Kline New Lime Blower System	\$35,000	\$35,000	27-Mar-19
JD Kline Pilot Plant Upgrades	\$200,000	\$200,000	26-Mar-18
JD Kline Pre-Mix Area Mixers Upgrade	\$90,000	\$90,000	8-Apr-19
JD Kline Process Upgrades			
JD Kline Purchase New Microscope	\$17,000	\$17,000	20-Mar-19
JD Kline Raw Water Intake Traveling Screen Replacement Program	\$245,000	\$245,000	8-Apr-19
JD Kline Raw Water Pump Station Electrical Room Ventilation			
JD Kline Raw Water Pump Station Window/Wall/Building Envelope			
JD Kline Replace CO2 Feeders			
JD Kline Replace Flocc Tank Valve	\$35,000	\$35,000	20-Mar-19
JD Kline Replace Westinghouse Electrical Panels	\$8,000	\$8,000	20-Mar-19
JD Kline Roof Replacement	\$270,000	\$270,000	1-May-19
JD Kline Upgrade the PCL			
JD Kline Upgrades to the Process Wastewater Lagoons	\$150,000	\$150,000	20-Mar-19
Lake Major Butterfly Valve Replacement Program	\$200,000	\$200,000	20-Mar-19
Lake Major CO2 System Replacement Construction	\$95,000	\$95,000	23-May-19

Category	Total Approved	Net Impact on Budget	Approval Date
Lake Major Clarifier Repair			
Lake Major Dry Polymer Feed System			
Lake Major Filtration System Replacement			
Lake Major Lab Relocation	\$235,000	\$235,000	20-Mar-19
Lake Major Overall Process and Design Study			
Lake Major Purchase Spectrophotometers	\$15,000	\$15,000	20-Mar-19
Lake Major Purchase Turbidimeters	\$18,000	\$18,000	20-Mar-19
Lake Major Replace Contactors in the MCC	\$34,000	\$34,000	20-Mar-19
Lake Major Replace the Lime Feed and Delivery System	\$120,000	\$120,000	27-Mar-19
Miller Lake Small System Public Main Extension Miller Lake Road	\$495,000	\$495,000	12-Apr-19
Purchase and Install TOC Analyzers WSP Facilities	\$90,000	\$90,000	18-Mar-19
Purchase and Install Water Quality Sonde Equipment	\$70,000	\$70,000	20-Mar-19
Reservoir Mixing and Residual Management Upgrade Program	\$150,000	\$150,000	10-Apr-19
Silversands WSP - Electrical/Architectural Upgrades			
<b>Water Total</b>	<b>\$14,520,920</b>	<b>\$14,520,920</b>	
<b>Wastewater</b>			
<b>Collection System</b>			
Bayers Rd Phase 2 - Sewer Separation			
Bedford West Collection System CCC	\$20,000	\$20,000	30-May-19
Cogswell Redevelopment Sewer Relocation			
Fairview, Clayton Park Bridgeview I/I Reduction	\$2,500,000	\$2,500,000	
Integrated Wastewater Projects Program	\$1,315,000	\$1,315,000	28-Feb-19
Lateral Replacements WW (non-tree roots)	\$1,685,000	\$1,685,000	3-May-19
Lateral Replacements WW (tree roots)	\$526,000	\$526,000	3-May-19
Main Street Sewer Main Replacement	\$100,000	\$100,000	19-Feb-19
Manhole Renewals WW	\$20,000	\$20,000	3-May-19
Romans - Federal Avenues Sewer Separation			
Sewer Relocation at South Street CN Bridge	\$25,000	\$25,000	15-Apr-19
Wanda Lane Sanitary Sewer Replacement	\$1,050,000	\$1,050,000	5-Jun-19
Wastewater System Trenchless Rehabilitation Program	\$2,870,000	\$2,870,000	
Wet Weather Management Program	\$250,000	\$250,000	29-May-19
WRWIP Project Bayers Rd Phase 1 - Sewer Separation			
<b>Energy</b>			
HHSP - BAS+ HVAC Recommissioning	\$50,000	\$50,000	1-May-19
NSPI Meter Relocations	\$25,000	\$25,000	15-Apr-19
Pump Station HVAC Retro-Commissioning Program			
Wastewater Pumping Station Performance Testing			
<b>Equipment</b>			
I&I Reduction (SIR) Program Flow Meters and Related Equipment	\$25,000	\$25,000	3-May-19
Miscellaneous Equipment Replacement	\$120,000	\$120,000	3-May-19
<b>Forcemains</b>			
Beaver Crescent PS - FM Replacement	\$500,000	\$500,000	23-May-19
Caldwell Road ARV/MH Replacement	\$75,000	\$75,000	28-Feb-19
<b>Security</b>			
Security Upgrade Program			
<b>Structures</b>			
Autoport Pleasant Street PS Replacement			
CSO Upgrade Program			
Duffus PS CSO - Modification			
Emergency Pumping Station Pump Replacements	\$64,000	\$64,000	31-May-19
Fairfield Holding Tank Rehabilitation	\$25,000	\$25,000	26-Mar-19
Fish Hatchery FM - ARV Chamber Water Proofing	\$25,000	\$25,000	28-Feb-19
Pump Station Elimination - Concept Design	\$25,000	\$25,000	12-Mar-19
Russell Lake PS Upgrade			
Upper Water Street PS CSO Replacement			
Wastewater Pumping Station Component Replacement Program - Central	\$250,000	\$250,000	1-May-19
Wastewater Pumping Station Component Replacement Program - East			
Wastewater Pumping Station Component Replacement Program - West			
Windmill Road PS Replacement			
<b>Treatment Facilities</b>			
Aerotech WWTF Asset Renewal Program	\$50,000	\$50,000	5-Jun-19
Aerotech WWTF Upgrade and Expansion Project Extra Cost	\$500,000	\$500,000	15-Apr-19
Building Cleaning and Corrosion Protection			
Carbon Media Replacement			
Dartmouth WW Treatment Facility Coagulant Dosing Pump Replacements			
Dartmouth WW Treatment Facility Densadeg Flow Meters			
Dartmouth WW Treatment Facility Duct Work Replacement	\$25,000	\$25,000	8-Apr-19
Easement for Sewer and Access			
Eastern Passage WWTF Atlas Copco Blowers Spare VFD	\$20,000	\$20,000	8-Apr-19

Category	Total Approved	Net Impact on Budget	Approval Date
Eastern Passage WWTF Drum Thickener Overhaul Spare Parts	\$15,000	\$15,000	8-Apr-19
Eastern Passage WWTF Outfall Inspection and Warning Signage	\$15,000	\$15,000	26-Apr-19
Eastern Passage WWTF Primary Sludge Pumps Spare Parts	\$15,000	\$15,000	8-Apr-19
Eastern Passage WWTF Process Upgrade Program			
Eastern Passage WWTF RAS Pumps Spare Parts	\$40,000	\$40,000	8-Apr-19
Eastern Passage WWTF Yard Lighting	\$35,000	\$35,000	8-Apr-19
Emergency Wastewater Treatment Facility equipment replacements			
Grit Pump Replacement	\$75,000	\$75,000	15-Apr-19
Halifax WWTF AHU Coil Replacement			
Halifax WWTF Duct work Replacement	\$50,000	\$50,000	8-Apr-19
Halifax WWTF New Raw Water Pumps	\$150,000	\$150,000	10-Jun-19
Herring Cove Wastewater Treatment Facility Duct Work Replacement Program	\$25,000	\$25,000	8-Apr-19
HHSP - OCS Wet Scrubber Chlorine Analyzers	\$125,000	\$125,000	29-May-19
HSPs - Outfall Inspection Program	\$20,000	\$20,000	26-Apr-19
Management Plan			
Mill Cove WW Treatment Facility Digester Mixers Failure Analysis	\$20,000	\$20,000	21-May-19
Mill Cove WW Treatment Facility Lining of Supernatant Pump Croc	\$50,000	\$50,000	21-May-19
Mill Cove WW Treatment Facility New Lab Cabinets and Countertops	\$69,500	\$60,000	18-Apr-19
Mill Cove WW Treatment Facility Process Upgrades - Preliminary & Detailed Design			
Mill Cove WW Treatment Facility Replace Oxygen Analyzer	\$75,000	\$75,000	21-May-19
Mill Cove WW Treatment Facility South Secondary Clarifier Recoat/Replace Mechanisms			
Mill Cove WW Treatment Facility South Secondary Splitter Box Rehabilitation	\$30,000	\$30,000	21-May-19
Plant Optimization Audit Program	\$107,000	\$107,000	23-May-19
Springfield Lake and North Preston - Driveway Replacement	\$15,000	\$15,000	23-May-19
Timberlea WWTF Asset Renewal Program			
Eastern Passage WWTF Rebuild Centrifuge 801	\$50,000	\$50,000	8-Apr-19
<b>Trunk Sewers</b>			
Fairview Cove Trunk Sewer	\$600,000	\$600,000	11-Apr-19
Sackville Trunk Sewer - Condition Assessment			
<b>Wastewater Total</b>	<b>\$13,721,500</b>	<b>\$13,712,000</b>	
<b>Stormwater</b>			
<b>Culverts/Ditches</b>			
Bundy Lane near civic 79			
Coronet Avenue driveway culvert replacement project			
Driveway Culvert Replacements	\$812,000	\$812,000	8-May-19
Frederick Drive at Dyke Road			
Highway 2, near civic 1380			
Lucasville Road Sta 0+910 near civic 1155			
Lucasville Road Sta 1+595 at Third Street			
Lucasville Road Sta 2+695 near civic 758			
Lucasville Road Sta 2+850 near civic 749 and 743			
Millers Road near civic 1			
Murray Road at Caldwell Road			
Parkway Drive and Atholea Drive			
Stormwater Survey and Studies Program			
Kipawa Crescent - Culvert Replacement Design Phase	\$31,000	\$0	1-Apr-19
Yankeetown Road near civic 16 (project is deferred to next budget year)	\$88,000	\$88,000	15-Apr-19
<b>Pipes</b>			
Catchbasin Renewals SW	\$60,000	\$60,000	3-May-19
Celtic Drive Storm Sewer Renewal	\$120,000	\$120,000	22-Feb-19
Cogswell Redevelopment SW Sewer Relocation			
Drainage Remediation Program Surveys/Studies			
Everette Street at Bonnie Brae Drive Drainage Upgrade			
Integrated Stormwater Projects	\$1,200,000	\$1,200,000	28-Feb-19
Lakecrest Drive CMP Replacement			
Lateral Replacements SW	\$12,000	\$12,000	3-May-19
Manhole Renewals SW	\$15,000	\$15,000	3-May-19
National Disaster Mitigation Program			
Stormwater Pipe Condition Inspections (CSP)	\$100,000	\$100,000	15-Apr-19
Wanda Lane Deep Storm Sewer	\$205,000	\$205,000	5-Jun-19
Wanda Lane Storm System Upgrade	\$210,000	\$210,000	5-Jun-19
<b>Structures</b>			
Clement St. Berm			
Ellenvale Run Retaining Wall System Phase 2	\$2,220,000	\$2,220,000	15-Apr-19
Ellenvale Run Retaining Wall System Phase 3 (Wanda Lane)	\$1,830,000	\$1,830,000	5-Jun-19

Category	Total Approved	Net Impact on Budget	Approval Date
<b>Stormwater Total</b>	<b>\$6,903,000</b>	<b>\$6,872,000</b>	
<b>Corporate</b>			
<b>Facility</b>			
Building Capital Improvements			
East/Central Regional Operational Facility			
<b>Fleet</b>			
Fleet - Stormwater	\$295,000	\$295,000	3-May-19
Fleet - Wastewater	\$1,180,000	\$1,180,000	3-May-19
Fleet - Water	\$385,000	\$385,000	3-May-19
<b>GIS</b>			
Engineering Drawing Database			
GIS Application Support Program			
GIS Data Build			
GIS Data Project			
GIS Hardware/Software Program			
Sewer Service Entry			
Water Data Base Model			
<b>Information Technology</b>			
Analytics Decision Support System			
Approval Forms Framework	\$112,000	\$112,000	6-May-19
Computer Maintenance Management System (CMMS) Enhancements	\$1,000,000	\$1,000,000	
Customer Portal			
Customer Transactional Site			
Data Governance	\$150,000	\$150,000	29-May-19
Desktop Computer Replacement Program	\$290,000	\$290,000	3-May-19
Document/Content Management			
IT Foundations			
IT Server Hosting			
Migrate to Office 365			
Mobile Devices and Applications			
New payroll System	\$600,000	\$600,000	30-Apr-19
Permit Approvals			
Regulatory Reporting			
SAP S4 Hana Upgrade	\$100,000	\$100,000	15-May-19
Stormwater Billing Support			
Telephony			
Water/Wastewater Data Quality Software Replacement			
Asset Registry			
<b>SCADA &amp; Other</b>			
GPS Units - Replacement	\$67,000	\$67,000	22-Feb-19
Large and New Customer Meters	\$460,000	\$460,000	3-May-19
Meter Deployment	\$2,600,000	\$2,600,000	3-May-19
SCADA Control System Enhancements	\$100,000	\$100,000	21-May-19
Central SCADA System Redesign/Relocation	\$90,000	\$0	18-Mar-19
<b>Asset Management</b>			
Corporate Flow Monitoring Program	\$1,760,000	\$1,760,000	
Storm Sewer Condition Assessment	\$60,000	\$60,000	22-May-19
Vulnerability to Climate Change Risk Assessment - Asset Call Pilot			
Wastewater Sewer Condition Assessment	\$90,000	\$90,000	22-May-19
Hydraulic Water Model Build			
<b>Corporate Total</b>	<b>\$9,339,000</b>	<b>\$9,249,000</b>	
<b>Grand Total</b>	<b>\$44,484,420</b>	<b>\$44,353,920</b>	#####

# Item 3-I

14-Jun-19

## FINANCIAL REPORT

Consolidated balance of the four operating accounts maintained by the Commission as of:	14-Jun-19	\$49,697,780
Rate of interest on the above balance - Investment Rate of Return	0.196%	\$49,697,780.40

**TO:** Darlene Fenton, Chair, and Members of the Halifax Regional Water Commission Board

**SUBMITTED BY:** *Original Signed By:*  
Reid Campbell, P. Eng., Director Water Services

**APPROVED:** *Original Signed By:*  
Carl Yates, M.A.Sc., P.Eng., General Manager

**DATE:** June 13, 2019

**SUBJECT:** **2018/2019 Lead Service Line Replacement Program**

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## **INFORMATION REPORT**

### **ORIGIN**

August 22<sup>nd</sup>, 2017 NSUAR Decision - HRWC Lead Service Line (LSL) Replacement Program (M07891).

### **BACKGROUND**

In October 2016, the Halifax Water Board approved a business plan for a new approach to LSL replacement, consistent with the National Drinking Water Advisory Council (NDWAC) recommendations to the USEPA. On August 22, 2017, the Nova Scotia Utility and Review Board issued an order granting Halifax Water authority to undertake emergency LSL renewals to the water meter at utility cost and to provide a 25% rebate (up to a maximum of \$2500) to homeowners undertaking an LSL replacement. This report will provide an annual update to the Halifax Water Board and the Nova Scotia Utility and Review Board on the LSL replacement program.

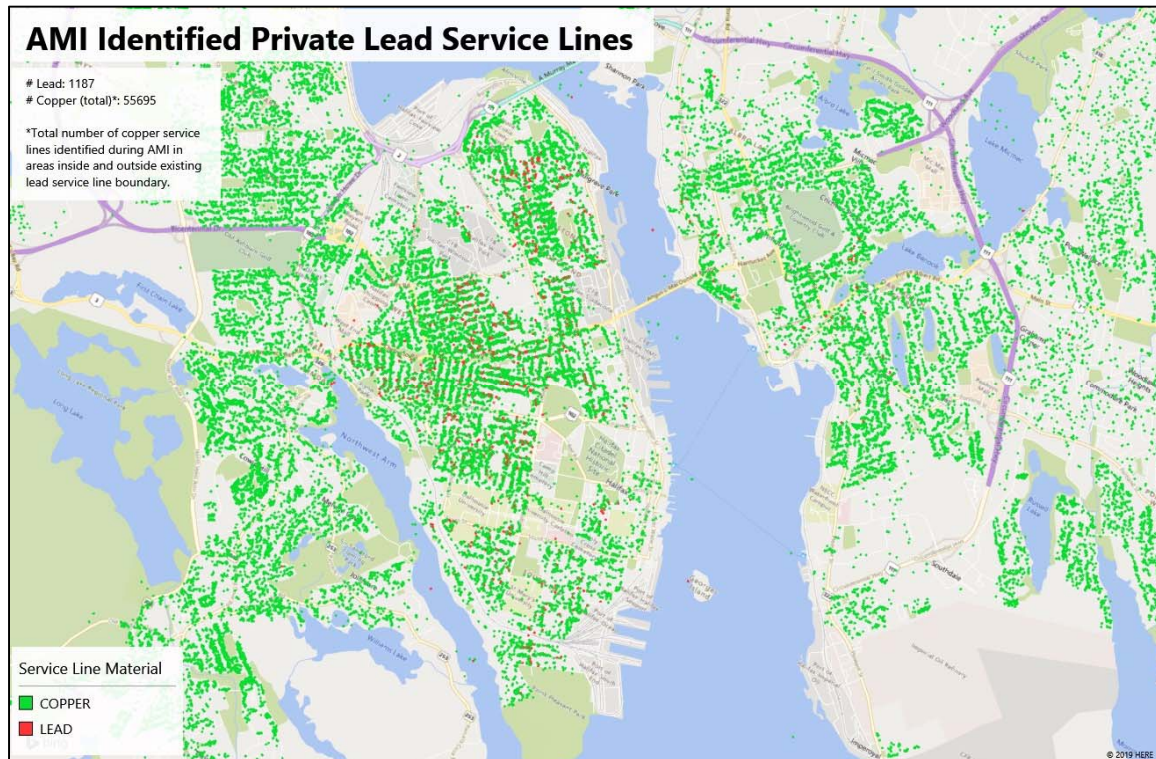
#### **Program Overview:**

Halifax Water's new approach to manage its customer's exposure to lead is designed to be consistent with the NDWAC recommendations, which have been endorsed by the American Water Works Association, to the degree they can be applied in Canada and do not conflict with local regulatory requirements. The 5 pillars of the new approach and progress made to date are described below:

### **1) Lead Service Line Inventory**

Halifax Water is currently working to consolidate all existing records pertaining to service line composition in an effort to identify all lead service lines. There are 25,851 service connections within the lead boundary area, 17,011 in Halifax (14,459 domestic services where lead could have been used) and 8,840 in Dartmouth. To date, efforts have been focused on the following tasks:

- **Digitizing existing service card records for electronic access;**  
There are a total of 17,051 service records that have been identified in Halifax within the existing lead service line boundary. This includes commercial and larger services that are greater than 2 inches which would not have been constructed of lead. As of May 2019, approximately 96 percent of the 17,051 service records have been digitized, while all service records in Dartmouth remain to be digitized. Dartmouth records will be digitized once the existing lead service line boundary is refined in fall 2019.
- **Creating a LSL Information Database:**  
In the fall of 2018, Halifax Water's GIS division completed upgrades to Halifax Water's existing drinking water service lateral database (Forms) to allow for lead related information (i.e. replacements, maintenance, inspections, observations, etc.) to be stored and queried. The next phase of this project, began in May 2019, and involves the review of all service records within Halifax Water's existing lead service line boundary to ensure all pertinent information is present for each record. This involves the review of the digital records and comparing them to existing physical records (i.e. service cards, drawings, etc.) and corporate knowledge with the intent of filling any data gaps to facilitate the determination of service line material, with the goal of making the digital record the authoritative source for lateral information, eliminating the need to keep maintaining paper service cards. A term position started working on this project in May 2019 and it is expected to take at least one year to complete records within the west lead boundary.
- **Customer Connect Project:**  
As part of the Customer Connect Advanced Metering Infrastructure (AMI) project, staff of our installation contractor, Neptune TG will be inside the premise for each of our approximately 83,000 customers. The AMI project will be used as an opportunity to obtain information on private service material in each home. This data will be incorporated into the digital database as part of the authoritative source determination discussed above. As of May 12th, 2019 there have been a total of 1187 lead service lines identified by meter installation visits. Neptune TG conducted a QA/QC check on a portion of their records and concluded a 90% confidence in their service material identification. With the majority of installations completed within Halifax Water's existing lead service line boundary, it is anticipated that fewer than 100 additional private lead service lines will be identified via the AMI project.



**Figure 1** – Lead service lines identified in the home as part of the Customer Connect Advanced Metering Installation project as of May 12, 2019.

## 2) Lead Service Line Replacement

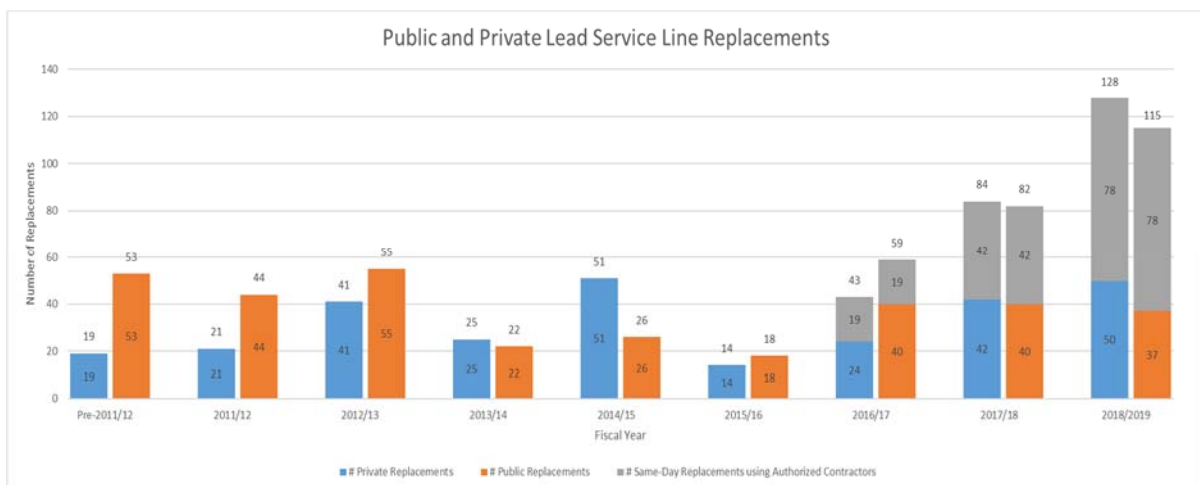
Halifax Water is working to increase both public and private replacements by:

- Removing barriers to private replacement, which involves informing the public about the health implications of lead service lines, simplifying the process for homeowners, and providing financial assistance mechanisms.
- Engaging in capital projects, meter replacement projects, and HRM paving projects and by increasing overall public engagement.
- Starting this year, Halifax Water is working with HRM to maximize lead service line replacements in conjunction with paving projects. Below are some of the highlights and challenges encountered through this effort to integrate with HRM:
  - Several meetings have been held over the past year with HRM capital project staff to discuss ways of reaching out to homeowners prior to HRM street work and to identify HRM projects for integrating with Halifax Water for lead service line renewal.



- Halifax Water’s policy of not conducting partial replacements for public health reasons poses significant challenges for smooth integration. This is because the replacement of the private portion is often the limiting factor in replacement of the public portion. HRM and Halifax Water would both like to see all public lead services renewed during paving projects. Achieving high levels of customer compliance, however, can be challenging since, if the customer is not motivated to participate for public health reasons, there is no mechanism to compel participation in the integrated project. This can lead to several problematic scenarios:
  - i. The homeowner may decide to renew after paving is complete leading to cuts in new pavement, or
  - ii. There is a missed opportunity for cost savings on large integration projects due to challenges with timing and lack of participation from homeowners.
- With no mechanism or incentive (beyond the standard rebate and loan process) to renew along the timelines of the paving project, integrating with HRM is difficult. To maximize the number of customers who renew with paving projects, further tools are required to incentivize private replacement. Discussions are ongoing internally on mechanisms that can help maximize the number of renewals.
- For the 2019 paving season, Halifax Water has hydro-excavated service boxes for any suspected public lead services where Halifax Water has agreed to integrate with a HRM capital project. A series of letters have been sent out to homeowners in these areas, informing them of their lateral composition and the renewal process in an effort to get commitments prior to paving.
- For the 2020 paving season there are several proposed projects with a significant number of public lead services. Halifax Water is focusing efforts on targeting these projects for integration in the next construction season. This will include hydro-excavating the service box this summer and contacting homeowners with lead services this fall to provide as much advance notice of the project as possible.
- Emergency Full Renewals –There were seven emergency renewals conducted in the 2018/19 fiscal year. Four were the result of a leak on the public service line resulting in a disturbance of a private lead service line. The remaining three were the result of a lead line replacement on the public when records indicated that the private was copper but was found to be lead once excavation began.

- Halifax Water is working to reduce an inventory of approximately 200 customers who have a public lead service line but copper private service line. To make this process more efficient, Halifax Water now hydro-excavates the service box prior to renewal to confirm material, as past practice has shown that sometimes copper is found despite lead being shown on records. This practice reduces costs as it avoids unnecessary excavation and it also eliminates the possibility of creating an emergency renewal as described above.
- Halifax Water implemented the LSL rebate program immediately after the NSUARB Order of August 22, 2018.
  - In the 2017/18 fiscal year, there were 18 customers that took part in this program for a total rebate cost of \$14,108. The mean rebate cost was \$738, with a min and max of \$201 and \$1,565, respectively.
  - In the 2018/2019 fiscal year, there were 105 customer that took park in the program for a total rebate cost of \$102,333.04. The mean rebate cost was \$974, with a min and max of \$143 and \$2,500 respectively.
- Figure 2 shows the number of replacements that have occurred as part of the program since 2011/12. This period encompasses the introduction of authorized contractors to replace the public portion in 2016/17 which allows for the entire LSL to be replaced in a single day, minimizing public health impacts and simplifying the process for the homeowners.



**Figure 2** – Number of public (orange) and private (blue) service lines replaced by fiscal year. Grey bars indicate residents who used the same day authorized contractor program to renew both public and private service lines in the same day.

- Historical data prior to 2017/2018 is currently under review to confirm renewal status. For the 2019/2020 report, we expect to see changes in historical renewal numbers due to historical record keeping practices. A new database for storing information in one location has been created. During the review this year, some clerical errors were rectified in the 2017/2018 renewal records resulting in an increase in public and private renewals from last year's report.
- Halifax Water has been exploring the feasibility of lining existing lead service lines as an alternative to replacement. The Water Research Foundation had done a study and determined that there were three technologies that appeared promising. It had been Halifax Water's intent to conduct a pilot study of one or more of these technologies in 2019.
- Halifax Water had been in discussion with a company that held the license for two of the technologies. In January of 2019, this company appears to have abandoned efforts to develop lead service lining as a business opportunity. We have been in contact with a local contractor who has a business relationship the third company. While this company has expressed some interest in doing a pilot project, they have not responded to requests for cost and technical information.
- As a result, we have put plans to conduct a pilot project in abeyance and will monitor market development to look for future opportunities.

### **3) Public Outreach**

Halifax Water is working on increasing customer awareness and engagement in the lead service line replacement program, particularly with respect to health implications of lead and processes for renewal, including the rebate and loan program. The following tasks have been conducted to increase awareness and engagement:

- Upon application by a homeowner for a LSL renewal, they are contacted by program staff. At this time, they are advised of sampling programs, provided with information on the renewal, post renewal maintenance and provided with a National Sanitation Foundation [NSF] certified pitcher filter for temporary use for cooking and drinking during the period of increased lead, post renewal. They are also provided with 7 replacement filters. Filter kits are also provided when Customer Connect installations (see below) require a new or repaired connection on a lead service line.

*Table 1 – Number of filter kits provided to residents either as part of LSL replacement or the AMI program in the last two fiscal years.*

	<b>2017/18</b>	<b>2018/2019</b>
Number of LSL Renewal Filter Kits Provided	138	157
AMI Filter Kits Provided	2	19

- Halifax Water has created a LSL program brand identity, consistent with Halifax Water’s brand identity. The brand identity is now used on all information and promotion material for the LSL program.
- An improved web page has been created on Halifax Water’s new website, [www.halifaxwater.ca](http://www.halifaxwater.ca).
- Three videos are available to view on the LSL program website. These videos include information on how to test your water for lead, how to identify a lead service line, and how to replace your lead service line.
- A web application allows for customers to determine if they are in the lead boundary area. This application has been posted on the lead website.
- If a lead line is present during meter upgrades as part of the Customer Connect installation, contractor staff leave a letter which informs the customer of line material, provides information on lead and our programs, and provides flushing instructions.
- In the 2018/19 Fiscal year we received 300 lead inquiries from homeowners or tenants. In 2018/19 letters outlining sampling and flushing procedures were replaced with easy to follow instructions to make the process easier for homeowners.

**4) Corrosion Control and Water Quality Monitoring**

Halifax Water and Dalhousie University continue to conduct research to optimize and monitor corrosion control treatment. Outcomes of research have led to greater effectiveness and reduced cost for corrosion control treatment at both JD Kline and Lake Major treatment plants. Further research is underway into seasonal optimization of corrosion control and the use of less expensive, bulk commodity chemicals for corrosion control. Following is a summary of routine corrosion control sampling.

- **Distribution Coupon Monitoring**

Since 2002 Halifax Water's (HW) water quality group has maintained 10 coupon racks throughout the Pockwock Lake and Lake Major distribution systems. There are six coupon racks in the Pockwock distribution system and four in the Lake Major distribution system. Each rack has a metal coupon for lead, copper, and mild steel, and are sampled quarterly.

- **Distribution Corrosion Control Monitoring**

Corrosion monitoring has been taking place throughout the Pockwock and Lake Major distribution systems since 2004. Parameters measured are alkalinity, aluminum, manganese, iron, zinc, phosphate, o-phosphate, sulphate, turbidity, pH, free chlorine, temperature, conductivity, and oxidation reduction potential (ORP).

- **Lead Rack Monitoring**

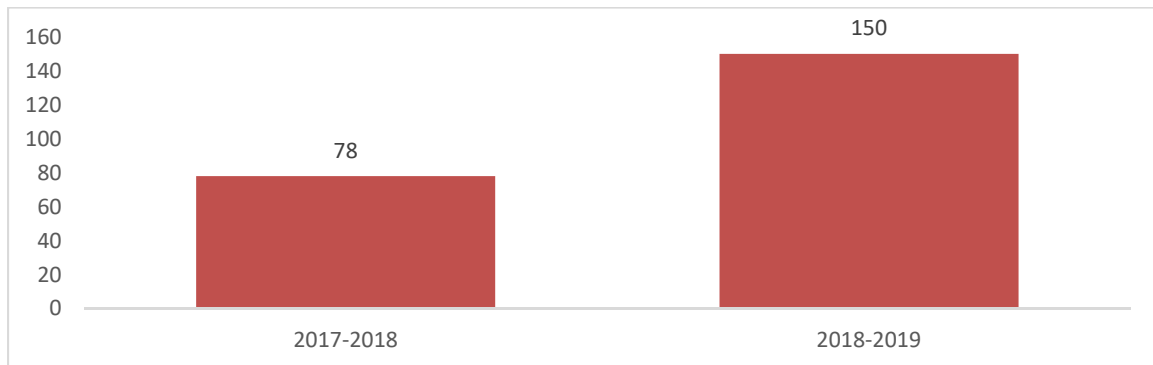
In December 2018 Halifax Water began monthly sampling at four "Lead Racks" in our distribution system. Each Lead Rack consists of 4 segments of lead pipe harvested from lead service line renewals, configured to permit sampling of the stagnated water in each pipe running on a 6 hour stagnation cycle. The goal of the lead racks is to be able to monitor full scale response to changes in corrosion control and seasonality of corrosion control. The racks are located in the Halifax and Dartmouth distribution system, in areas where lead service lines are known or suspected to exist. The Halifax racks are currently located in the basement of the N building at Dalhousie and the Robie reservoir chamber. The Dartmouth Racks are located in the MicMac chamber and Park Ave waste water pumping station. Water Quality staff are currently looking into moving the Dalhousie Rack to the waste water pumping station on Barrington St. due to disruptions in water flow to the racks at Dalhousie.

## **5) Customer Sampling**

Halifax Water has several customer sampling programs for lead in drinking water. These programs are outlined below:

- **Customer Request Lead Sampling**

Halifax Water provides complimentary lead testing for customers who have a known or suspected lead service line, and who live in a house built prior to 1960 within the lead service boundary, consistent with Health Canada protocols. Results are sent to the customer once they are available. Figure 3 describes the number of addresses where customer request kits that have been analyzed since 2016. Due to AMI, last year saw repeat samples for several single addresses to track recovery following the creation of a new connection. For the 2018/19 fiscal year 150 sample kits were analyzed for 119 addresses.



**Figure 3** – Customer request lead sample kits analyzed in the last two fiscal year

- **Lead Service Line Replacement Monitoring program**  
This program, carried out in conjunction with Dalhousie University, monitors lead levels prior to and after a lead service line replacement. Samples are taken prior to replacement and following replacement at 72 hours, 1, 3, and 6 months. Homeowners are encouraged to participate in the monitoring program following a service line replacement, as it allows them to have a better understanding of the lead levels in their home. When a permit is issued for a private lead service renewal, the homeowner is contacted by email or phone to encourage their participation in the LSL monitoring program and inform them of the Filter Program (see Public Involvement above). In 2018/19, there was a total of 24 LSLR participants and 9 participants associated with the Water Research Foundation 4713. Project [see description below].
- **Annual Health Canada Residential Monitoring Program**  
Halifax Water conducts an annual residential sampling program to monitor the effectiveness of the corrosion control program by sampling lead and copper levels in customers' homes throughout the distribution system as per Health Canada protocol. Once per year, 100 homes are tested on a volunteer basis. This program will likely change in 2020/21 in response to recent changes to the Health Canada guideline for lead and anticipated requirements from Nova Scotia Environment which has yet to be released.
- **Water Research Foundation Project 4713**  
This project aimed to understand the impacts of, and develop an optimized protocol for conducting high velocity flushing after lead service line replacement to minimize lead exposure. Halifax Water committed to conducting in depth sampling for 10 full service line replacement as a partner in this project; 10 sites were enrolled in the program and 9 sites completed the program requirements. This program is complete and we are awaiting the final report.

- Nova Scotia Environment/Dalhousie University Lead Survey**  
 Halifax Water participated in a lead survey conducted last year by Dalhousie University on behalf of Nova Scotia Environment. Halifax Water agreed to arrange for 60 samples along with 6 other communities across Nova Scotia to assess the use of new proposed Health Canada sampling protocols. In total, Halifax Water arranged for sampling at 30 sites in Halifax, and 17 sites in Dartmouth. Despite several mail out recruitment programs, participation in Dartmouth remained low. In total, 42 sites had full analysis. Dalhousie has prepared a report for Halifax Water and the program is completed.

**Financial**

**Table 2** – Summary of money spent on aspects of the lead program from April 1, 2017 to March 31, 2019. Public lead service line replacement is a capital cost and all other costs are operational.

	<b>2017/18</b>	<b>2018/19</b>
Customer Request Lead Sampling	\$4,914	\$13,305
LSL Replacement Monitoring Program	\$12,285	\$14,636
Pitcher Filter Kits	\$10,271	\$11,759
Communications	\$11,900	\$2,607 <sup>1</sup>
Staff	\$148,758	\$228,016
Public Lead Service Line Replacement	\$550,112	\$1,124,473
Lead Service Line Rebate	\$14,107	\$102,333
<b>Total</b>	<b>\$752,347</b>	<b>\$1,497,129</b>

<sup>1</sup> The majority of communications development was done in house in 2018/19.

**Summary**

**Table 3** - Summary of the statistics of the lead program for 2017/2018 and 2018/2019.

	<b>2017/18</b>	<b>2018/19</b>
Public replacements	82 <sup>1</sup>	115
Private replacements	84 <sup>1</sup>	128
Rebates	18	105
Emergency replacements to the meter	2	7 <sup>2</sup>
Lead program inquiries	263	300
Filter kits issued	140	158
Customer request lead sample kits analyzed	78	150
	<b>Average cost</b>	<b>Average cost</b>
Public replacement	\$8,067 <sup>4</sup>	\$11,468 <sup>3</sup>
Private replacement (based on rebates)	\$3,188	\$3,940
Rebate	\$738	\$974.00
Emergency replacement	\$14,860	\$11,413.45 <sup>2</sup>

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**HRWC Board**  
**June 20, 2019**

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	<b>Total Cost</b>	<b>Total Cost</b>
Public replacement	\$550,112	\$1,124,473
Private replacement	\$88,318	\$429,529.26
Rebate	\$14,108	\$102,333
Emergency replacement	\$29,720	\$79,894.18

- <sup>1</sup> Numbers are different than report provided to UARB in 2018 due to review of historical records.
- <sup>2</sup> One renewal was the result of issues encountered during an AMI meter replacement. Neptune covered the cost of the renewal therefore the cost is not included in this table.
- <sup>3</sup> Based on review of 70 contractor invoices.
- <sup>4</sup> Based on review of 48 contractor invoices.

Report Prepared by: *Original Signed By:* \_\_\_\_\_  
Wendy Krkosek, Water Quality Manager, 902-483-4432



**TO:** Darlene Fenton, Chair, and Members of the Halifax Regional Water Commission Board

**SUBMITTED BY:** Original Signed By:  
Kenda MacKenzie, P.Eng., Director, Regulatory Services

**APPROVED:** Original Signed By:  
Carl Yates, M.A.Sc., P.Eng., General Manager

**DATE:** June 13, 2019

**SUBJECT:** **Capital Cost Contribution Areas – Financial Status Report for the Fiscal Year ended March 31, 2019.**

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### **INFORMATION REPORT**

#### **ORIGIN**

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

#### **BACKGROUND/DISCUSSION**

Halifax Water oversees twelve (12) Capital Cost Contribution (CCC) charge areas for oversized water and wastewater infrastructure. The Halifax Water Board and subsequently the NSUARB directly approved eleven (11) area specific CCC charges consistent with our CCC policy, with one being inherited and endorsed at the time of the wastewater/stormwater merger in 2007. 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 accordance with the approved policy, Halifax Water is obligated to provide an accounting of all funds received and all costs incurred with respect to the infrastructure improvement. Attached is an annual report showing the cumulative accounting of all CCC funds received and disbursed as of the end of the fiscal year at March 31, 2019. 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.

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As of March 31, 2019, the results show that six (6) charge areas are in a negative cash position and six (6) are in a positive cash position. Combined, the net current deficit is \$2.6 million with the implementation of \$34.9 million in infrastructure projects. The CCC program is anticipated to be cost neutral within each charge area 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, 2019

Report prepared by:	<i>Original Signed By:</i>
	Warren Brake, Manager, Accounting, B.Comm, CPA, CGA
	902-490-4814

**HALIFAX WATER**  
**Capital Cost Contribution Report**

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 HRWC Board  
 June 20, 2019  
 ATTACHMENT

**Summary to March 31, 2019**

Capital Cost Contribution Area	Receipts	Disbursements	Cumulative
Beaverbank	\$1,336,109	(\$1,762,046)	(\$425,936)
Bedford South - Water	\$3,090,708	(\$2,074,291)	\$1,016,417
Bedford South - Wastewater	\$2,300,357	(\$1,022,796)	\$1,277,561
Bedford West - Water	\$4,977,674	(\$4,898,751)	\$78,923
Bedford West - Wastewater	\$11,967,547	(\$16,707,647)	(\$4,740,099)
Birch Cove North - Water	\$2,240,790	(\$2,200,334)	\$40,455
Herring Cove	\$1,385,726	(\$698,579)	\$687,148
Lakeside Timberlea	\$805,862	(\$1,264,666)	(\$458,803)
Morris Russell Lake	\$1,128,095	(\$363,291)	\$764,804
Northgate	\$585,772	(\$788,960)	(\$203,188)
Sackville Lively	\$430,254	(\$567,455)	(\$137,201)
Geizer Hill	\$967,154	(\$1,504,806)	(\$537,652)
<b>Grand Total</b>	<b>\$31,216,048</b>	<b>(\$33,853,621)</b>	<b>(\$2,637,573)</b>

**HALIFAX WATER**  
**BEAVERBANK - WATER**  
**Summary to March 31, 2019**

Transaction Description	Receipts	Disbursements	Cumulative
<b>Balance as of March 31/18</b>	<b>\$1,332,814.04</b>	<b>(\$1,762,045.74)</b>	<b>(\$429,231.70)</b>
Carriagewood Estates 1A-1 & 1B-S/D 19811 (AC 3.595)	\$3,295.28		
<i>Fiscal 2019 Yearly Totals</i>	\$3,295.28	\$0.00	\$3,295.28
<b>Balance as of March 31/19</b>	<b>\$1,336,109.32</b>	<b>(\$1,762,045.74)</b>	<b>(\$425,936.42)</b>

**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: 804.81 (61.8%)

Acreage Rate: \$850/acre

Total Infrastructure Cost: \$3,198,896.00

Benefit to Existing HRWC Customer Base - 0%

Benefit to HRM Fire Protection - 37%

Percentage of Total Infrastructure Cost to be recovered through CCC Charge - 34.6%

Infrastructure to be completed: None

\* Based on NSURB review

**HALIFAX WATER**  
**BEDFORD SOUTH - WATER**  
**Summary to March 31, 2019**

Transaction Description	Receipts	Disbursements	Cumulative
<b>Balance as of March 31/18</b>	<b>\$3,095,889.69</b>	<b>(\$2,074,291.42)</b>	<b>\$1,021,598.27</b>
Correction to Fire Protection on pre-existing asset value (1153-194)	(\$5,181.74)		
<i>Fiscal 2019 Yearly Totals</i>	(\$5,181.74)	\$0.00	(\$5,181.74)
<b>Balance as of March 31/19</b>	<b>\$3,090,707.95</b>	<b>(\$2,074,291.42)</b>	<b>\$1,016,416.53</b>

**Project Information**

Nova Scotia Utility & Review Board Approval Date: June 19, 1998  
 Total Acreage: 598.0  
 Acreage Developed to Date: 498.41 (83.35%)  
 Acreage Rate: \$4,621.00  
 Total Infrastructure Cost: \$6,155,269.00  
 Benefit to Existing HRWC Customer Base - 21%  
 Benefit to HRM Fire Protection - 37%  
 Percentage of Total Infrastructure Cost to be recovered through CCC Charge - 42%  
 Infrastructure to be completed: Reservoir

**HALIFAX WATER**  
**BEDFORD SOUTH - WASTEWATER**  
**Summary to March 31, 2019**

Transaction Description	Receipts	Disbursements	Cumulative
<b>Balance as of March 31/18</b>	<b>\$2,300,357.05</b>	<b>(\$1,022,795.90)</b>	<b>\$1,277,561.15</b>
<i>Fiscal 2019 Yearly Totals</i>	<i>\$0.00</i>	<i>\$0.00</i>	<i>\$0.00</i>
<b>Balance as of March 31/19</b>	<b>\$2,300,357.05</b>	<b>(\$1,022,795.90)</b>	<b>\$1,277,561.15</b>

<b>Project Information</b>
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Nova Scotia Utility & Review Board Approval Date: August 1, 2007

Total Acreage: 624

Acreage Developed to Date: 535.97 (85.89%)

Acreage Rate: \$3305.29

Total Infrastructure Cost: \$2,273,400.00

Benefit to Existing HRWC Customer Base - 0%

Percentage of Total Infrastructure Cost to be recovered through CCC Charge - 100%

Infrastructure to be completed: oversized piping

**HALIFAX WATER**  
**BEDFORD WEST - WATER**  
**Summary to March 31, 2019**

Transaction Description	Receipts	Disbursements	Cumulative
<b>Balance as of March 31/18</b>	<b>\$4,688,662.60</b>	<b>(\$4,898,750.67)</b>	<b>(\$210,088.07)</b>
HRM FILE #21565 (9.916ac)	\$32,326.11		
West Bedford #21486 (12.084 ac)	\$32,750.77		
West Bedford Q-R4A (3.871 Acres)	\$20,310.92		
West Bedford WB-9R2 (8.006 Acres)	\$42,007.04		
West Bedford Block A-11, P-03B & P-03C (21.442 ac)	\$56,256.13		
West Bedford BLOCK Q-R27 (16.064 AC)	\$105,360.01		
<i>Fiscal 2019 Yearly Totals</i>	<i>\$289,010.98</i>	<i>\$0.00</i>	<i>\$289,010.98</i>
<b>Balance as of March 31/19</b>	<b>\$4,977,673.58</b>	<b>(\$4,898,750.67)</b>	<b>\$78,922.91</b>

<b>Project Information</b>
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Nova Scotia Utility & Review Board Approval Date: September 2012

Total Acreage: 1611.00

Acreage Developed to Date: 687.60 (42.68%)

Acreage Rate: \$3,149.83 (2012)

Total Infrastructure Cost: \$9,290,316

Benefit to Existing HRWC Customer Base - 5.4%

Benefit to HRM Fire Protection - 37%

Percentage of Total Infrastructure Cost to be recovered through CCC Charge - 57.6%

Infrastructure to be completed: Proportionate amount of Bedford South Reservoir, PRV's, and Pipe Oversizing

**HALIFAX WATER**  
**BEDFORD WEST - WASTEWATER**  
**Summary to March 31, 2019**

Transaction Description	Receipts	Disbursements	Cumulative
<b>Balance as of March 31/18</b>	<b>\$11,011,692.47</b>	<b>(\$16,707,646.83)</b>	<b>(\$5,695,954.36)</b>
West Bedford - Phase LUB 1B Benefit to Sandy Lake	\$155,591.48		
West Bedford - Phase 8 Benefit to Sandy Lake	\$181,016.60		
West Bedford - Kearney Run - Benefit to Sandy Lake	\$9,428.58		
West Bedford - TWPS # 1 - Benefit to Sandy Lake	\$95,318.31		
West Bedford - Phase 5-4 - Benefit to Sandy Lake	\$369,069.22		
West Bedford - Phase 9-1 - Benefit to Sandy Lake	\$126,840.49		
West Bedford - HRWC 6-1002 - Benefit to Sandy Lake	\$253,095.55		
West Bedford - Phase 2-5A - Benefit to Sandy Lake	\$162,919.14		
West Bedford - Phase 2-5B - Benefit to Sandy Lake	\$107,898.20		
West Bedford - Phase 2-5C - Benefit to Sandy Lake	\$58,236.45		
West Bedford - Block 3-4 - Benefit to Sandy Lake	\$127,655.72		
West Bedford - Phase 9A - Benefit to Sandy Lake	\$76,814.95		
Less: WBHL MOU Payment	(\$1,000,000.00)		
WASTEWATER - HRM FILE #21565 (9.916ac)	\$25,946.07		
West Bedford CCC fees #21486 Wastewater 12.084 ac	\$26,286.91		
West Bedford CCC - WasteWater Q-R4A (3.871 Acres)	\$16,302.26		
West Bedford CCC - WasteWater WB-9R2 (8.006 Acres)	\$33,716.32		
West Bedford CCC - Block A-11, P-03B & P-03C WW	\$45,153.14		
West Bedford CCC - BLOCK Q-R27 (16.064 AC) WW	\$84,565.63		
<i>Fiscal 2019 Yearly Totals</i>	<i>\$955,855.02</i>	<i>\$0.00</i>	<i>\$955,855.02</i>
<b>Balance as of March 31/19</b>	<b>\$11,967,547.49</b>	<b>(\$16,707,646.83)</b>	<b>(\$4,740,099.34)</b>

**Project Information**

Nova Scotia Utility & Review Board Approval Date: September 2012  
Total Acreage: 1611.00  
Acreage Developed to Date: 687.60 (42.68%)  
Acreage Rate: \$10,122.65 (2012)  
Total Infrastructure Cost: \$20,175,319  
Benefit to Existing HRWC Customer Base - 9.9%  
Percentage of Total Infrastructure Cost to be recovered through CCC Charge - 90.1%  
Infrastructure to be completed: Forcemains, Pumping Stations and Pipe Oversizing



**HALIFAX WATER**  
**BIRCH COVE NORTH - WATER**  
**Summary to March 31, 2019**

Transaction Description	Receipts	Disbursements	Cumulative
<b>Balance as of March 31/18</b>	<b>\$2,240,789.63</b>	<b>(\$2,200,334.45)</b>	<b>\$40,455.18</b>
<i>Fiscal 2019 Yearly Totals</i>	<i>\$0.00</i>	<i>\$0.00</i>	<i>\$0.00</i>
<b>Balance as of March 31/19</b>	<b>\$2,240,789.63</b>	<b>(\$2,200,334.45)</b>	<b>\$40,455.18</b>

<b>Project Information</b>
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Nova Scotia Utility & Review Board Approval Date: September 17, 1999  
Total Acreage: 494.0  
Acreage Developed to Date: 335.36 (67.89%)  
Acreage Rate: \$5,060.00  
Total Infrastructure Cost: \$3,717,646.00  
Benefit to Existing HRWC Customer Base - 0%  
Benefit to HRM Fire Protection - 37%  
Percentage of Total Infrastructure Cost to be recovered through CCC Charge - 63%  
Infrastructure to be completed: Reservoir and Pipe Oversizing

**HALIFAX WATER  
HERRING COVE  
Summary to March 31, 2019**

Transaction Description	Receipts	Disbursements	Cumulative
<b>Balance as of March 31, 2018</b>	<b>\$1,385,726.23</b>	<b>(\$698,578.68)</b>	<b>\$687,147.55</b>
<i>Fiscal 2019 Yearly Totals</i>	<i>\$0.00</i>	<i>\$0.00</i>	<i>\$0.00</i>
<b>Balance as of March 31/19</b>	<b>\$1,385,726.23</b>	<b>(\$698,578.68)</b>	<b>\$687,147.55</b>

<b>Project Information</b>
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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

Benefit to Existing HRWC Customer Base - 0%

Benefit to HRM Fire Protection - 37%

Percentage of Total Infrastructure Cost to be recovered through CCC Charge - 63%

Infrastructure to be completed: Future Reservoir

**HALIFAX WATER  
LAKESIDE TIMBERLEA  
Summary to March 31, 2019**

Transaction Description	Receipts	Disbursements	Cumulative
<b>Balance as of March 31, 2018</b>	<b>\$753,946.18</b>	<b>(\$1,264,665.78)</b>	<b>(\$510,719.60)</b>
CCC FEE 201-232 INCLUSIVE, BB1, PARCEL A-1-R2	\$51,916.19		
<i>Fiscal 2019 Yearly Totals</i>	\$51,916.19	\$0.00	\$51,916.19
<b>Balance as of March 31, 2019</b>	<b>\$805,862.37</b>	<b>(\$1,264,665.78)</b>	<b>(\$458,803.41)</b>

Project Information
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Nova Scotia Utility & Review Board Approval Date: December 14, 2012  
 Overall Acreage 277.79  
 Acreage Developed to Date: 47.838 (17.22%)  
 Acreage Rate: \$14,926.23  
 Total Infrastructure Cost: \$ 8,062,204.55  
 Benefit to Existing HRWC Customer Base - 2.7%  
 Benefit to HRM Fire Protection - 37%  
 Percentage of Total Infrastructure Cost to be recovered through CCC Charge - 60.3%  
 Infrastructure to be completed: Pipe Oversizing

**HALIFAX WATER**  
**MORRIS RUSSELL LAKE**  
**Summary to March 31, 2019**

Transaction Description	Receipts	Disbursements	Cumulative
<b>Balance as of March 31, 2018</b>	<b>\$1,128,094.67</b>	<b>(\$363,290.75)</b>	<b>\$764,803.92</b>
<i>Fiscal 2019 Yearly Totals</i>	<i>\$0.00</i>	<i>\$0.00</i>	<i>\$0.00</i>
<b>Balance as of March 31/19</b>	<b>\$1,128,094.67</b>	<b>(\$363,290.75)</b>	<b>\$764,803.92</b>

Project Information
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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

Benefit to Existing HRWC Customer Base - 8.2%

Benefit to HRM Fire Protection - 37%

Percentage of Total Infrastructure Cost to be recovered through CCC Charge - 54.8%

Infrastructure to be completed: Pipe Oversizing

**HALIFAX WATER  
NORTHGATE  
Summary to March 31, 2019**

Transaction Description	Receipts	Disbursements	Cumulative
<b>Balance as of March 31, 2018</b>	<b>\$585,772.08</b>	<b>(\$788,960.44)</b>	<b>(\$203,188.36)</b>
<i>Fiscal 2019 Yearly Totals</i>	<i>\$0.00</i>	<i>\$0.00</i>	<i>\$0.00</i>
<b>Balance as of March 31/19</b>	<b>\$585,772.08</b>	<b>(\$788,960.44)</b>	<b>(\$203,188.36)</b>

Project Information
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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  
 Benefit to Existing HRWC Customer Base - 13.4%  
 Benefit to HRM Fire Protection - 37%  
 Percentage of Total Infrastructure Cost to be recovered through CCC Charge - 49.6%  
 Infrastructure to be completed: Pipe Oversizing

**HALIFAX WATER  
SACKVILLE LIVELY  
Summary to March 31, 2019**

Transaction Description	Receipts	Disbursements	Cumulative
<b>Balance as of March 31/18</b>	<b>\$408,579.23</b>	<b>(\$567,455.00)</b>	<b>(\$158,875.77)</b>
Phase 6 subdivision #16662 16.0339 acres	\$20,089.46		
Phase 7A subdivision #18296 1.26498 acres	\$1,585.02		
<i>Fiscal 2019 Yearly Totals</i>	\$21,674.48	\$0.00	\$21,674.48
<b>Balance as of March 31/19</b>	<b>\$430,253.71</b>	<b>(\$567,455.00)</b>	<b>(\$137,201.29)</b>

<b>Project Information</b>
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Nova Scotia Utility & Review Board Approval Date: October 29, 2007  
 Total Acreage: 335.5 acres  
 Acreage Developed to Date: 216.87 (64.6%)  
 Acreage Rate: \$1,253.00 / acre  
 Total Infrastructure Cost: \$567,455  
 Benefit to HRWC Existing Customer: \$26,133 (25 acres)  
 Benefit to HRM through LIC: \$50,746 (40.5 acres)  
 Benefit to HRM Fire Protection: \$205,972.71  
 Total Infrastructure of the Project, including financing: \$667,497  
 Percentage of Total Infrastructure Cost to be recovered through CCC Charge: 50.2%  
 Infrastructure to be completed: 0%

**HALIFAX WATER  
GEIZER HILL  
Summary to March 31, 2019**

Transaction Description	Receipts	Disbursements	Cumulative
<b>Balance as of March 31/18</b>	<b>\$967,153.88</b>	<b>(\$1,504,805.54)</b>	<b>(\$537,651.66)</b>
<i>Fiscal 2019 Yearly Totals</i>	<i>\$0.00</i>	<i>\$0.00</i>	<i>\$0.00</i>
<b>Balance as of March 31/19</b>	<b>\$967,153.88</b>	<b>(\$1,504,805.54)</b>	<b>(\$537,651.66)</b>

<b>Project Information</b>
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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  
 Benefit to Existing HRWC Customer Base - 0%  
 Benefit to HRM Fire Protection - 37%  
 Percentage of Total Infrastructure Cost to be recovered through CCC Charge - 63%  
 Infrastructure to be completed: Water Main Extension

**TO:** Darlene Fenton, Chair and Members of the Halifax Regional Water Commission Board

**SUBMITTED BY:** Original Signed By:  
Cathie O’Toole, MBA, CPA, CGA, Director, Corporate Services  
Allan Campbell, B.Comm, CPA, CMA, Manager, Finance

**APPROVED:** Original Signed By:  
Carl Yates, M.A.Sc., P. Eng., General Manager

**DATE:** June 8, 2019

**SUBJECT:** **Halifax Regional Water Commission Employees’ Pension Plan  
Financial Report – 1st Quarter (Q1), 2019**

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**INFORMATION REPORT**

**ORIGIN**

Financial reporting for the Halifax Regional Water Commission Employees’ Pension Plan (hereinafter called the “Plan”).

**BACKGROUND**

The Board is required to review the periodic (quarterly) financial results of the Plan throughout the year.

**DISCUSSION**

The attached statement of changes in net assets available for benefits (Appendix A) outlines the annual budget for the Plan and actual financial performance for Q1 (January 1 to March 31, 2019). Reported variances compare actual results to prorated budget amounts (25% = 3 months/12 months), which serves as a benchmark for the three (3) month period in 2019. Year-end audited results for 2017 and 2018 are shown for comparative purposes.



## ITEM # 6-I

HRWC Board

June 20, 2019

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As shown on the statement of changes in net assets available for benefits, net assets available for benefits have increased by \$4.8 million for the three (3) month period ending March 31, 2019. The annual budget for 2019 forecasted an increase in net assets available of \$6.1 million. Actual results for the period of \$4.8 million compared to the benchmark of \$1.5 million results in a favourable variance in the amount of \$3.2 million.

The annual budget forecasted revenue of \$4.4 million. Revenue for the period totaled \$4.9 million, which when compared to the benchmark of \$1.1 million results in a favourable variance of \$3.8 million. Revenue is affected largely by the performance of the HRM Master Trust, and change tends to be more volatile compared to contributions and expenses of the Plan. This variance is attributed directly to the fact the actual increase in the fair value of the investment assets was higher than expected. The increase for the period totaled \$4.2 million compared to the benchmark of \$0.5 million, a difference of \$3.7 million or 748%. Investment income for the period performed above expectations, showing a favorable variance of \$11.8 thousand or 2%.

Contributions of \$1.5 million are tracking as expected, showing a small, unfavourable variance of \$128.1 thousand as a result of lower than expected contributions for the period. An Actuarial Valuation was performed on the Plan as at January 1, 2019, which reported changes with respect to funding policy for the Plan, effective January 1, 2019 as follows:

- The proposed combined current service rates will increase slightly to 20.68% from 20.50%. Participants' contributions in 2019 are proposed at 10.34% of pensionable earnings, which are matched by the Plan sponsor. Prior to January 1, 2019 participants' contributions were 10.65%, with the Plan sponsor matching up to 9.85%.
- Required unfunded liability special payment of \$825,500 annually by the Plan sponsor, identified in the January 1, 2016 Actuarial Valuation, will be no longer be required as a result of the Plan reporting an actuarial surplus on a going concern basis.

Results and implementation of the January 1, 2019 Actuarial Valuation are subject to approval by the Halifax Regional Water Commission's Board of Directors, at the meeting scheduled for June 20, 2019.

Expenses of \$1.6 million for the period are higher than the benchmark of \$1.2 million resulting in an unfavourable variance of \$0.4 million or 31%. The main contributor to this unfavourable variance is termination benefit payments of \$0.5 million for the year to date, which came in considerably higher than the benchmark of \$0.2 million. The remainder of the variance is due to the timing of administrative expenses, which totaled \$45.3 thousand for the period compared to the benchmark of \$51.5 thousand.

**SERVICE STANDARDS**

Tracking of Regulatory Filing Requirements, Administrative Reporting Requirements and Service Standards for actuarial calculation requests is ongoing. The reports for Regulatory Filing Requirements and Administrative Reporting Requirements are attached as Appendix B and Appendix C respectively, and document administrative compliance within the various levels of reporting for the period.

Service Standard results to March 31, 2019 have been attached as Appendix D. The intent of the Service Standards Report is to set a standard number of days for which calculations can be provided to Members when actuarial calculations are requested. The service standard includes both estimated number of days required by the current actuarial services provider, Eckler Partners Ltd., as well as estimated Halifax Water staff time.

The overall results outlined for Q1 as reported in Appendix D show, out of 5 requests, none were delivered within the standard days proposed under the threshold limits. Response time of the actuary remains inconsistent ranging from 11 – 22 days and is high compared to the benchmark of 11 days for the categories reported. For the actuary, average service days for Retirement Estimates and Termination Estimates (standard) were 18.3 days and 12.0 days respectively. Likewise for administrative staff, response time ranged from 6 - 31 days compared to the benchmark of 7 days for the categories reported, with an average response time of 8.0 days for Retirement Estimates, and 26.0 days for Termination Estimates (standard). It is important to note that the urgency of requests is considered by administrative staff and thus may be set aside while other tasks take priority.

Results will continue to be monitored and evaluated over the coming months to obtain a larger data sample with standards being adjusted if necessary, to reflect the realities and special circumstances factoring into processing Member requests. Emphasis has been placed on working with the actuaries to ensure timely responses to calculation requests.

**ATTACHMENTS**

APPENDIX A – Financial Report:

*Statement of changes in net assets available for benefits, for the three (3) month period ended March 31, 2019.*

APPENDIX B – Regulatory Filing Requirements – 2019

APPENDIX C – Administrative Reporting Requirements – 2019

APPENDIX D – Service Standards Report - 2019

Report Prepared by: *Original Signed By:*

Michelle Bennett, B.Comm, Accountant 902-490-5242

Heather Britten, B.Comm, Quality Assurance Officer 902-490-1895

Halifax Regional Water Commission Employees' Pension Plan  
Statement of changes in net assets available for benefits  
For the three (3) month period ended  
Benchmark 25%

	March 31, 2019						Actual <sup>2</sup> 2018	Actual 2017	
	2019 Budget	Actual	Prorated Budget 25%	Variance		Actual <sup>2</sup> 2018			Actual 2017
				Actual versus Prorated Budget Favourable (Unfavourable)					
			\$	%					
<b>Revenue<sup>1</sup></b>									
Net investment income:									
Total investment income	\$2,530,000	\$644,283	\$632,500	\$11,783	2%	\$2,939,026	\$2,622,024		
Investment manager fees	(\$160,000)	(\$31,905)	-\$40,000	\$8,095	-20%	(\$165,670)	(\$146,420)		
Increase (decrease) in the fair value of investment assets	\$2,000,000	\$4,238,207	\$500,000	\$3,738,207	748%	\$1,763,098	\$8,712,459		
	<b>\$4,370,000</b>	<b>\$4,850,585</b>	<b>\$1,092,500</b>	<b>\$3,758,085</b>	<b>344%</b>	<b>\$4,536,454</b>	<b>\$11,188,063</b>		
<b>Contributions<sup>2</sup></b>									
Participants:									
Current service (inc AVC's)	\$3,028,000	\$690,276	\$757,000	-\$66,724	-9%	\$2,845,791	\$2,665,078		
Sponsors:									
Current service (inc LTD)	\$2,745,000	\$624,790	\$686,250	-\$61,460	-9%	\$2,578,842	\$2,422,527		
Unfunded liability	\$825,000	\$206,315	\$206,250	\$65	0%	\$825,200	\$825,200		
	<b>\$6,598,000</b>	<b>\$1,521,381</b>	<b>\$1,649,500</b>	<b>-\$128,119</b>	<b>-8%</b>	<b>\$6,249,833</b>	<b>\$5,912,805</b>		
<b>Expenses<sup>3</sup></b>									
Benefit payments:									
Benefit payments	\$3,959,000	\$1,009,737	\$989,750	-\$19,987	-2%	\$3,848,218	\$3,738,659		
Termination payments	\$700,000	\$541,159	\$175,000	-\$366,159	-209%	\$79,849	\$314,591		
Death benefit payments	\$0	\$0	\$0	\$0	n/a	\$0	\$242,767		
Administrative:									
Actuarial & consulting fees	\$130,000	\$14,322	\$32,500	\$18,178	56%	\$50,409	\$67,394		
Audit & accounting fees	\$9,000	\$3,450	\$2,250	-\$1,200	-53%	\$8,441	\$9,283		
Bank custodian fees	\$25,000	\$5,980	\$6,250	\$270	4%	\$32,303	\$20,132		
Insurance	\$9,000	\$8,347	\$2,250	-\$6,097	-271%	\$8,347	\$8,347		
Miscellaneous	\$15,000	\$7,933	\$3,750	-\$4,183	-112%	\$16,195	\$18,965		
Professional fees	\$14,000	\$5,293	\$3,500	-\$1,793	-51%	\$13,440	\$14,623		
Registration fees	\$3,000	\$0	\$750	\$750	100%	\$2,337	\$2,221		
Training (Trustees/ Administration/ Pension Committee)	\$1,000	\$0	\$250	\$250	100%	\$0	\$0		
	<b>\$4,865,000</b>	<b>\$1,596,220</b>	<b>\$1,216,250</b>	<b>-\$379,970</b>	<b>-31%</b>	<b>\$4,059,539</b>	<b>\$4,436,982</b>		
<b>Increase (decrease) in net assets available for benefits</b>	<b>\$6,103,000</b>	<b>\$4,775,746</b>	<b>\$1,525,750</b>	<b>\$3,249,996</b>	<b>213%</b>	<b>\$6,726,748</b>	<b>\$12,663,886</b>		
<b>Net assets available for benefits, beginning of period</b>	<b>\$122,964,705</b>	<b>\$126,458,630</b>				<b>\$119,731,882</b>	<b>\$107,067,996</b>		
<b>Increase (decrease) in net assets available for benefits</b>	<b>\$6,103,000</b>	<b>\$4,775,746</b>				<b>\$6,726,748</b>	<b>\$12,663,886</b>		
<b>Net assets available for benefits, end of period</b>	<b>\$129,067,705</b>	<b>\$131,234,376</b>				<b>\$126,458,630</b>	<b>\$119,731,882</b>		

1 For the purposes of this statement, expenses are reported on a cash basis. Comparative years are reported on an accrual basis as that is how they are reported on the financial statements.  
2 Audited results for 2018 are subject to approval by the Halifax Regional Water Commission's Board of Directors, at the meeting scheduled for June 20, 2019.

**Halifax Regional Water Commission Employees' Pension Plan**  
**Regulatory Filing Requirements - 2019**  
**as at March 31, 2019**

<b>Report</b>	<b>Regulatory Body</b>	<b>Filing Deadline</b>	<b>Date last filed</b>		<b>Comments</b>
1 Annual Form 3 - Summary of Contributions	Superintendent of Pensions	60 days after the beginning of each fiscal year	February 11, 2019	DB Plan	Filed directly with the Trustee, Northern Trust, for the DB Plan.
			February 11, 2019	DC Plan	Filed directly with the Trustee, Industrial Alliance, for the DC Plan.
2 Pension Plan Income Tax Return (T3)	Canada Revenue Agency	March 31st	February 26, 2019	DB Plan	CRA requires Northern Trust as the custodian to prepare and file T3 Income Tax Returns each year. Information obtained from HRM Pension Plan quarterly report.
3 Pension Plan Audited Financial Statements	Superintendent of Pensions	6 months after the Plan's fiscal year end	July 11, 2018	DB Plan	Audited financial statements were completed but not approved by the HW Board until after the June 30th deadline. The regulatory body was notified prior to June 30th that the financial statements would be submitted once they were approved by the Board.
			April 13, 2018	DC Plan	Audited financial statements are not prepared for this pension plan. However, Industrial Alliance provides a Financial Report detailing all pertinent details of the plan. This report will be submitted to the regulatory body prior to June 30th, 2019.
4 Annual Information Returns (AIR)	Superintendent of Pensions	June 30th	April 13, 2018	DB Plan	
			April 13, 2018	DC Plan	
5 Actuarial Valuation*	Superintendent of Pensions Canada Revenue Agency	September 30th	August 26, 2016		Actuarial Valuation was conducted as of January 1, 2019. Official results will be filed with the Superintendent of Pensions and CRA once official report is received and approved by the Halifax Water Board.
6 Plan Amendments	Superintendent of Pensions Canada Revenue Agency	60 days after the amendment approved by the Board	April 4, 2018	DB Plan	Amendment #11 approved by the Board in March 29, 2018; Submitted to the Superintendent April 4, 2018
	Superintendent of Pensions Canada Revenue Agency	60 days after the amendment approved by the Board	n/a	DC Plan	All documents relating to the registration of the DC Plan were received by the Superintendent October 6, 2017.  Amendment #11 was prepared November 17, 2017 by the Administrator pursuant to changes requested to the Plan Text by the Regulator, and filed.

\* Actuarial Valuations are required at a minimum every three (3) years.

\*\* Notional Agreements were implemented during 2017 with an effective date for January 1, 2017. Notional Agreements are not registered therefore not subject to reporting requirements to a regulatory body.

**Halifax Regional Water Commission Employees' Pension Plan**  
**Administrative Reporting Requirements - 2019**  
**as at March 31, 2019**

<b>Report</b>	<b>Filing Deadline/ Recurrence</b>	<b>Date last filed/ Performed</b>		<b>Comments</b>
1 Pensioners' Payroll	Monthly	June 1, 2019		Pensioners are paid the 1st of each month; no exceptions to report for Q1 2019.
2 Contributions to the Trustee	Monthly	May 8, 2019	DB Plan	Remittances due to Northern Trust within 30 days of monthend; no exceptions to report for Q1 2019.
		January 9, 2019	DC Plan	Remittances due to Industrial Alliance within 30 days of monthend; no exceptions to report for Q1 2019.
		n/a	Notional Agreement*	
3 Pension Plan Financial Statements	Quarterly	June 7, 2019	DB Plan	1st Quarter (January - March 2019)
		n/a	DC Plan	Quarterly statements are not prepared for the DC Plan. A financial report is prepared by Industrial Alliance and that report is filed with the AIR to the regulator.
		n/a	Notional Agreement*	Financial statements not required.
4 Investment Performance Review & Compliance with SIP&P	Quarterly	March 15, 2019	DB Plan	4th Quarter (January - December 2018)  Report prepared quarterly by administration staff for the HW Board of Directors, in conjunction with the quarterly HRM Pension Plan Committee meeting documentation.
5 Annual Pension Statements to Members	June 30th	June 18, 2018	DB Plan	
		June 18, 2018	DC Plan	Statements issued annually in conjunction with the DB Plan statements, commencing in 2018. Members also have access to online, real-time reporting.
		June 18, 2018	Notional Agreement*	Statements issued annually in conjunction with the DB Plan statements, commencing in 2018.
6 Fiduciary Liability Insurance	Annually	November 15, 2018	DB Plan	Reviewed and renewed annually by administration staff. The policy period expires November 30 each year.

\* Notional Agreements were implemented during 2017 with an effective date for January 1, 2017. Notional Agreements are not registered therefore not subject to reporting requirements to a regulatory body.

Halifax Regional Water Commission Employees' Pension Plan  
Service Standards Report - 2019

Quarter 1 (as at June 6, 2019)			Eckler				HW Staff				Total Average Service Days
Transaction	Standard		Total # Completed	# Past Standard	% with Standard	Average Service Days	Total # Completed	# Past Standard	% with Standard	Average Service Days	
Retirement Estimates	18	Business Days	3	3	0%	18.3	3	1	67%	8.0	26.3
Marriage Breakdown Calculations	28	Business Days	0	0	-	-	0	0	-	-	-
Post-Retirement Death Letter	10	Business Days	0	0	-	-	0	0	-	-	-
Pre-Retirement Death Benefit	28	Business Days	0	0	-	-	0	0	-	-	-
Termination Estimates/ Calculations											
- Standard	18	Business Days	2	1	50%	12.0	2	2	0%	26.0	38.0
- Non Standard (incl RTAs)	28	Business Days	0	0	-	-	0	0	-	-	-
<b>Volume-Weighted Average</b>			<b>5</b>	<b>4</b>	<b>20%</b>	<b>-</b>	<b>5</b>	<b>3</b>	<b>40%</b>	<b>-</b>	
			<b>Total # Completed</b>		<b># Past Standard</b>		<b>% within Standard</b>				
<b>Combined Volume-Weighted Average</b>			<b>5</b>		<b>5</b>		<b>0.0%</b>				

**TO:** Darlene Fenton, Chair and Members of the Halifax Regional Water Commission Board

**SUBMITTED BY:** *Original Approved By:*  
James Campbell, Communications and PR Coordinator

**APPROVED:** *Original Approved By:*  
Carl Yates, M.A.Sc., P.Eng., General Manager

**DATE:** June 18, 2019

**SUBJECT:** **Corporate Balanced Scorecard - 2018/19 Results**

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## **INFORMATION REPORT**

### **ORIGIN**

Annual Corporate Performance Measurement.

### **BACKGROUND**

Halifax Water has been utilizing a corporate balanced scorecard (CBS) to measure performance since 2001. With the merger in 2007, Halifax Water developed an expanded CBS to include wastewater and stormwater measurements. As well, this provided an opportunity to refine measurements related to water service delivery. This report provides a reconciliation of final results for the 2018/19 fiscal year.

### **DISCUSSION**

As part of the CBS refinement in 2007, staff developed new mission and vision statements, as follows:

#### **Our Mission:**

- To provide world-class services for our customers and our environment.

**Our Vision:**

- We will provide our customers with high quality water, wastewater and stormwater services.
- Through the adoption of best practices, we will place the highest value on public health, customer service, fiscal responsibility, workplace safety and security, asset management, regulatory compliance, and stewardship of the environment.
- We will fully engage employees through teamwork, innovation, and professional development.

With the vision statement entrenched, Halifax Water staff defined eight Critical Success Factors (CSFs) derived from the vision statement as follows:

1. High Quality Drinking Water
2. Service Excellence
3. Responsible Financial Management
4. Effective Asset Management
5. Workplace Safety and Security
6. Regulatory Compliance
7. Environmental Stewardship
8. Motivated and Satisfied Employees

Under each of the CSFs, staff developed organizational indicators to track performance and allow for the establishment of targets. The following lists the CSFs and corresponding results for the organizational indicators under each category.

**High Quality Drinking Water**

Under the category of High Quality Drinking Water, we are continuing to seek adherence to five key objectives associated with our Water Quality Masterplan. Performance was measured through our ability to maintain a disinfection residual throughout the distribution system, control disinfection byproducts like trihalomethanes and haloacetic acids, ensure particle removal through our filtration systems, and ensure corrosion control in the distribution system, as measured by the level of lead at the customers' taps. Our results in these five categories scored 0.62 out of a total maximum score of 1.00, a reduction from last year's result of 0.87. The main difference from the previous year is associated with THM and HAAs results which were challenged by the phenomenon of source lake recovery. It should be noted that THM and HAA results were still within the prescribed levels of our operating permits.

As for water safety, our bacteriological test results were 99.97%, matching last year's result of 99.97%, and above our target of 99.3% of our samples free of total coliform for the fiscal year.



Results from our annual customer survey indicate that 89% of our customers rated their drinking water quality as good to excellent, an improvement from last year's figure of 85%, exceeding the top end of the target of 80%-85%.

**Service Excellence**

Under the Service Excellence CSF, the annual customer survey indicated that 96% of our customers are satisfied or very satisfied with our overall service, surpassing the target of 90%, and matching last year's result of 96%.

In terms of service outages for water and wastewater services, results were down significantly for water compared to last year with outages of 203 connection hours per 1,000 customers this year compared to 361 connection hours per 1,000 customers last year, with a target of 200. Wastewater results were similar to last year with 2.06 connection hours per 1,000 customers, as compared to a target of 8 connection hours per 1,000 customers, remaining well below the target.

Also under Service Excellence, our call centre had an average call wait time of 84 seconds, compared with the target of 80 seconds. This matches last year's number of 84 seconds.

At the March 28, 2019 Halifax Water Board meeting, a new Organizational Indicator (OI) was approved. The new OI measures an average speed of answer with a target of 60 – 65% of calls answered within 20 seconds.

**Responsible Financial Management**

Under Responsible Financial Management, the expense to revenue ratio was recorded as 0.764, compared to the benchmark of 0.797 for the fiscal year. Also tied to the theme of Responsible Financial Management is the annual cost per connection for water and wastewater service. For water, the annual cost per connection increased to \$477 from \$439 in 2017/18, compared to a target of \$482.

For wastewater, the annual cost increased to \$684 from \$653 per connection, but remained below the target of \$687.

**Effective Asset Management**

The leakage performance measure for 2018/19 was 172 litres per service connection per day, a decrease from 199 last year and well below the target range of 180 - 190 litres per connection per day.

On the wastewater side, reduction of inflow and infiltration is a key measurement of performance, and as such, 932 inspections were carried out on private property, down from 1,100 last year, but remaining above the target of 900 inspections.

In recognition of the importance of keeping extraneous flows out of the wastewater system, a new OI has been developed for 2019/20 targeting peak flow reductions in the Clayton

Park/Fairview sewershed where a concerted effort is being made to reduce inflow & infiltration into the wastewater system. The new OI has a target range reduction of 34 – 38l/sec.

Updating and maintaining our GIS database is crucial to our Asset Management Program. With the database in a mature state last year with 99.3% of linear infrastructure embedded in GIS, the OI was revised to focus on minimizing the number of hours of unplanned outages of the GIS database. The 2018/2019 target was 90% - 85% of the 2017/2018 actual outage number. For 2018/2019 the unplanned outage time was reduced by 70.85% of the 2017/2018 figure, a significant improvement in system reliability and availability. At the March 28, 2019 Halifax Water Board meeting, a new OI was approved based on the percentage of time GIS and CityWorks is in service on a 24/7 operational protocol. The target range is 95% - 97%.

Also under Effective Asset Management is Capital Budget Expenditures, recognizing that we need to maximize spending of the annual funds approved by the NSUARB. The target for this OI is 80%-90%. The 2018/19 result for percentage of capital funds spent is currently being finalized with a number anticipated by the end of June/19.

### **Workplace Safety and Security**

Under the theme of Workplace Safety and Security, the organization saw 1 infraction resulting in a written warning from NS Labour and Advanced Education, down from 2 in 2017/2018. The target range for this OI is 0 - 2. With the safety program in a more mature and stable state, at the March 28, 2019 Halifax Water Board meeting, a revised OI was approved based on the average score of internal safety audits. The target range for this revised OI is 85% - 95%.

With regard to lost-time accidents, which are a key indicator for workplace safety, the organization saw 2.5 accidents per 100 employees as compared to a target of 2.5-3.5 (with a maximum of 4.5) per 100 employees, which is an improvement from the 2017/18 figure of 2.8. This OI is a Gateway Indicator for the Organizational Performance Award program.

Halifax Water has a large fleet to delivery its services. Accordingly, the organization tracks the number of traffic accidents per million kilometers driven. For 2018/19, 4.3 traffic accidents per million km were recorded. This is a reduction from 2017/2018's number of 4.38, and falls within the target range of 4 (maximum of 5).

### **Regulatory Compliance**

Under the critical success factor of Regulatory Compliance, 2018/19 saw three written warnings from NS Environment, up from one for 2017/2018 and exceeding the target of 0 – 2 (maximum).

Also under regulatory compliance, we tracked the percentage of wastewater treatment facilities meeting discharge requirements of their operating permits for the 2018/19 fiscal year. Our wastewater treatment facilities met their discharge requirements 94.9% of the time, up from 94.6% in 2017/2018 and placing well within the target range of 93-98%. Remaining compliant with federal wastewater system effluent regulations [WSER] is a key aspect of our strategic plan and shows a continued focus on stewardship of the environment.

### **Environmental Stewardship**

During the 2018/19 fiscal year, our Pollution Prevention division of Regulatory Services inspected 528 businesses in the Halifax municipality, an increase from 507 in 2017/18. The target for this OI was 500.

We also continued to focus on energy management associated with our water and wastewater treatment facilities with an energy reduction of 4.7% in 2018/2019 in association with capital upgrade projects. This figure significantly exceeds the target of 3.0%. As one of the Utility's largest expenses, these on-going energy reductions represent real savings on the capital and operational sides of the business, as well as continued reductions in our environmental foot print.

Under biosolids residuals handling, 99.5% of the biosolids residuals met the desired solids concentration in 2018/2019, as compared to a target of 97%. This result is up from the 2017/2018 figure of 98.3%.

### **Motivated and Satisfied Employees**

There are several organizational indicators under this category, including filling jobs with Halifax Water incumbents. For the 2018/19 fiscal year, 63% of jobs were filled from within as compared to a target of 80%. This is a slight improvement from the 2017/18 figure of 62%.

To promote harmonious labour management relations, an organizational indicator was chosen to recognize the number of grievances and arbitrations throughout the fiscal year. There were 26 grievances and zero (0) arbitrations filed during the 2018/19 fiscal year as compared to the 2017/18 numbers of 12 grievances and 1 arbitration.

The Corporate Balanced Scorecard also includes an indicator of employee satisfaction which is derived from a survey that is carried out in the fall of the year. The 2018/19 survey result was a B, down slightly from B+ in 2017/18. The target for this OI is an A-. With 5 year contracts in place for unionized staff, it is hoped this figure will improve to meet the target of A-.

The number of days of absenteeism for employees is also a measure of satisfaction and motivation. Accordingly, the average number of days that an employee was absent this year stood at 7.8, up from 7.35 in 2017/18, and just above the target of less than 7 days. This result compares favourably with the private sector.

### **Organizational Award Program**

Similar to previous years, 12 organizational indicators were incorporated into an Organizational Award Program. The selected organizational indicators are determined to be the most objective and outward looking to the customers and environment we serve. The following is a summary of our organizational indicators and corresponding award point values for the 2018/19 fiscal year:

#### **Organizational Indicator**

	<b><u>2018/19 Results</u></b>
Water Quality Master Plan Objectives	0.62
Customer Water Quality Survey Results	1.0
Customer Service Survey Results	1.0
Operating Expense/Revenue Ratio ( <b>Gateway Indicator</b> )	1.0
Water Loss Control Reduction	1.0
Inflow & Infiltration Reduction	1.0
Percentage that GIS is Operational	1.0
# of Lost Time Accidents per 100 Employees ( <b>Gateway Indicator</b> )	1.0
# of Accidents per 1,000,000 kms driven	0.7
Percentage of WWTFs Compliant with NS Environment Permits	0.7
Energy Management - Water & Wastewater	1.0
Biosolids Residuals Handling	<u>1.0</u>
<b>*TOTAL SCORE</b>	<b>11.02</b>

\*The maximum attainable score is 12.0

In accordance with the Organizational Award Program criteria, eligible employees received \$1,000 each in recognition of the exceptional performance.

**BUDGET IMPLICATIONS**

With the operating expense-to-revenue ratio less than the target, funds were available within the 2018/19 operations budget for the Organizational Award Program.


**ATTACHMENT**

Presentation - 2018-19 Corporate Balanced Scorecard – Final Results, June 20, 2019

Report Prepared by: *Original Approved By:* \_\_\_\_\_

James Campbell, Communications and PR Coordinator  
902-490-4604



2019 State of the Utility Address 1 


## CSF: High Quality Drinking Water

**Organizational Indicator:** \*

- Adherence with 5 objectives from the Water Quality Master Plan for all water systems; we must own system for one year to include results.

Objective	Total Sites	Result to March 31/19 (% of Sites Achieving Target)	Target	Distrib. Pts.
Disinfection – Chlorine Residual	65	98%	80 – 100%	18/20
Disinfection By-products (THMs)	24	76%	< 80 ug/l	0/20
Disinfection By-products (HAAs)	25	86%	< 60 ug/l	8/20
Particle Removal	5	98%	<0.2 &< 1.0 NTU	16/20
Corrosion Control	n/a	3.96 ug/L	Lead; < 10 ug/l	20/20
<b>Summary Total</b>				<b>62/100</b>

Disinfection – Achieve 0.2 mg/L at all sites (100% of sites achieving residual of 0.2 on 95% of tests)  
 THMs – Annual Avg. of < 80 ug/L at all THM sampling sites  
 HAAs - Annual Avg. of < 60 ug/L at all HAA sampling sites  
 Particle removal – Surface water plant achieves turbidity of <0.2 NTU 95% of the time and <1.0 100% of the time  
 Corrosion Control – Achieve 90th percentile standing lead sample of <10 ug/L for all sample sites



## CSF: High Quality Drinking Water

### Organizational Indicator:

- Bacteriological tests [monthly target of 99.3% free of Total Coliform]

	% Samples Free of Coliform	Target
2018/19	99.97%	99.3%



## CSF: High Quality Drinking Water

### Organizational Indicator:

- Customer satisfaction about water quality [Target of 85% rating water quality as good to excellent]



	Survey Results (actual)	Target
From Fall 2018 Survey	89%	85%

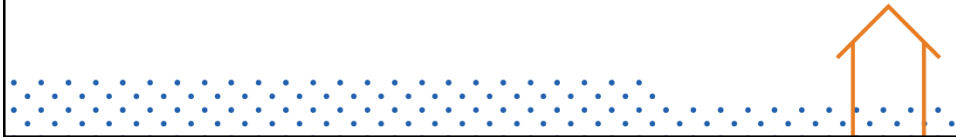


## CSF: Service Excellence

### Organizational Indicator:

- Customer satisfaction with service [Target of 90% satisfied or very satisfied]

	Survey Result (actual)	Target
From Fall 2018 Survey	96%	90%



## CSF: Service Excellence

### Organizational Indicator:

- Service outages of water [# connection hours / 1000 customers]

	Hours (actual)	Target
2018/19	203	200





## CSF: Service Excellence

### Organizational Indicator:

- Service outages of wastewater [# connection hours / 1000 customers].  
(N.B. the clock starts after we know it is our problem)

	Hours (actual)	Target
2018/19	2.06	8




## CSF: Service Excellence

### Organizational Indicator:

- Average call wait time over the year

	Seconds	Target
2018/19	84	70




2019 State of the Utility Address 8 


## CSF: Responsible Financial Management

**Organizational Indicator:** \*

- Operating Expense/Revenue Ratio [based on annual operating budget]

	Exp/Rev ratio (actual)	Target
2018/19	0.764	0.797




2019 State of the Utility Address 9 


## CSF: Responsible Financial Management

**Organizational Indicator:**

- Annual Cost per Customer Connection [Water]

	Cost/connection	Target
2018/19	\$477	\$482




2019 State of the Utility Address 10 


## CSF: Responsible Financial Management

Organizational Indicator:

- Annual Cost per Customer Connection [Wastewater]

	Cost/connection	Target
2018/19	\$684	\$687




2019 State of the Utility Address 11 

## CSF: Effective Asset Management

Organizational Indicator: \*

- Water Loss Control; target leakage allowance of 160 Litres/Service Connection/Day

	Leakage Actual	Target
2018/19	172	160 - 170



## CSF: Effective Asset Management

### Organizational Indicator:

- Inflow and Infiltration [I&I] Reduction; # of inspections on private property in relation to discharge of stormwater into the wastewater system.

	I&I Inspections	Target
2018/19	932	900



## CSF: Effective Asset Management

### Organizational Indicator:

- Hours of unplanned outages of GIS and CityWorks 

	Outage Hours	Target
2018/19	70.85%	*90% to 85% of 2017/18 actual



## CSF: Effective Asset Management

### Organizational Indicator

- Capital Budget Expenditures – Maximize annual funds spent by end of fiscal year

	Maximize Annual Capital Budget Expenditures	Target
2018/19	T.B.D.	80% to 90% approved



## CSF: Workplace Safety & Security

### Organizational Indicator:

- # of Incidents with written Compliance Orders received from NS Labour and Advanced Education

	Labour Infractions	Target
2018/19	1	0 – 2 (max.)



## CSF: Workplace Safety & Security

### Organizational Indicator:

- Lost Time Accidents [# of accidents resulting in lost time per 100 employees (FTE pro-rated)]

	Lost time accidents	Target
2018/19	2.5	2.5 – 3.5 per 100 employees (with a maximum of 4.5)



## CSF: Workplace Safety & Security

### Organizational Indicator:

- # of Traffic Accidents per 1,000,000 km

	Traffic Accidents / 1,000,000 Kms	Target
2018/19	4.3	4.0 per 1,000,000 km (maximum of 5)



## CSF: Workplace Safety & Security

### Organizational Indicator:

- Employees are retrained or recertified before due date

	% of Employees Retrained or Recertified Before Due Date	Target
2018/19	81%	80% - 90%



## CSF: Workplace Safety & Security

### Organizational Indicator:

- Supervisors complete weekly or bi-weekly safety talks

	% of Completed Safety Talks	Target
2018/19	81%	80% - 90%



## CSF: Regulatory Compliance

### Organizational Indicator:

- # of public health and environmental regulatory infractions resulting in an Environmental Warning Report, Summary Offence Ticket, Ministerial Order or prosecution.

	Public Health & Env. Infract.	Target
2018/19	3	0 - 2 (max.)



## CSF: Regulatory Compliance

### Organizational Indicator:

- % of WWTFs complying with NSE approval permits.



	% of WWTF samples meeting NSE discharge limits	Target
2018/19	94.9%	93% - 98%





## CSF: Environmental Stewardship

### Organizational Indicator:

- # of ICI properties in HRM inspected by Pollution Prevention [P2] Section each year

	Actual Inspected	Target
2018/19	528	500



## CSF: Environmental Stewardship

### Organizational Indicator:



- “Energy Management [kwh/m3]; % energy reduction associated with capital projects.

	% Energy/GHG Reduction	Target
2018/19	4.7%	3%

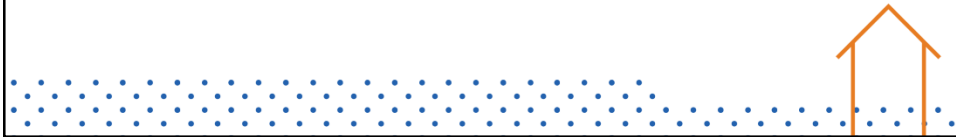


## CSF: Environmental Stewardship

### Organizational Indicator:

- Bio-solid Residuals Handling; % of sludge meeting solids concentration target - 97% of samples meet a minimum solids concentration of:
  - 25% from HHSP plants
  - 18% from Aerotech Dewatering Facility

	% Meet Solids Concentration Target	Target
2018/19	99.5%	92% - 97 %



## CSF: Motivated and Satisfied Employees

### Organizational Indicator:

- # of arbitrations divided by total # of grievances.

	Arbitrations/Grievances	Target
2018/19	0/26	0 Arbitrations

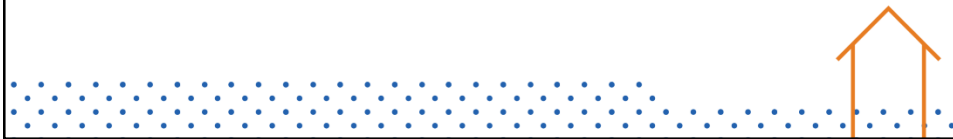


## CSF: Motivated and Satisfied Employees

### Organizational Indicator:

- % of jobs filled from within Halifax Water [excluding entry level jobs].

	% Jobs filled within	Target
2018/19	63%	80%



## CSF: Motivated and Satisfied Employees

### Organizational Indicator:

- Employee satisfaction survey. [2009 was the benchmark year with a B result].

	Survey Result (actual)	Target
Survey in 2018	B	A-



## CSF: Motivated and Satisfied Employees

### Organizational Indicator:

- Average number of days of absenteeism

	Avg. No. of days absenteeism	Target
2018/19	7.8	< 7 days



## 2018/19 Organizational Award Final Results

Organizational Indicator	2018/19 Results
Water Quality Master Plan Objectives	0.62
Customer Water Quality Survey Results	1.00
Customer Service Survey Results	1.00
Operating Expense/Revenue Ratio <i>[Gateway Indicator]</i>	1.00
Water Loss Control Reduction	1.00
Inflow & Infiltration Reduction	1.00
Percentage that GIS is Operational	1.00
Energy Management – Water & Wastewater	1.00
Biosolids Residual Handling	1.00
# of Lost Time Accidents per 100 Employees <i>[Gateway Indicator]</i>	1.00
# of Traffic Accidents per 1,000,000 km	0.7
Percentage of WWTFs Compliant with NS Environment Permits	0.7
<b>TOTAL SCORE</b>	<b>11.02</b>



**TO:** Darlene Fenton, Chair, and Members of the Halifax Regional Water Commission Board

**SUBMITTED BY:** *Original Signed By:*  
\_\_\_\_\_  
Cathie O’Toole, MBA, CPA, CGA, ICD.D  
Director, Corporate Services/CFO

**APPROVED:** *Original Signed By:*  
\_\_\_\_\_  
Carl Yates, M.A.Sc., P.Eng, General Manager

**DATE:** June 11, 2019

**SUBJECT:** **2018/19 Q4 Cost Containment**

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### **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 its appreciation in receiving HRWC’s first cost containment report, and HRWC’s initiatives to contain its operating costs.

**DISCUSSION**

A Summary Report-Cost Containment Initiatives for 2018/19 is attached, with updated information as at June 11, 2019. This report shows the cost containment initiatives effecting operations for 2018/19 as a result of new initiatives implemented during the year, along with amounts of an ongoing nature from fiscal years 2013/14 to 2017/18 inclusive. The inclusion of initiatives and amounts from prior years reflects an intentional focus on sustainable results over the long term. The estimated cost savings for 2018/19 is \$5.4 million as outlined by category in Figure #1 below:

**Figure #1**

<b>Procurement Strategies</b>	<b>\$980,654</b>	<b>18%</b>
<b>Human Resource Strategies</b>	<b>\$2,684,375</b>	<b>49%</b>
<b>Information Technology (IT) Strategies</b>	<b>\$108,700</b>	<b>2%</b>
<b>Facilities/ Process Strategies</b>	<b>\$1,499,916</b>	<b>28%</b>
<b>Reduce Paper and Printing Costs</b>	<b>\$37,479</b>	<b>1%</b>
<b>Technology and Business Process Changes</b>	<b>\$135,138</b>	<b>2%</b>
	<b><u>\$5,446,261</u></b>	

As shown above, cost containment initiatives are impacted most in the areas of Human Resource, Facilities/ Process and Procurement Strategies. Under Human Resource Strategies, the effects of pension plan re-design initiated in 2015/16 is one of the main contributors to cost containment savings in the current year. Annual savings related to pension plan re-design approximates \$1.7 million, which represents 63% of the savings within Human Resource Strategies and 31% of the total projected cost savings for 2018/19. Employer contributions on pensionable earnings decreased in 2016 from 12.95% to 9.85%, with employees experiencing a similar decrease from 12.95% to 10.65%. In addition, special payments made by the HRWC to fund the unfunded liability of the pension plan were reduced from \$3.0 million to \$0.8 million on an annual basis. Savings of \$20.2 million for the employer was projected over a 14-year period, with a 50% likelihood the plan would be fully funded within 10 years.

Further to the above, an actuarial valuation was performed as at January 1, 2019, which showed a significant improvement in the Halifax Regional Water Commission Employees' Pension Plan. The pension plan reported a surplus as at January 1, 2019, and as a result Halifax Water (as the Plan Sponsor) would not be required to make special payments to fund a previously unfunded liability for the Plan. In the previous two (2) years the special payments amounted to \$0.8 million annually. After accounting for a small increase in the contribution rate, the savings in 2018/19 are estimated at \$0.2 million. The next actuarial valuation is required to be performed on or before January 1, 2022.

## ITEM # 8-I

HRWC Board

June 20, 2019

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Facilities/ Process Strategies contain initiatives of varying nature; however, one of the main contributors in this category is Halifax Water's Energy Efficiency Program. Projects under this program account for approximately \$0.7 million of projected savings for the current year, representing 48% of savings within the category and 13% of the total projected savings for 2018/19.

Chemical costs are key to the operations of Halifax Water, in both water and wastewater services. Through its Procurement Strategies, staff continues to negotiate the best product and pricing to enable the facilities to operate in an efficient manner. This is evident in 2018/19 where savings related to chemical purchasing amounted to an estimated \$0.4 million.

New cost containment initiatives implemented during the 2018/19 fiscal year resulted in cost savings amounting to \$0.4 million. These initiatives are highlighted for ease of reference on the Summary Report-Cost Containment Initiatives attached. Cost savings resulting from these new initiatives fall within the following categories, ranked in order of cost savings:

- Human Resource Strategies \$216 thousand.
- Facilities/ Process Strategies \$92 thousand
- Procurement Strategies \$27 thousand
- Technology & Business Process Changes \$23 thousand
- Reduce Paper & Printing Costs \$10 thousand

### **BUDGET IMPLICATIONS**

Available information on cost containment initiatives were taken into consideration when the 2018/19 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: *Original Signed By:*

\_\_\_\_\_  
Allan Campbell, B.Comm., CPA, CMA  
Manager, Finance, (902) 490-4288

#	Initiative	Annual Cost Savings	Comments	Year Initiated	2018/19 Cost Savings
<b>1 General Budget Strategies</b>					
	Sub-total	\$617,201			\$0
<b>2 Procurement Strategies</b>					
	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	\$5,000
	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
	NSPI rate reclassification	\$15,000	Duffus Street Pumping Station	2015/16	\$15,000
	Chemical purchasing	\$400,000	Able to purchase a corrosion inhibitor with a higher concentration of active ingredient, thus foregoing additional costs that would have resulted under current dosage requirements	2015/16	\$400,000
	Replacement of wireless headsets for CCC staff	\$1,500	Wireless headsets were not performing as expected, therefore a switch was made to wired headsets which resulted in savings on a per unit cost basis, and also savings regarding the frequency and cost of replacement associated with the wired headsets.	2015/16	\$1,500
	Mobile devices - switched supplier and carrier	\$48,000	HW leveraged the mobility contract of the Province of Nova Scotia	2016/17	\$48,000
	Garbage collection - JD Kline Plant	\$1,370	An RFP was put out to consolidate the garbage collection, which resulted in a cost savings with respect to internal man-hours and use of HW vehicles.	2016/17	\$1,370
	Utilizing HW staff to setup excavations sites	\$50,000	Using trained HW staff as TWS for job sites, unless outside traffic control personal are required	2016/17	\$50,000
	RFP for biosolids transport	\$220,000	As a result of a recent RFP, the is expected to be an approximate 33% cost reduction related to transporting biosolids from the Halifax, Dartmouth,Herring Cove and Eastern Passage WWTP	2017/18	\$220,000
	Traffic control	\$50,000	Using trained HW staff for the purposes of traffic control while working on HW excavations sites will result in cost savings of \$750/day. This is based on an 8 hour day, including setup costs typically paid to the contractor.	2017/18	\$50,000
	Insourcing (Lead Line Replacement Program)	\$17,500	The ability to perform in-house communications/graphic design work saved significant time and cost for internal staff, which would have been required to engage outside firms to perform the same work.	2018/19	\$17,500
	Insourcing (Halifax Water's Annual Report)	\$9,200	The ability to perform in-house graphic design work versus contracting this work outside created savings with respect to the 2018 report of approximately \$100/page. Recurring annual savings will fluxuate depending on the size of the report in subsequent years.	2018/19	\$9,200
	Sub-total	\$1,372,254			\$980,654
<b>3 Human Resource Strategies</b>					
	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	\$2,241
	Background Checks	\$654	Out-sourced background checks to a new contractor.	2015/16	\$654
	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.	2015/16	\$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.	2015/16	\$1,700,000
	Re-structuring within the organization to create a new "Corporate Services" sector	\$35,000	January 1, 2016 saw the elimination of two (2) full time positions and a re-design of several other jobs.	2015/16	\$35,000
	Workload, labour force assessment	\$57,000	January 1, 2016 saw the elimination the administrative assistant within Regulatory Services.	2015/16	\$57,000
	Workload, labour force assessment	\$81,966	November, 2016 saw the elimination of a Compliance Sampling position as a result of a reduction in sampling requirements.	2016/17	\$81,966



**Halifax Water  
Summary Report - Cost Containment Initiatives  
2018/ 2019**

Item #8-1 Attachment  
HRWC Board  
June 20, 2019

Hiring at Lake Major plant	\$9,800	Summer student not hired	2016/17	\$9,800
Overtime reductions	\$40,000	Overtime has been reduced at the Harbour Solutions Plants with respect to sick leaves, vacation, etc. when weather conditions allow and operational needs are met. Also, Halifax WWTP staff are responding to after hours calls at the Dartmouth and Herring Cove facilities in an effort to minimize the need for overtime call-outs.	2016/17	\$40,000
Change in benefit provider	\$125,000	The selection of a new benefit provider for life and LTD resulted in significant cost savings over the next three (3) years...2018-2021	2017/18	\$125,000
Hiring deferment (Engineering - Wastewater Infrastructure)	\$100,000	As a result of maternity leave, staff resourcing was compared against project demands for 2018 and it was decided the position would not be backfilled.	2017/18	\$83,333.33
Hiring deferment (Pockwock Water Treatment Plant)	\$9,880	a summer student was not hired in 2018 at the Pockwock WTP as it was not feasible to have them onsite with all the capital work being carried out at the plant	2018/19	\$9,880
Actuarial Valuation - January 1, 2019	\$825,200	The actuarial valuation performed January 1, 2019 reported a surplus for the pension plan. As a result, special payments by Halifax Water to fund the unfunded liability are no longer required for at least 3 years when the next valuation is to be performed..	2018/19	\$206,300
Sub-total	<u>\$4,206,599</u>			<u>\$2,684,375</u>

**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
Sub-total	<u>\$108,700</u>			<u>\$108,700</u>

**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
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 than 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	\$86,000
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
E-delivery	\$20,000	Transitioning from traditional billing methods to e-delivery	2014/15	\$20,000
Change in Recycling Pickups	\$2,700	By changing the schedule for recycling pickups from bi-weekly to every three (3) weeks, the anticipated annual savings will range from \$2,500 to \$2,700.	2015/16	\$2,700
Highway #7 Booster Station Upgrade	\$14,300	Expected energy savings	2015/16	\$14,300
Dartmouth WWTF - UV Channel Isolation	\$59,460	Expected energy savings	2015/16	\$59,460
Halifax WWTF - Fixed Compressed Air Leaks	\$2,293	Expected energy savings	2015/16	\$2,293
Halifax WWTF - UV Channel Isolation	\$62,115	Expected energy savings	2015/16	\$62,115
Herring Cove WWTF - MCC 190 Cooling/Heat Recovery	\$8,496	Expected energy savings	2015/16	\$8,496
Herring Cove WWTF - Ventilation Air Heat Recovery	\$28,300	Expected energy savings	2015/16	\$28,300
Sampling	\$4,160	Using internal staff at the Mill Cove facility to perform the required daily sampling at the facility, rather than the compliance staff, limiting their site visits to once a week.	2015/16	\$4,160
Staff utilization	\$50,000	Using trained HW staff for traffic control on HW job sites unless contractors are required.	2015/16	\$50,000

Process alternative	\$40,000	A centrifuge was rented for the Mill Cove WWTF (with the option to purchase) on a trial basis to dewater liquid sludge that typically would be transported to the Aerotech WWTF. The transport of the liquid sludge resulted overtime costs, as well as reducing the time available for HW truck to service other facilities. This process assisted the Aerotech in reaching its compliance goals and reduced overtime costs by an estimated 50%. This equipment will enable HW proceed with a digester clean out project, which would otherwise be sub-contracted at a cost of \$200,000.	2015/16	\$40,000	
Process change	\$4,854	It was decided that flanges for meter sizes greater than 2" would be the responsibility of the customer, since when meters are replaced, the flanges are not replaced.	2015/16	\$4,854	
Halifax WWTF - Ventilation Air Heat Recovery System	\$32,300	Implemented October, 2016	2016/17	\$32,300	
Tools developed internally	\$20,000	Tools developed internally to install new operating nuts on buried valves. Previously nuts were lost on buried valves resulting in a need to excavate the valve and install new nuts. Cost savings are achieved regarding excavation and reinstatement.	2016/17	\$20,000	
Spruce Hill transmission main	\$3,000	Two long term leaks were discovered in the transmission main resulting in cost savings from the perspective of water loss control.	2016/17	\$3,000	
Utilization of industrial water	\$26,000	A new filter system was installed at the Eastern Passage WWTP that provides the capability to use the current industrial water system rather than potable water to deliver water to the polymer feed systems.	2016/17	\$26,000	
Cost reductions (material transport)	\$2,000	Modifications to the screening/grit skip eliminated the need to purchase 2 new screening compactors, which also resulted in the amount of material transported of approximately 28 metric tonnes.	2017/18	\$2,000	
Servicing oxygen monitors in-house	\$30,000	Technical Service staff have been trained by the manufacturer to service the fleet of personal gas monitors in-house, specifically the replacement of the oxygen sensor. These monitors, 165 in total, are used by all operation and treatment departments throughout the organization.	2018/19	\$30,000	
Pumping Station Starters (4160V)	\$1,500	The pumping station starters were upgraded to vacuum starters, thus eliminating the need for annual servicing of the starters to be outsourced. Any maintenance can now be handled by in-house industrial electricians.	2018/19	\$1,500	
Automated Flushing Stations	\$8,000	Automated flushing stations are now used to ensure the proper chorine residuals are achieved in all areas of the transmission and distribution system. Previously this operation was performed manually on a daily basis from approximately June to September. As a result labour and vehicle costs have been reduced accordingly.	2018/19	\$8,000	
Corrosion Sampling	\$15,120	Corrosion sampling in the distribution system was reduced from bi-weekly to monthly in June, 2018, since enough baseline data has been collected and there are no immediate plans to change corrosion control in the near future.	2018/19	\$12,600	
Alternative product	\$40,000	An alternative timing belt was introduced to replace the normal v-belt/sheave configuration, which reduced slippage between the v-belts and sheaves resulting in a reduction in power demand. The product has been installed at both the Halifax and Herring Cove WWTF, with the expectation of implementation at other wastewater and water facilities.	2018/19	\$40,000	
Sub-total				<u>\$2,556,878</u>	<u>\$1,499,916</u>
<b>6 Reduce Paper and Printing Costs</b>					
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	
Changes to document archiving	\$9,000	Transitioning file storage from outside contractor to public resources	2016/17	\$9,000	
Cost reduction associated with off-site storage	\$10,000	There has been an effort to reduce the number of boxes (documents) stored in facilities such as Iron Mountain, by sorting and purging documents in accordance with the document retention policy of the Commission.	2018/19	\$10,000	
Sub-total				<u>\$37,479</u>	
<b>7 Technology and Business Process Changes</b>					
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.	2015/16	\$47,605	
Workload, labour force assessment	\$64,533	Re-structuring by management within the AMI project as a result of technological efficiencies anticipated.	2015/16	\$64,533	
2018 Canadian Biosolids & Residuals Conference	\$23,000	Halifax Water hosted this conference in Halifax, September 12-18, 2018 as part of its unregulated business, and did so in conjunction with the ACWWA and NEBRA. As host Halifax Water is entitled to 50% of the net profit from the conference.	2018/19	\$23,000	
Sub-total				<u>\$142,138</u>	<u>\$135,138</u>
				<u>\$9,726,057</u>	<u>\$5,446,261</u>

**TO:** Darlene Fenton, Chair, and Members of the Halifax Regional Water Commission Board

**SUBMITTED BY:** *Original Signed By:*  
\_\_\_\_\_  
Cathie O’Toole, MBA, CPA, CGA, Director, Corporate Services  
Allan Campbell, BComm, CPA, CMA, Manager, Finance

**APPROVED:** *Original Signed By:*  
\_\_\_\_\_  
Carl Yates M.A.Sc., P.Eng., General Manager

**DATE:** June 20, 2019

**SUBJECT:** HRM Pension Plan Investment Performance – 1st Quarter (Q1, 2019)

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**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 provide a performance update for Q1 of 2019 (January to March) 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 March 31, 2019 was 6.2%, and totaled \$130.7 million.

The total fund returned 3.82% in the 1st Quarter, which underperformed the policy benchmark of 4.7% by 0.88%. The return for the one-year period ended March 31, 2019 is 6.24%, outperforming the policy benchmark of 4.88% by 1.36%. Other historical returns are provided in Table 1 below:

**Table 1 - Returns**

	<b>Current</b>					<b>Since</b>
	<b>Quarter</b>	<b>Year to</b>		<b>3 - Year</b>	<b>4 - Year</b>	<b>Since</b>
	<b>(Jan to Mar)</b>	<b>Date</b>	<b>1-Year</b>	<b>Annualized</b>	<b>Annualized</b>	<b>Inception</b>
						<b>(Oct 1999)</b>
Fund Return	3.82%	3.82%	6.24%	8.95%	7.09%	7.11%
Policy Benchmark	4.70%	4.70%	4.88%	6.90%	5.25%	5.65%
Excess Return	-0.88%	-0.88%	1.36%	2.05%	1.84%	1.46%

The total fund return is subject to investment management fees and plan expenses. The HRM Pension Plan performs an analysis with respect to the Master Trust to show the potential downside return risk under different scenarios. The most recent scenarios analyzed showing the greatest potential risk, are identified in Table 2 following:

**Table 2 – Stress Testing (as at March 31, 2019)**

Scenario:	<b>Projected Return</b>
	<b>of Master Trust</b>
Equities down by 5%	-2.37%
CAD decrease by 10% compared to the USD	-0.38%
US interest rates increase by 0.25%	-0.44%
Oil prices drop by 10%	-0.64%

As at March 31, 2019 the Master Trust was in compliance with the Statement of Investment Policies and Procedures (SIP&P), and a summary of the asset mix is provided in Table 3 below:

**Table 3 – Asset Mix, as at March 31, 2019**

Asset:	<b>Actual</b>	<b>Policy</b>
Cash & Equivalents	0.40%	0.00%
Canadian Equity	4.60%	5.30%
Global Equity	31.40%	29.40%
Bonds	28.60%	33.20%
Minimum Target Return	35.00%	32.10%

**ATTACHMENT**

Halifax Regional Municipality Pension Plan Investment Report Q1, 2019

Report Prepared by: *Original Signed By:*

Michelle Bennett, BComm, Accountant 902-490-5242

Heather Britten, BComm, Quality Assurance Officer  
902-490-1895

Consent Agenda Item No. 1



# **Investment Report**

Q1 2019



# Executive Summary

## Compliance

- As at March 31, 2019, the Master Trust (MT) was in compliance with the SIP&P.

## Funded Status

- As at December 31, 2017, the going concern funded ratio and transfer ratio were 90.6% and 63.1% respectively.\*
- The December 31, 2018 funded status to be discussed with Eckler.

## Master Trust Performance (net of fees)

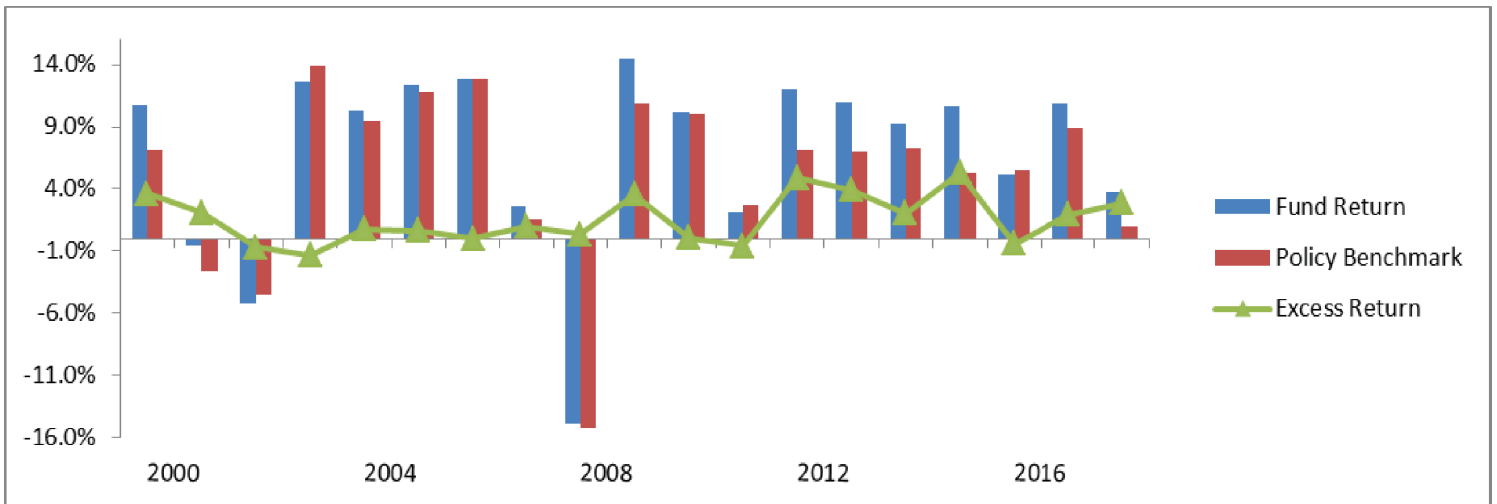
- In Q1, the MT earned 3.82%, underperforming the policy benchmark return by 0.88%.
- For the one-year period ending March 31, 2019, the MT earned 6.24% outperforming the policy benchmark by 1.36%.
- The MT earned an annualized return of 7.09% over the 4-year period ending March 31, 2019, outperforming the policy benchmark by 1.84% annualized.
- Since inception (October 1999), the MT earned 7.11% annualized, outperforming the Plan's long-term rate objective of 6.20%. The table on the next slide summarizes the calendar year returns for the MT.

\*Per Eckler Valuation Report as at December 31, 2017. Assumes a going concern discount rate of 6.20%.



# Executive Summary – Cont.

Calendar Returns  
(net of fees)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
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%	10.59%	5.13%	10.85%	3.81%
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%	5.27%	5.55%	8.91%	0.96%
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%	5.32%	-0.42%	1.94%	2.85%







## Executive Summary – Cont.

### Added Value

- In Q1 of 2019, the MT underperformed its policy benchmark by 0.88%. Attribution: Global Credit +0.29%, Emerging Market Equity +0.16%, EAFE Equity +0.03%, US Equity +0.02%, Canadian Equity -0.04%, World Equity -0.06%, Universe Bonds -0.13% and Minimum Target Return -1.15%.

### Q1 Updates

- Redeemed CAD \$7.5 million from passive public Canadian equity.
- Redeemed CAD \$7.5 million from passive public EAFE equity.
- Committed EUR 14 million to a global infrastructure fund focused on large cap opportunities.
- Committed EUR 20 million to a European infrastructure fund focused on mid cap opportunities.
- Co-invested EUR 2.5 million in a preferred equity investment portfolio consisting of three companies in the modular space rental business. The deal provided liquidity to existing investors of a blue-chip European private equity manager.



## Total Fund Net Returns

As of March 31, 2019

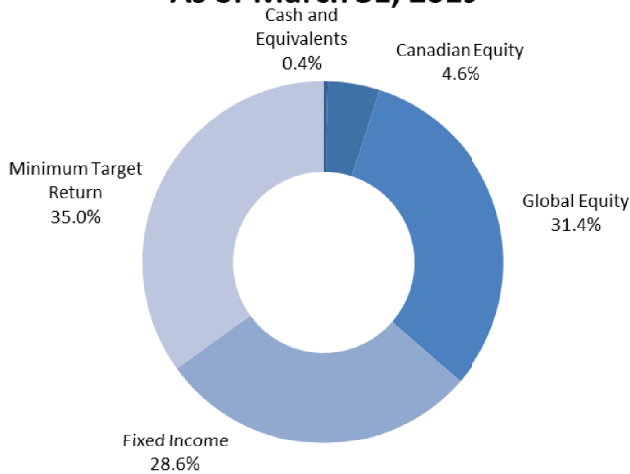
	Q1	1-Year	3-Year Annualized	4-Year Annualized	Since Inception (Oct 1999)
Fund Return	3.82%	6.24%	8.95%	7.09%	7.11%
Policy Benchmark*	4.70%	4.88%	6.90%	5.25%	5.65%
Excess Return	-0.88%	1.36%	2.05%	1.84%	1.46%

\*Effective March 31, 2019, the Policy Benchmark is 3.3% S&P/TSX Index + 2.0% S&P/TSX 60 + 4.9% S&P 500 Index (\$USD) + 8.3% MSCI EAFE Index (\$CAN) + 4.1% MSCI Emerging Markets (\$CAN) + 12.1% MSCI World (\$CAN) +15.0% FTSE TMX Canada Universe Bond + 18.2% 3 Month Bankers Acceptance + 32.1% Minimum Target Return.

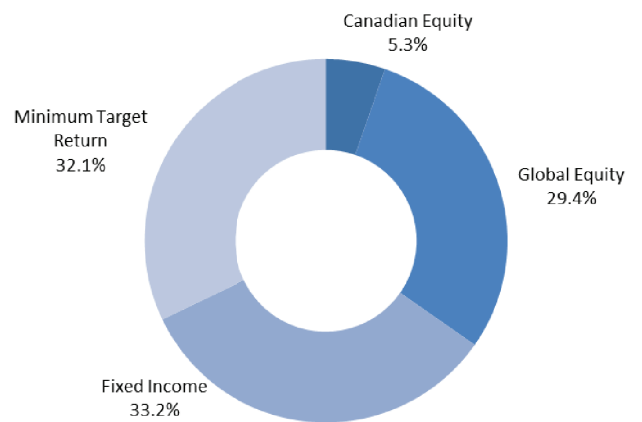
*Fund returns are shown net of fees and expenses*

# Asset Mix

**Asset Mix  
As of March 31, 2019**



**Asset Mix Policy  
As of March 31, 2019**



\*Effective March 31, 2019, the Policy Benchmark is 3.3% S&P/TSX Index + 2.0% S&P/TSX 60 + 4.9% S&P 500 Index (\$USD) + 8.3% MSCI EAFE Index (\$CAN) + 4.1% MSCI Emerging Markets (\$CAN) + 12.1% MSCI World (\$CAN) + 15.0% FTSE TMX Canada Universe Bond + 18.2% 3 Month Bankers Acceptance + 32.1% Minimum Target Return.



## Equity Market Index Returns

As of March 31, 2019

Index	Q1	1-Year	3-Year Annualized	4-Year Annualized
Canadian Equity (S&P/TSX Composite Index)	13.29%	8.11%	9.26%	5.07%
US Equity (S&P 500 C\$)	11.16%	13.46%	14.74%	11.94%
US Equity (S&P 500 U\$)	13.65%	9.50%	13.51%	10.46%
EAFE Equity (MSCI EAFE C\$)	7.57%	-0.23%	8.43%	4.54%
Emerging Markets (MSCI EM C\$)	7.51%	-4.06%	11.88%	5.91%
World Equity (MSCI World C\$)	10.02%	7.78%	11.88%	8.40%

\*Source: Northern Trust

### In the first quarter:

- All equity markets rebounded from a weak 2018 and made gains in Q1, as concerns over the China-US trade dispute eased and central banks turned more dovish.
- Canada was one of the top-performing equity markets due to solid corporate profitability.
- US equities rose as the government shutdown ended and Emerging Market equities posted a strong return led by China.



## Equity – Q1 Summary

- The MT's Equity portfolio returned 10.13% during the quarter, outperforming the equity policy benchmark return of 10.11% by 0.02%, primarily due to outperforming Emerging Market equities.

As of March 31, 2019

MT Equity	Q1	Benchmark	Relative Performance
Canadian Equity (S&P/TSX Composite Index)**	13.53%	13.01%	0.52%
US Equity (S&P 500)	14.12%	13.65%	0.47%
EAFE Equity (MSCI EAFE)	7.62%	7.57%	0.05%
Emerging Markets (MSCI EM)	9.81%	7.51%	2.30%
World Equity (MSCI World)	9.26%	10.02%	-0.76%
<b>MT Equity Total</b>	<b>10.13%</b>	<b>10.11%</b>	<b>0.02%</b>

\*Source: Northern Trust

\*\*Canadian Equity is a blended index of S&P TSX 60 and S&P/TSX Composite



## Bond Market Index Returns

As of March 31, 2019

Index	Q1	1-Year	3-Year Annualized	4-Year Annualized
Canadian Universe Bonds (FTSE TMX Canada Universe Bond)	3.91%	5.27%	2.70%	2.21%
Canadian Government Bonds (FTSE TMX Canada Universe)	3.87%	5.42%	2.37%	1.98%
Canadian Corporate Bonds (FTSE TMX Canada Universe Corporate)	4.03%	4.88%	3.57%	2.84%

\*Source: Northern Trust

- Corporate bonds have outperformed Government bonds and the broader Universe over Q1, 3-year and 4-year periods.
- Government bonds have outperformed Corporate bonds and the broader Universe over the 1-year period.
- Q1 had one of the strongest returns in both Canada and the U.S with significant declines in interest rates across the entire yield curve, with the most decline occurring in March.



## Fixed Income – Q1 Summary

- The MT's diversified Fixed Income portfolio earned 2.06%, which outperformed its benchmark return of 2.05% by 0.01%.

As of March 31, 2019

MT Fixed Income	Q1	Benchmark	Relative Performance
Canadian Corporate Bond	2.43%	4.03%	-1.60%
Government Bond	3.55%	3.87%	-0.32%
Global Credit Absolute Return	1.20%	0.53%	0.67%
<b>MT Fixed Income Total</b>	<b>2.06%</b>	<b>2.05%</b>	<b>0.01%</b>

\*Source: Northern Trust

- Strong performance by our Global credit portfolios increased returns relative to the overall fixed income benchmark.



## MTR –Summary

- The Minimum Target Return portfolio (private investment portfolio) returned -0.64% in Q1, versus a benchmark of 1.52%, underperforming by 2.16%. The underperformance is mainly due to a lag in the receipt of Q1 capital statements.

As of March 31, 2019

	Q1	1-Year	3-Year Annualized	4-Year Annualized	Since Inception (Oct 1999)
MTR Return	-0.64%	11.04%	12.53%	11.52%	12.92%
Policy Benchmark	1.52%	6.20%	6.35%	6.40%	6.53%
Excess Return	-2.16%	4.84%	6.18%	5.12%	6.39%

*The policy benchmark for the private investment portfolio is the Going Concern Discount rate. The 2019 and 2018 rate is 6.2%, 2017 is 6.4%, 2016 is 6.5%, 2015 is 6.55%, 2014 is 6.5%, 2013 is 6.25%, 2007-2012 is 6.75% and prior to 2007 is 7.4% respectively.*





# Stress Testing

## Scenario Analysis

- Of the scenarios we analyze, the four that show the greatest potential downside return risk to the Master Trust include:

**As of March 31, 2019**

Scenario	Projected Return of Master Trust
Equities Down 5%	-2.37%
CAD decrease by 10% vs USD	-0.38%
US interest rates increase by 0.25%	-0.44%
Oil price drops by 10%	-0.64%



# Liquidity

	Estimated 2019 Amounts (\$ mln)
Contributions**	\$ 87.1
Dividend & Distribution Income	\$ 17.3
Interest Income	\$ 12.6
Other Income	\$ 0.3
Benefit Payments**	-\$ 105.7
Expenses	-\$ 3.2
<b>Total Annual Net CF</b>	<b>\$ 8.4</b>
Liquid Investments*	\$ 1,320.3
Actual Net Distributions	\$ 17.0
Projected Net Distributions	\$ 117.0
Actual Net Capital Calls	-\$ 39.6
Projected Net Capital Calls	-\$ 90.0
<b>Total CF + Liquid Investments + Private Sales – Capital Calls</b>	<b>\$ 1,333.1</b>

\* Liquid investments as at May 23, 2019. Includes all publicly traded equity and fixed income investments

\*\* Contributions are derived from the Contribution Planner filed with Northern Trust. Benefits are based on monthly average January to March 2019 with a conservative estimate for lump sum payments

\*\*\* Income and expense estimates based on actual amounts from January to March 2019, annualized for full year

**TO:** Members of the Halifax Regional Water Commission Board

**SUBMITTED BY:** *Original Signed By:*  
\_\_\_\_\_  
Darlene Fenton, Chair, Board Environment, Health & Safety  
Committee

**DATE:** June 13, 2019

**SUBJECT:** **Use of Dry Ice in Rodent Management**

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## **INFORMATION REPORT**

### **ORIGIN**

February 7, 2019 Environment, Health and Safety Committee.

### **BACKGROUND**

A report was submitted to the Halifax Water Board June 13, 2018.

During discussions on rodent control, there have been questions as to why Halifax Water does not simply bait catch basins on a regular basis. Halifax Water does not bait catch basins as the sewer system is not the prime habitat for rodents and there are significant environmental implications. The bait used is highly poisonous and can be carried to the nearest water body during runoff from a rain or snow melt event which occurs frequently. Some catch basins are connected to the storm system that directly discharges to nearby rivers, lakes or Halifax Harbour. Halifax Water staff have confirmed with HRM staff that the Construction Management Plan (CMP) requirements have been amended to include rodent control activities. Halifax Water reviews its construction projects for the requirements of pest control and engages the services of pest control contractors as required.

Given the potential environmental impacts of using bait in the sewer, on February 7, 2019, the Environment, Health and Safety Committee requested a report on the use of dry ice in managing rodents.

**DISCUSSION**

Dry ice has been used in other cities, such as New York, Boston, and Chicago to control rodent population. Although it has been shown to control rodents, there are significant drawbacks from a safety and environmental perspective. Essentially, when dry ice is outside of the transporting container, it releases gaseous carbon dioxide and suffocates the rodents. The practice involves placing the dry ice underground, in the burrows of the rodents, resulting in the rodents suffocating underground and decomposing in place, with minimal impact on the environment. Notwithstanding, in Canada, the Pest Management Regulatory Agency (PMRA), which is a division of Health Canada, regulates all pest control products would require dry ice to be registered as a pest control product prior to it being approved for legal use to control rodents. It has not been registered and the US Environmental Protection Agency has banned the use of dry ice as it is not a registered pesticide.

Also, in reviewing the use and disposal of dry ice, it is strongly recommended **not** to place dry ice in non-ventilated areas or sewers as it may impact the pipes. It is also recommended not to use dry ice in areas that are accessible to the general public.

Given the above, the use of dry ice in the sewers for the management of rodents is not recommended as:

- The PMRA has not registered it for use and US EPA does not recommend its use
- The sewers are not the primary habitat for rodents,
- The carbon dioxide gas could travel through the sewers and enter homes or exit catch basin grates,
- The gases could impact the integrity of the sewer pipes and/or
- The rodents would die within the sewers and they would have to be extracted to prevent blockage or impact to mechanical systems (pump stations and treatment facilities).

It is understood that HRM is preparing a report on the management of invasive species, and will likely consider aspects of rodent control for Council's consideration. As in the past, Halifax Water will continue to work with HRM and other stakeholders to conform to best practice in rodent control. The current arrangement with HRM is for HRM to take the lead on rat control and Halifax Water takes the lead on beaver control, as these activities align closely with the agency that is best able to manage the risk.

Report Approved by: Original Signed By:  
Carl D. Yates, M.A.Sc., P.Eng. General Manager

Report Prepared by: Original Signed By:  
Kenda MacKenzie, Director, Regulatory Services, 902-237-7116