

March 19, 2021

Craig MacMullin, MBA, CPA, CGA, Chair  
Halifax Water  
Halifax, NS

The regular meeting of the Halifax Water Board will be held virtually on Thursday, March 25, 2021 beginning at 9:00 a.m. Visit [www.halifaxwater.ca](http://www.halifaxwater.ca) to register to attend the public portion of the meeting.

## AGENDA

### In Camera Reports

- 1C Approval of Minutes of the In-Camera Meeting held on Thursday, January 28, 2021

**Motion:** That the Halifax Water Board approve the In-Camera minutes of January 28, 2021.

- 2C Business Arising from Minutes  
a)

- 3C Land Matter (10 minutes)

**Motion:** That the Halifax Water Board convene to In Camera (private) to discuss the matter.

- 4C-I Land Matter (20 minutes)

**Information Item**

- 5C-I Legal Matter (10 minutes)

**Information Item**

### Regular Reports

1. a) Ratification of In-Camera Motions (2 minutes)

**Motion:** That the Halifax Water Board ratify the In-Camera Motions.

- b) Approval of the Order of Business and Approval of Additions and Deletions (2 minutes)

**Motion:** That the Halifax Water Board approve the order of business and approve additions and deletions.

2. Approval of Minutes of the Regular Meeting held on Thursday, January 28, 2021 (2 minutes)

**Motion:** That the Halifax Water Board approve the minutes of the January 28, 2021 regular meeting.

3. Business Arising from Minutes  
a)

### Financial

- 4.1 Operating Results for the Eleven Months Ended February 28, 2021 (10 minutes)

## Capital Approvals

5.1 Capital Expenditures for the Eleven Months Ended February 28, 2021 (10 minutes)

5.2 William's Lake Road Wastewater Pump Station Rehabilitation (Construction Phase) (10 minutes)

**Motion:** That the Halifax Water Board approve the construction phase of the Williams Lake Road Wastewater Pumping Station Rehabilitation project in the amount of \$3,190,000, for a revised total project cost of \$3,400,000.

5.3 Cobequid Looping – Windgate Drive Water Transmission Main (10 minutes)

**Motion:** That the Halifax Water Board approve the construction phase funding for the Cobequid Looping - Windgate Drive Water Transmission Main Phase 1 (\$1,500,000) and Phase 2 (\$950,000) for an estimated total project cost of \$2,500,000.

## Other Business

6. Corporate Governance Manual (15 minutes)

**Motion:** That the Halifax Water Board approve the revisions to the Corporate Governance Manual, as attached to the Board Report dated March 1, 2021.

7. Appointment of Board Vice-Chair and Confirmation of Appointments to Board Committees – Verbal (25 minutes)

**Motion:** That the Halifax Water Board appoint a Vice-Chair and confirm appointments to the subcommittees of the Board.

8. Corporate Balanced Scorecard – 2021/22 Program (25 minutes)

**Motion:** That the Halifax Water Board approve:

1. Corporate Balanced Scorecard targets for the 2020/21 fiscal year as detailed in the attached presentation.
2. The Organizational Award Program tied to the outcomes of 12 Organizational Indicators as detailed in the attached presentation.

9. Halifax Water Odour Strategy & Service Level (20 minutes)

**Motion:** That the Halifax Water Board endorse Halifax Water's established response and level of service to respond to odour complaints within the wastewater and combined collection systems.

## Information Reports

- 1-I Financial and Operations Information Report
- 2-I Lake Major Water Supply Plant (WSP) - Clarifier Component Replacement Project – Phase II
- 3-I Halifax Regional Water Commission Employees' Pension Plan Financial Report, Fourth Quarter, 2020
- 4-I Halifax Regional Municipality Master Trust Investment Performance, Fourth Quarter, 2020
- 5-I Update on Wastewater Research Program – Dalhousie University


Heidi  
Schedler  
Heidi Schedler  
Secretary

Digitally signed by Heidi  
Schedler  
Date: 2021.03.19  
10:26:43 -03'00'

**TO:** Craig MacMullin, MBA, CPA, CGA, Chair, and Members of the Halifax Regional Water Commission Board

**SUBMITTED BY:**  Digitally signed by Allan Campbell  
Date: 2021.03.18 16:46:20 -03'00' *On behalf of*

Louis de Montbrun, CPA, CA  
Director, Corporate Services/CFO

**APPROVED:** Cathie O'Toole  Digitally signed by Cathie O'Toole  
Date: 2021.03.18 16:37:24 -03'00'  
Cathie O'Toole, MBA, FCPA, FCGA, ICD.D  
General Manager

**DATE:** March 19, 2021

**SUBJECT:** Operating Results for the eleven months ended February 28, 2021

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### **ORIGIN**

Financial Information Reporting.

### **BACKGROUND**

The Halifax Regional Water Commission (Halifax Water) Board is required to review periodic financial information throughout the year.

### **DISCUSSION**

Attached are the operating results for the eleven (11) months ending February 28, 2021, with comparative figures for February 28, 2020 and March 31, 2020.

The following discussion of the operating results reflect direct operating costs by department and allocations among water, wastewater and stormwater for common costs shared across all the services provided by Halifax Water.

### **Statement of Financial Position (NSUARB) - Page 3 of attachment**

Key indicators and balances from the Statement of Financial Position are provided in the following tables. An analysis of assets is as follows:

**ITEM # 4.1**  
**Halifax Water Board**  
**March 25, 2021**

**Table 1:**

	February 28 2021	February 29 2020	March 31 2020	From Prior Year	
				\$ Change	% Change
<b>Assets</b>					
Current					
Cash and cash equivalents	\$ 58,565	\$ 55,514	\$ 49,953	\$ 3,051	5.5%
Receivables					
Customers charges and contractual	13,290	15,751	18,405	(2,461)	(15.6%)
Unbilled service revenues	19,234	18,474	17,367	760	4.1%
Halifax Regional Municipality	0	0	3,668	0	0.0%
Inventory	2,120	1,637	1,736	483	29.5%
Prepays	724	175	1,002	549	313.7%
	93,933	91,551	92,131	2,382	2.6%
Capital work in progress	65,357	87,185	18,104	(21,828)	(25.0%)
Utility plant in service	1,287,674	1,236,401	1,330,147	51,273	4.1%
Total assets	1,446,964	1,415,137	1,440,382	31,827	2.2%
Regulatory deferral account	2,637	2,829	2,812	(192)	(6.8%)
<b>Total assets and regulatory deferral account</b>	<b>\$ 1,449,601</b>	<b>\$ 1,417,966</b>	<b>\$ 1,443,194</b>	<b>\$ 31,635</b>	<b>2.2%</b>

- Cash and cash equivalents consist of cash on hand and balances held within financial institutions reduced by outstanding cheques. They have increased \$3.1 million from the prior year due to lower capital expenditures in the current year.
- Customer charges and contractual receivables have decreased \$2.5 million from the prior year. The change in receivables is driven by the timing of billing cycles, receipt of funding for capital projects, and increase in the allowance for doubtful accounts.
- Unbilled service revenue has increased \$0.8 million due to the annual stormwater site generated service revenue invoicing commencing in January of the prior year.
- Inventory has increased \$0.5 million primarily due to a large purchase of meters in the current year as the vendor indicated their prices were increasing.
- The increase in prepaids of \$0.5 million is a result of reallocating amounts within balance sheet accounts and deposit for land purchase to be held until Burnside facility is completed.
- The \$21.8 million decrease in capital work in progress relates to expenditures during the current year of \$49.5 million offset by projects that were capitalized at March 31, 2020. The top five projects in capital work in progress at month end are detailed below:



**Table 2:**

<b>Capital Work in Progress</b>	
	<b>Cumulative '000</b>
Port Wallace Transmission Main	<b>\$ 4,711</b>
Romans & Federal Avenues Sewer Separation	<b>3,310</b>
Bedford South Reservoir	<b>2,559</b>
Payroll Replacement Project	<b>2,025</b>
Fairview/Clayton Park/Bridgeview Inflow/Infiltration Reduction	<b>1,983</b>
	<b>14,588</b>
<u>All other projects:</u>	
Water	<b>26,116</b>
Wastewater	<b>20,766</b>
Stormwater	<b>3,887</b>
	<b>50,769</b>
Net capital work in progress	<b>\$ 65,357</b>

- Utility plant in service assets total \$1.3 billion, an increase of \$51.3 million from the prior year. The increase is a result of additions at year end offset by disposals, less current year depreciation expense.

The changes in liabilities are presented below:

**Table 3:**

	<b>February 28 2021</b>	<b>February 29 2020</b>	<b>March 31 2020</b>	<b>From Prior Year</b>	
				<b>\$ Change</b>	<b>% Change</b>
<b>Liabilities</b>					
Current					
Payables and accruals					
Trade	16,021	13,094	28,756	2,927	22.4%
Interest on long term debt	2,122	2,343	2,139	(221)	(9.4%)
Halifax Regional Municipality	2,986	4,093	0	(1,107)	(27.0%)
Contractor and customer deposits	195	200	197	(5)	(2.5%)
Current portion of long term debt	20,559	19,484	21,184	1,075	5.5%
Unearned revenue	1,305	1,735	760	(430)	(24.8%)
	<u>43,188</u>	<u>40,949</u>	<u>53,036</u>	<u>2,239</u>	<u>5.5%</u>
Long term debt	204,089	199,646	197,962	4,443	2.2%
Deferred contributions	54,965	53,660	42,604	1,305	2.4%
Total liabilities	<u>302,242</u>	<u>294,255</u>	<u>293,602</u>	<u>7,987</u>	<u>2.7%</u>
<b>Equity</b>					
Accumulated capital surplus	1,097,644	1,064,484	1,094,580	33,160	3.1%
Accumulated operating surplus	42,572	44,108	52,573	(1,536)	(3.5%)
Operating surplus used to fund capital	12,380	12,380	12,380	0	0.0%
Deficiency of revenues over expenditures	(5,237)	2,739	(9,941)	(7,976)	(291.2%)
Total equity	<u>1,147,359</u>	<u>1,123,711</u>	<u>1,149,592</u>	<u>23,648</u>	<u>2.1%</u>
<b>Total liabilities and equity</b>	<b>\$ 1,449,601</b>	<b>\$ 1,417,966</b>	<b>\$ 1,443,194</b>	<b>\$ 31,635</b>	<b>2.2%</b>

- Trade payables and accruals have increased \$2.9 million as a result of trade payables for work completed on capital projects, including the purchase of large vehicles, and timing of payment for payroll remittances.
- HRM net receivables and payables were a payable in February, the net payable was lower by \$1.1 million as RDC collected by HRM and not yet paid to Halifax Water was higher than prior year.
- Current portion of long term debt has increased \$1.1 million primarily as a result of acquiring new debt.
- Long term debt increased \$4.4 million. Since March 1, 2020, new debt of \$25.0 million was issued in July 2020 and long term debt repayments have been \$19.5 million. Halifax Water is awaiting receipt of the fall 2020 debenture issue in the amount of \$20.0 million. It is expected to be received in early April 2021.

Debt servicing ratio is a function of total interest and principal payments (including accrued amounts) plus the amortization of debt issue costs divided by total operating revenue per service. Debt servicing ratio by service as at February 31, 2021 is as follows:

**Table 4:**

<b>Debt Servicing Ratio by Service</b>		
	<b>2020/21</b>	<b>2019/20</b>
Water	<b>13.12%</b>	11.60%
Wastewater	<b>25.00%</b>	23.96%
Stormwater	<b>24.95%</b>	20.44%
Combined	<b>20.11%</b>	18.66%

- The debt servicing ratio for each service has increased from the prior year as a result of the issuance of new debt.
- The debt servicing ratio of 20.11% is below the maximum 35.0% ratio allowed under the blanket guarantee agreement with HRM.

**Statement of Earnings (NSUARB) - Page 4 of attachment**

Key indicators and balances from the Statement of Earnings are provided in the following tables:

**Table 5:**

<b>Summarized Statement of Earnings</b>					
	<b>YTD 2020/21</b>	<b>PYTD 2019/20</b>			
	<b>'000</b>	<b>'000</b>	<b>\$ Change</b>	<b>% Change</b>	
Operating revenues	\$ 126,086	\$ 127,428	\$ (1,342)	(1.1%)	
Operating expenditures	101,215	97,294	3,921	4.0%	
Earnings (loss) from operations before financial and other revenues and	24,871	30,134	(5,263)	(17.5%)	
Financial and other revenues	716	1,082	(366)	(33.8%)	
Financial and other expenditures	30,824	28,477	2,347	8.2%	
Earnings (loss) for the year	\$ (5,237)	\$ 2,739	\$ (7,976)	(291.2%)	

- Operating revenues of \$126.1 million are \$1.3 million lower than the prior year. Details to be discussed further in the next section.
- Operating expenditures of \$101.2 million are \$3.9 million higher than the prior year. Details to be discussed on page 7.
- Financial and other revenues of \$0.7 million are \$0.4 million lower than the prior year.
- Financial and other expenditures of \$30.8 million are \$2.3 million higher than the prior year as a result of higher debt servicing costs and an increase in the dividend/grant in lieu of taxes paid to HRM.

**Table 6:**

<b>Debt Servicing by Service</b>					
	<b>YTD 2020/21</b>	<b>PYTD 2019/20</b>			
	<b>'000</b>	<b>'000</b>	<b>\$ Change</b>	<b>% Change</b>	
<b>Water Services</b>					
Interest on long term debt	\$ 1,855	\$ 1,674	\$ 181	10.8%	
Repayment on long term debt	4,877	4,303	574	13.3%	
Amortization of debt discount	68	58	10	17.2%	
	\$ 6,800	\$ 6,035	\$ 765	12.7%	
<b>Wastewater Services</b>					
Interest on long term debt	\$ 4,045	\$ 4,313	\$ (268)	(6.2%)	
Repayment on long term debt	12,110	11,421	689	6.0%	
Amortization of debt discount	110	100	10	10.0%	
	\$ 16,265	\$ 15,834	\$ 431	2.7%	
<b>Stormwater Services</b>					
Interest on long term debt	\$ 627	\$ 555	\$ 72	13.0%	
Repayment on long term debt	1,647	1,339	308	23.0%	
Amortization of debt discount	17	12	5	41.7%	
	\$ 2,291	\$ 1,906	\$ 385	20.2%	

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- Water debt servicing costs of \$6.8 million have increased \$0.8 million from the prior year as a result of \$12.0 million in new debt.
- Wastewater debt servicing costs of \$16.3 million have increased \$0.4 million from the prior year as a result of \$7.4 million in new debt.
- Stormwater debt servicing costs of \$2.3 million have increased \$0.4 million from the prior year as a result of \$5.6 million in new debt.

Operating revenues are presented below, broken down by type:

**Table 7:**

<b>Operating Revenues</b>				
	<b>YTD 2020/21</b>	<b>PYTD 2019/20</b>		
	<b>'000</b>	<b>'000</b>	<b>\$ Change</b>	<b>% Change</b>
Consumption revenue	\$ 77,773	\$ 79,272	\$ (1,499)	(1.9%)
Base charge revenue	30,738	30,550	188	0.6%
Wastewater rebate	(836)	(952)	116	(12.2%)
Metered sales total	107,675	108,870	(1,195)	(1.1%)
Stormwater site generated charge	5,565	5,630	(65)	(1.2%)
Stormwater right of way	3,515	3,515	-	0.0%
Public fire protection	6,694	6,485	209	3.2%
Private fire protection	816	804	12	1.5%
Other operating revenue	1,821	2,124	(303)	(14.3%)
Operating revenue total	\$ 126,086	\$ 127,428	\$ (1,342)	(1.1%)

Operating revenues have decreased \$1.3 million as compared to the previous year. Key items of note include:

- Water and wastewater consumption are down 1.9% on a volumetric basis as compared to the previous year. This is mainly due to commercial customers who have had to close offices due to COVID-19. Consumption has been budgeted to remain consistent with the prior year.
- Other operating revenue categories are down \$0.3 million. This is a result of not charging interest on overdue accounts from March 13, 2020 through August 31, 2020 as a COVID-19 relief measure and a slight decrease in other contract revenue including septage tipping and airline effluent. Some haulers continue to take their septage outside of HRM for disposal and there is less airline traffic at the airport.

Operating expenditures are presented below:

**Table 8:**

<b>Operating Expenditures</b>					
	<b>YTD 2020/21</b>	<b>PYTD 2019/20</b>			
	<b>'000</b>	<b>'000</b>	<b>\$ Change</b>	<b>% Change</b>	
Water supply and treatment	\$ 9,100	\$ 8,531	\$ 569	6.67%	
Water transmission and distribution	10,546	9,989	557	5.58%	
Wastewater collection	12,962	12,289	673	5.48%	
Stormwater collection	4,434	4,387	47	1.07%	
Wastewater treatment	18,624	18,339	285	1.55%	
Engineering and information services	8,337	8,819	(482)	(5.47%)	
Regulatory services	3,582	3,441	141	4.10%	
Customer services	4,460	4,675	(215)	(4.60%)	
Administration services	5,174	5,371	(197)	(3.67%)	
Depreciation and amortization	23,996	21,453	2,543	11.85%	
	<b>\$ 101,215</b>	<b>\$ 97,294</b>	<b>\$ 3,921</b>	<b>4.03%</b>	

Key items to note:

- Operating expenditures of \$101.2 million are \$3.9 million higher than the prior year. This is a result of the following:
  - Water supply and treatment has increased due to higher chemical costs for polymer and alum and major repair work to raw water pump at the Pockwock facility and higher electricity costs.
  - Water transmission and distribution has increased mainly due to higher salaries and benefits including the creation of a new superintendent position as well as higher fleet costs.
  - Wastewater collection has increased mainly due to higher salaries and benefits including the creation of two new full time positions and an increase in materials and supplies purchases.
  - Wastewater treatment has increased mainly due to purchase of UV lamps, higher processing costs, and electricity costs.
  - Engineering and information services has decreased relative to higher consulting costs in the prior year.
  - Depreciation and amortization have increased as a result of additions to utility plant in service at year end.

**Table 9:**

<b>Summary of Depreciation</b>					
	<b>YTD 2020/21</b>	<b>PYTD 2019/20</b>			
	<b>'000</b>	<b>'000</b>	<b>\$ Change</b>	<b>% Change</b>	
Water depreciation	\$ 9,488	\$ 8,293	\$ 1,195	14.41%	
Wastewater depreciation	13,221	12,216	1,005	8.23%	
Stormwater depreciation	1,287	944	343	36.33%	
	<b>\$ 23,996</b>	<b>\$ 21,453</b>	<b>\$ 2,543</b>	<b>11.85%</b>	

- Water depreciation of \$9.5 million has increased \$1.2 million from the prior year as a result of \$51.1 million in utility plant in service additions at the end of the prior fiscal year.
- Wastewater depreciation of \$13.2 million has increased \$1.0 million from the prior year as a result of \$30.9 million in utility plant in service additions at the end of the prior fiscal year.
- Stormwater depreciation of \$1.3 million has increased \$0.3 million from the prior year as a result of \$17.8 million in utility plant in service additions at the end of the prior fiscal year.

Pages 5 through 7 of the attachment present the Statement of Earnings by service and the table below is a summary:

**Table 10:**

<b>Operating Results by Service</b>					
	<b>YTD 2020/21</b>	<b>PYTD 2019/20</b>			
	<b>'000</b>	<b>'000</b>	<b>\$ Change</b>	<b>% Change</b>	
Water	\$ 1,980	\$ 5,534	\$ (3,554)	(64.2%)	
Wastewater	(5,912)	(2,222)	(3,690)	166.1%	
Stormwater	(1,305)	(573)	(732)	127.7%	
Earnings (loss)	<b>\$ (5,237)</b>	<b>\$ 2,739</b>	<b>\$ (7,976)</b>	<b>(291.2%)</b>	

Key items to note:

- Water services earnings of \$2.0 million have decreased from the prior year by \$3.6 million due to the following factors:
  - Decrease in consumption as a result of lower usage by commercial customers.
  - Decrease in late payment fees as a result of COVID-19 relief measures.
  - Increase in operating expenditures mainly due to depreciation of new assets, higher chemical costs, major repair work, and higher salaries and benefits.
  - Increase in financial and other expenditures due to higher debt servicing costs and an increase in the dividend/grant in lieu of taxes paid to HRM.

- Wastewater services loss of \$5.9 million has increased from the prior year by \$3.7 million due to the following factors:
  - Decrease in consumption as a result of lower discharge by commercial customers.
  - Decrease in late payment fees as a result of COVID-19 relief measures.
  - Increase in operating expenditures mainly due to depreciation of new assets, an increase in salaries and benefits, and an increase in materials and equipment purchases.
  - Increase in financial and other expenditures due to higher debt servicing costs.
- Stormwater services loss of \$1.3 million has increased from the prior year by \$0.7 million due to the following factors:
  - Increase in operating expenditures mainly due to depreciation of new assets.
  - Increase in financial and other expenditures due to higher debt servicing costs.

To fund the deficit for wastewater services, the NSUARB has approved a transfer from special purpose reserves, to a maximum of \$5.0 million, which will be completed in the current fiscal year.

Pages 8 through 9 of the attachment present the Statement of Earnings by activity and the table below is a summary:

**Table 11:**

<b>Results by Activity</b>					
	<b>YTD 2020/21</b>	<b>PYTD 2019/20</b>			
	<b>'000</b>	<b>'000</b>	<b>\$ Change</b>	<b>% Change</b>	
Regulated activities	\$ (5,938)	\$ 2,138	\$ (8,076)	(377.7%)	
Unregulated activities	701	601	100	16.6%	
Earnings (loss)	\$ (5,237)	\$ 2,739	\$ (7,976)	(291.2%)	

Key items to note:

- Regulated activities loss of \$5.9 million has increased from the prior year by \$8.1 million due to the following factors:
  - Decrease in consumption as a result of lower usage by commercial customers.
  - Decrease in interest and late payment fees as a result of COVID-19 relief measures.
  - Increase in operating expenditures mainly due to depreciation of new assets and higher salaries and benefits including the creation of new positions.
  - Increase in financial and other expenditures due to higher debt servicing costs and an increase in the dividend/grant in lieu of taxes.

- Unregulated activities earnings of \$0.7 million have increased \$0.1 million from the prior year due to a decrease in operating costs for the leachate and dewatering facilities.

### **Results under International Financial Reporting Standards as compared to NSUARB Handbook**

As noted previously, the AcSB requires Halifax Water, as a rate regulated utility, to report financial results using IFRS. The NSUARB requires Halifax Water to report in accordance with the NSUARB Handbook. The table below reconciles the results between IFRS and the NSUARB Handbook:

**Table 12:**

<b>Reconcile IFRS to NSUARB</b>		
	<b>YTD 2020/21</b>	<b>PYTD 2019/20</b>
	<b>'000</b>	<b>'000</b>
IFRS comprehensive earnings	<b>\$ 2,084</b>	<b>\$ 10,241</b>
Add non-cash pension expense	<b>9,354</b>	<b>7,345</b>
Subtract debt principal payments	<b>(18,634)</b>	<b>(17,063)</b>
Add depreciation expense on contributed assets	<b>15,652</b>	<b>15,114</b>
Subtract amortization of contributed capital	<b>(15,652)</b>	<b>(15,114)</b>
Add various depreciation adjustments	<b>1,959</b>	<b>2,216</b>
Subtract OCI gain	<b>-</b>	<b>-</b>
NSUARB earnings (loss)	<b>\$ (5,237)</b>	<b>\$ 2,739</b>

Operating revenues are the same as operating revenues using IFRS and the NSUARB Handbook.

The main differences relate to reporting requirements surrounding the recognition of various expenditures as follows:

- Non-cash pension expense represents the accrued portion of contributions to the pension plan and is not considered an expense for NSUARB Handbook reporting purposes.
- The principle payments on long term debt are recognized as an expense for NSUARB Handbook reporting purposes but are not an expense in IFRS statements.
- Depreciation expense on contributed assets is not an expense for NSUARB Handbook purposes, however, it is offset by the removal of the amortization of contributed capital. IFRS requires contributed capital to be treated as a long term liability and amortized, resulting in higher long term liabilities and lower equity on the statement of financial position.
- The various depreciation adjustments include the add back of losses on the disposal of utility plant in service and IFRS requires componentization of assets and shorter useful lives resulting in higher depreciation than under NSUARB Handbook reporting.

**Statement of Earnings and Comprehensive Earnings (IFRS) - Page 2 of attachment**



Key indicators and balances from the Statement of Earnings and Comprehensive Earnings are provided in the table below:

**Table 13:**

<b>Summarized Comprehensive Earnings</b>					
	<b>YTD 2020/21</b>		<b>PYTD 2019/20</b>		
	<b>'000</b>		<b>'000</b>	<b>\$ Change</b>	<b>% Change</b>
Operating revenues	<b>\$ 126,086</b>	\$	127,428	\$ (1,342)	(1.1%)
Operating expenditures	<b>130,070</b>		123,525	6,545	5.3%
Earnings (loss) from operations before financial and other revenues and	<b>(3,984)</b>		3,903	(7,887)	(202.1%)
Financial and other revenues	<b>17,932</b>		17,689	243	1.4%
Financial and other expenditures	<b>11,864</b>		11,351	513	4.5%
Total comprehensive earnings for the year	<b>\$ 2,084</b>	\$	10,241	\$ (8,157)	(79.7%)

- Operating revenues of \$126.1 million are \$1.3 million lower than the prior year. Details have been discussed in preceding pages.
- Operating expenditures of \$130.1 million are \$6.5 million higher than the prior year. This is a result of the following factors:
  - Increase in depreciation and amortization expense of \$3.2 million as a result of additions to utility plant in service.
  - Increase in accrued pension expense of \$2.0 million as a result of the actuarial extrapolation at year end, resulting in a higher estimate for this current fiscal year.
  - Increase in salaries as benefits due to the creation of new positions and wage rate increases.
- Financial and other revenues and expenditures have not changed drastically from the prior year. The increase is mainly due to the \$0.8 million increase of the dividend/grant in lieu of taxes, which is based on the value of assets at the end of the previous fiscal year. In previous years, the dividend/grant in lieu of taxes was based only on the value of water assets. In the current fiscal year, a new agreement was signed with HRM and the dividend/grant in lieu of taxes is also paid on the value of wastewater and stormwater assets.

## **ATTACHMENTS**

Unaudited Operating Results for the eleven (11) months ended February 28, 2021.

Report prepared by: **Alicia Scallion**

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Alicia Scallion, CPA, CA, Manager, Accounting, (902) 497-9785

HALIFAX WATER  
UNAUDITED STATEMENT OF FINANCIAL POSITION - IFRS  
FEBRUARY 28, 2021 (in thousands)

	February 28 2021	February 29 2020	March 31 2020	From Prior Year \$ Change	% Change
<b>Assets</b>					
Current					
Cash and cash equivalents	\$ 58,565	\$ 55,514	\$ 49,953	\$ 3,051	5.5%
Receivables					
Customers charges and contractual	13,290	15,751	18,405	(2,461)	(15.6%)
Unbilled service revenues	19,234	18,474	17,367	760	4.1%
Halifax Regional Municipality	0	0	3,668	0	0.0%
Inventory	2,120	1,637	1,736	483	29.5%
Prepays	724	175	1,002	549	313.7%
	93,933	91,551	92,131	2,382	2.6%
Intangible assets	17,334	14,171	18,951	3,163	22.3%
Capital work in progress	65,357	87,185	18,104	(21,828)	(25.0%)
Utility plant in service	1,238,850	1,193,132	1,281,010	45,718	3.8%
Total assets	1,415,474	1,386,039	1,410,196	29,435	2.1%
Regulatory deferral account	2,637	2,829	2,812	(192)	(6.8%)
<b>Total assets and regulatory deferral account</b>	<b>\$ 1,418,111</b>	<b>\$ 1,388,868</b>	<b>\$ 1,413,008</b>	<b>\$ 29,243</b>	<b>2.1%</b>
<b>Liabilities</b>					
Current					
Payables and accruals					
Trade	16,021	13,094	28,756	2,927	22.4%
Interest on long term debt	2,122	2,343	2,139	(221)	(9.4%)
Halifax Regional Municipality	2,986	4,093	0	(1,107)	(27.0%)
Contractor and customer deposits	195	200	197	(5)	(2.5%)
Current portion of deferred contributed capital	14,488	13,846	14,488	642	4.6%
Current portion of long term debt	20,559	19,484	21,184	1,075	5.5%
Unearned revenue	1,305	1,735	760	(430)	(24.8%)
	57,676	54,795	67,524	2,881	5.3%
Deferred contributed capital	877,087	863,453	879,460	13,634	1.6%
Long term debt	204,089	199,646	197,962	4,443	2.2%
Employee benefit obligation	72,660	77,001	63,365	(4,341)	(5.6%)
Total liabilities	1,211,512	1,194,895	1,208,311	16,617	1.4%
<b>Equity</b>					
Accumulated other comprehensive loss	(26,453)	(41,209)	(26,453)	14,756	(35.8%)
Accumulated surplus	233,052	235,182	231,150	(2,130)	(0.9%)
Total equity	206,599	193,973	204,697	12,626	6.5%
<b>Total liabilities and equity</b>	<b>\$ 1,418,111</b>	<b>\$ 1,388,868</b>	<b>\$ 1,413,008</b>	<b>\$ 29,243</b>	<b>2.1%</b>

**HALIFAX WATER**  
**UNAUDITED STATEMENT OF EARNINGS AND COMPREHENSIVE EARNINGS - ALL SERVICES - IFRS**  
**APRIL 1, 2020 - FEBRUARY 28, 2021 (11 MONTHS)**  
**ACTUAL YEAR TO DATE COMPLETE: 91.67%**

	<b>ACTUAL YEAR TO DATE</b>		<b>APR 1/20 MAR 31/21</b>	<b>ACTUAL YEAR TO DATE</b>	<b>From Prior Year</b>	
	<b>THIS YEAR</b>	<b>LAST YEAR</b>	<b>BUDGET</b>	<b>as % of BUDGET</b>	<b>\$ Change</b>	<b>% Change</b>
	<b>'000</b>	<b>'000</b>	<b>'000</b>			
<b>Operating revenues</b>						
Water	\$ 43,717	\$ 44,050	\$ 48,083	90.92%	\$ (333)	(0.76%)
Wastewater	63,958	64,820	70,365	90.89%	(862)	(1.33%)
Stormwater	9,080	9,145	9,882	91.88%	(65)	(0.71%)
Public fire protection	6,694	6,485	7,074	94.63%	209	3.22%
Private fire protection	816	804	884	92.31%	12	1.49%
Other operating revenue	1,821	2,124	2,327	78.26%	(303)	(14.27%)
	<b>126,086</b>	<b>127,428</b>	<b>138,615</b>	<b>90.96%</b>	<b>(1,342)</b>	<b>(1.05%)</b>
<b>Operating expenditures</b>						
Water supply and treatment	9,100	8,531	10,590	85.93%	569	6.67%
Water transmission and distribution	10,546	9,989	12,311	85.66%	557	5.58%
Wastewater collection	12,962	12,289	13,499	96.02%	673	5.48%
Stormwater collection	4,434	4,387	5,821	76.17%	47	1.07%
Wastewater treatment	18,624	18,339	21,413	86.98%	285	1.55%
Engineering and information services	8,337	8,819	9,204	90.58%	(482)	(5.47%)
Regulatory services	3,582	3,441	4,359	82.17%	141	4.10%
Customer services	4,460	4,675	5,413	82.39%	(215)	(4.60%)
Administration services	5,174	5,371	8,071	64.11%	(197)	(3.67%)
Pension services	9,354	7,345	10,204	91.67%	2,009	27.35%
Depreciation and amortization	43,497	40,339	41,357	105.17%	3,158	7.83%
	<b>130,070</b>	<b>123,525</b>	<b>142,242</b>	<b>91.44%</b>	<b>6,545</b>	<b>5.30%</b>
<b>Earnings from operations before financial and other revenues and expenditures</b>	<b>(3,984)</b>	<b>3,903</b>	<b>(3,627)</b>	<b>109.84%</b>	<b>(7,887)</b>	<b>(202.08%)</b>
<b>Financial and other revenues</b>						
Interest	202	473	87	232.18%	(271)	(57.29%)
Amortization of contributed capital	17,216	16,607	13,927	123.62%	609	3.67%
Other	514	609	533	96.44%	(95)	(15.60%)
	<b>17,932</b>	<b>17,689</b>	<b>14,547</b>	<b>123.27%</b>	<b>243</b>	<b>1.37%</b>
<b>Financial and other expenditures</b>						
Interest on long term debt	6,527	6,542	8,823	73.98%	(15)	(0.23%)
Amortization of debt discount	195	170	228	85.53%	25	14.71%
Dividend/grant in lieu of taxes	5,417	4,655	6,114	88.60%	762	16.37%
Other	(275)	(16)	32	(859.38%)	(259)	1618.75%
	<b>11,864</b>	<b>11,351</b>	<b>15,197</b>	<b>78.07%</b>	<b>513</b>	<b>4.52%</b>
<b>Total comprehensive earnings for the year</b>	<b>\$ 2,084</b>	<b>\$ 10,241</b>	<b>\$ (4,277)</b>	<b>(48.73%)</b>	<b>\$ (8,157)</b>	<b>(79.65%)</b>

**HALIFAX WATER**  
**UNAUDITED STATEMENT OF FINANCIAL POSITION - NSUARB**  
**FEBRUARY 28, 2021 (in thousands)**

	February 28 2021	February 29 2020	March 31 2020	From Prior Year \$ Change	% Change
<b>Assets</b>					
Current					
Cash and cash equivalents	\$ 58,565	\$ 55,514	\$ 49,953	\$ 3,051	5.5%
Receivables					
Customers charges and contractual	13,290	15,751	18,405	(2,461)	(15.6%)
Unbilled service revenues	19,234	18,474	17,367	760	4.1%
Halifax Regional Municipality	0	0	3,668	0	0.0%
Inventory	2,120	1,637	1,736	483	29.5%
Prepays	724	175	1,002	549	313.7%
	93,933	91,551	92,131	2,382	2.6%
Capital work in progress	65,357	87,185	18,104	(21,828)	(25.0%)
Utility plant in service	1,287,674	1,236,401	1,330,147	51,273	4.1%
Total assets	1,446,964	1,415,137	1,440,382	31,827	2.2%
Regulatory deferral account	2,637	2,829	2,812	(192)	(6.8%)
<b>Total assets and regulatory deferral account</b>	<b>\$ 1,449,601</b>	<b>\$ 1,417,966</b>	<b>\$ 1,443,194</b>	<b>\$ 31,635</b>	<b>2.2%</b>
<b>Liabilities</b>					
Current					
Payables and accruals					
Trade	16,021	13,094	28,756	2,927	22.4%
Interest on long term debt	2,122	2,343	2,139	(221)	(9.4%)
Halifax Regional Municipality	2,986	4,093	0	(1,107)	(27.0%)
Contractor and customer deposits	195	200	197	(5)	(2.5%)
Current portion of long term debt	20,559	19,484	21,184	1,075	5.5%
Unearned revenue	1,305	1,735	760	(430)	(24.8%)
	43,188	40,949	53,036	2,239	5.5%
Long term debt	204,089	199,646	197,962	4,443	2.2%
Deferred contributions	54,965	53,660	42,604	1,305	2.4%
Total liabilities	302,242	294,255	293,602	7,987	2.7%
<b>Equity</b>					
Accumulated capital surplus	1,097,644	1,064,484	1,094,580	33,160	3.1%
Accumulated operating surplus	42,572	44,108	52,573	(1,536)	(3.5%)
Operating surplus used to fund capital	12,380	12,380	12,380	0	0.0%
Deficiency of revenues over expenditures	(5,237)	2,739	(9,941)	(7,976)	(291.2%)
Total equity	1,147,359	1,123,711	1,149,592	23,648	2.1%
<b>Total liabilities and equity</b>	<b>\$ 1,449,601</b>	<b>\$ 1,417,966</b>	<b>\$ 1,443,194</b>	<b>\$ 31,635</b>	<b>2.2%</b>

**HALIFAX WATER**  
**UNAUDITED STATEMENT OF EARNINGS - ALL SERVICES - NSUARB**  
**APRIL 1, 2020 - FEBRUARY 28, 2021 (11 MONTHS)**  
**ACTUAL YEAR TO DATE COMPLETE: 91.67%**

	ACTUAL YEAR TO DATE		APR 1/20 MAR 31/21		ACTUAL YEAR TO DATE		ACTUAL YEAR TO DATE		From Prior Year		Budget to Forecast	
	THIS YEAR	LAST YEAR	BUDGET	FORECAST	as % of	as % of			\$ Change	% Change	\$ Change	% Change
	'000	'000	'000	'000	BUDGET	FORECAST						
Operating revenues												
Water	\$ 43,717	\$ 44,050	\$ 48,083	\$ 48,010	90.92%	91.06%	\$ (333)	(0.76%)	\$ (73)	(0.15%)		
Wastewater	63,958	64,820	70,365	70,166	90.89%	91.15%	(862)	(1.33%)	(199)	(0.28%)		
Stormwater site generated service	5,565	5,630	6,047	6,004	92.03%	92.69%	(65)	(1.15%)	(43)	(0.71%)		
Stormwater right of way service	3,515	3,515	3,835	3,835	91.66%	91.66%	0	0.00%	0	0.00%		
Fire protection (public and private)	7,510	7,289	7,958	8,410	94.37%	89.30%	221	3.03%	452	5.68%		
Other services and fees	1,161	1,261	1,416	1,326	81.99%	87.56%	(100)	(7.93%)	(90)	(6.36%)		
Late payment and other connection fees	252	496	520	342	48.46%	73.68%	(244)	(49.19%)	(178)	(34.23%)		
Miscellaneous	408	367	391	411	104.35%	99.27%	41	11.17%	20	5.12%		
	126,086	127,428	138,615	138,504	90.96%	91.03%	(1,342)	(1.05%)	(111)	(0.08%)		
Operating expenditures												
Water supply and treatment	9,100	8,531	10,590	10,425	85.93%	87.29%	569	6.67%	(165)	(1.56%)		
Water transmission and distribution	10,546	9,989	12,311	11,867	85.66%	88.87%	557	5.58%	(444)	(3.61%)		
Wastewater collection	12,962	12,289	13,499	13,264	96.02%	97.72%	673	5.48%	(235)	(1.74%)		
Stormwater collection	4,434	4,387	5,821	5,279	76.17%	83.99%	47	1.07%	(542)	(9.31%)		
Wastewater treatment	18,624	18,339	21,413	20,223	86.98%	92.09%	285	1.55%	(1,190)	(5.56%)		
Engineering and information services	8,337	8,819	9,204	9,083	90.58%	91.79%	(482)	(5.47%)	(121)	(1.31%)		
Regulatory services	3,582	3,441	4,359	4,144	82.17%	86.44%	141	4.10%	(215)	(4.93%)		
Customer services	4,460	4,675	5,413	5,201	82.39%	85.75%	(215)	(4.60%)	(212)	(3.92%)		
Administration services	5,174	5,371	8,071	8,047	64.11%	64.30%	(197)	(3.67%)	(24)	(0.30%)		
Depreciation and amortization	23,996	21,453	27,430	28,742	87.48%	83.49%	2,543	11.85%	1,312	4.78%		
	101,215	97,294	118,111	116,275	85.69%	87.05%	3,921	4.03%	(1,836)	(1.55%)		
Earnings from operations before financial and other revenues and expenditures	24,871	30,134	20,504	22,229	121.30%	111.89%	(5,263)	(17.47%)	1,725	8.41%		
Financial and other revenues												
Interest	202	473	87	226	232.18%	89.38%	(271)	(57.29%)	139	159.77%		
Other	514	609	533	533	96.44%	96.44%	(95)	(15.60%)	0	0.00%		
	716	1,082	620	759	115.48%	94.33%	(366)	(33.83%)	139	22.42%		
Financial and other expenditures												
Interest on long term debt	6,527	6,542	8,823	7,261	73.98%	89.89%	(15)	(0.23%)	(1,562)	(17.70%)		
Repayment on long term debt	18,634	17,063	21,880	20,663	85.16%	90.18%	1,571	9.21%	(1,217)	(5.56%)		
Amortization of debt discount	195	170	228	220	85.53%	88.64%	25	14.71%	(8)	(3.51%)		
Dividend/grant in lieu of taxes	5,417	4,655	6,114	5,953	88.60%	91.00%	762	16.37%	(161)	(2.63%)		
Other	51	47	32	47	159.38%	108.51%	4	8.51%	15	46.88%		
	30,824	28,477	37,077	34,144	83.14%	90.28%	2,347	8.24%	(2,933)	(7.91%)		
Earnings (loss) for the year	\$ (5,237)	\$ 2,739	\$ (15,953)	\$ (11,156)	32.83%	46.94%	\$ (7,976)	(291.20%)	\$ 4,797	(30.07%)		

**HALIFAX WATER**  
**UNAUDITED STATEMENT OF EARNINGS - WATER - NSUARB**  
**APRIL 1, 2020 - FEBRUARY 28, 2021 (11 MONTHS)**  
**ACTUAL YEAR TO DATE COMPLETE: 91.67%**

	ACTUAL YEAR TO DATE		APR 1/20 MAR 31/21	APR 1/20 MAR 31/21	ACTUAL YEAR TO DATE	ACTUAL YEAR TO DATE	From Prior Year		Budget to Forecast	
	THIS YEAR	LAST YEAR	BUDGET	FORECAST	as % of	as % of	\$ Change	% Change	\$ Change	% Change
	'000	'000	'000	'000	BUDGET	FORECAST				
<b>Operating revenues</b>										
Water	\$ 43,717	\$ 44,050	\$ 48,083	\$ 48,010	90.92%	91.06%	\$ (333)	(0.76%)	\$ (73)	(0.15%)
Public fire protection	6,694	6,485	7,074	7,336	94.63%	91.25%	209	3.22%	262	3.70%
Private fire protection	816	804	884	1,074	92.31%	75.98%	12	1.49%	190	21.49%
Bulk water stations	309	292	303	330	101.98%	93.64%	17	5.82%	27	8.91%
Late payment and other connection fees	137	226	238	163	57.56%	84.05%	(89)	(39.38%)	(75)	(31.51%)
Miscellaneous	167	150	163	177	102.45%	94.35%	17	11.33%	14	8.59%
	<b>51,840</b>	<b>52,007</b>	<b>56,745</b>	<b>57,090</b>	<b>91.36%</b>	<b>90.80%</b>	<b>(167)</b>	<b>(0.32%)</b>	<b>345</b>	<b>0.61%</b>
<b>Operating expenditures</b>										
Water supply and treatment	9,100	8,531	10,590	10,425	85.93%	87.29%	569	6.67%	(165)	(1.56%)
Water transmission and distribution	10,546	9,989	12,311	11,867	85.66%	88.87%	557	5.58%	(444)	(3.61%)
Engineering and information services	3,734	3,716	4,162	4,112	89.72%	90.81%	18	0.48%	(50)	(1.20%)
Regulatory services	980	778	1,195	1,154	82.01%	84.92%	202	25.96%	(41)	(3.43%)
Customer services	2,307	2,388	2,758	2,650	83.65%	87.06%	(81)	(3.39%)	(108)	(3.92%)
Administration services	2,349	2,740	4,112	4,100	57.13%	57.29%	(391)	(14.27%)	(12)	(0.29%)
Depreciation and amortization	9,488	8,293	10,993	11,219	86.31%	84.57%	1,195	14.41%	226	2.06%
	<b>38,504</b>	<b>36,435</b>	<b>46,121</b>	<b>45,527</b>	<b>83.48%</b>	<b>84.57%</b>	<b>2,069</b>	<b>5.68%</b>	<b>(594)</b>	<b>(1.29%)</b>
<b>Earnings from operations before financial and other revenues and expenditures</b>	<b>13,336</b>	<b>15,572</b>	<b>10,624</b>	<b>11,563</b>	<b>125.53%</b>	<b>115.33%</b>	<b>(2,236)</b>	<b>(14.36%)</b>	<b>939</b>	<b>8.84%</b>
<b>Financial and other revenues</b>										
Interest	119	205	39	134	305.13%	88.81%	(86)	(41.95%)	95	243.59%
Other	389	468	394	394	98.73%	98.73%	(79)	(16.88%)	0	0.00%
	<b>508</b>	<b>673</b>	<b>433</b>	<b>528</b>	<b>117.32%</b>	<b>96.21%</b>	<b>(165)</b>	<b>(24.52%)</b>	<b>95</b>	<b>21.94%</b>
<b>Financial and other expenditures</b>										
Interest on long term debt	1,855	1,674	3,127	2,116	59.32%	87.67%	181	10.81%	(1,011)	(32.33%)
Repayment on long term debt	4,877	4,303	6,465	5,542	75.44%	88.00%	574	13.34%	(923)	(14.28%)
Amortization of debt discount	68	58	84	77	80.95%	88.31%	10	17.24%	(7)	(8.33%)
Dividend/grant in lieu of taxes	5,039	4,655	5,654	5,497	89.12%	91.67%	384	8.25%	(157)	(2.78%)
Other	25	21	2	17	1250.00%	147.06%	4	19.05%	15	750.00%
	<b>11,864</b>	<b>10,711</b>	<b>15,332</b>	<b>13,249</b>	<b>77.38%</b>	<b>89.55%</b>	<b>1,153</b>	<b>10.76%</b>	<b>(2,083)</b>	<b>(13.59%)</b>
<b>Earnings (loss) for the year</b>	<b>\$ 1,980</b>	<b>\$ 5,534</b>	<b>\$ (4,275)</b>	<b>\$ (1,158)</b>	<b>(46.32%)</b>	<b>(170.98%)</b>	<b>\$ (3,554)</b>	<b>(64.22%)</b>	<b>\$ 3,117</b>	<b>(72.91%)</b>

**HALIFAX WATER**  
**UNAUDITED STATEMENT OF EARNINGS - WASTEWATER - NSUARB**  
**APRIL 1, 2020 - FEBRUARY 28, 2021 (11 MONTHS)**  
**ACTUAL YEAR TO DATE COMPLETE: 91.67%**

	ACTUAL YEAR TO DATE		APR 1/20 MAR 31/21 BUDGET	APR 1/20 MAR 31/21 FORECAST	ACTUAL YEAR TO DATE as % of BUDGET	ACTUAL YEAR TO DATE as % of FORECAST	From Prior Year		Budget to Forecast	
	THIS YEAR '000	LAST YEAR '000	'000	'000			\$ Change	% Change	\$ Change	% Change
<b>Operating revenues</b>										
Wastewater	\$ 63,958	\$ 64,820	\$ 70,365	\$ 70,166	90.89%	91.15%	\$ (862)	(1.33%)	\$ (199)	(0.28%)
Leachate and other contract revenue	388	404	473	436	82.03%	88.99%	(16)	(3.96%)	(37)	(7.82%)
Septage tipping fees	436	474	505	505	86.34%	86.34%	(38)	(8.02%)	0	0.00%
Overstrength surcharge	0	14	30	15	0.00%	0.00%	(14)	(100.00%)	(15)	(50.00%)
Airplane effluent	28	77	105	40	26.67%	70.00%	(49)	(63.64%)	(65)	(61.90%)
Late payment and other connection fees	109	177	176	116	61.93%	93.97%	(68)	(38.42%)	(60)	(34.09%)
Miscellaneous	146	131	136	142	107.35%	102.82%	15	11.45%	6	4.41%
	<b>65,065</b>	<b>66,097</b>	<b>71,790</b>	<b>71,420</b>	<b>90.63%</b>	<b>91.10%</b>	<b>(1,032)</b>	<b>(1.56%)</b>	<b>(370)</b>	<b>(0.52%)</b>
<b>Operating expenditures</b>										
Wastewater collection	12,962	12,289	13,499	13,264	96.02%	97.72%	673	5.48%	(235)	(1.74%)
Wastewater treatment	18,624	18,339	21,413	20,223	86.98%	92.09%	285	1.55%	(1,190)	(5.56%)
Engineering and information services	4,147	4,389	3,769	3,701	110.03%	112.05%	(242)	(5.51%)	(68)	(1.80%)
Regulatory services	1,243	1,308	1,537	1,446	80.87%	85.96%	(65)	(4.97%)	(91)	(5.92%)
Customer services	1,913	1,967	2,352	2,253	81.34%	84.91%	(54)	(2.75%)	(99)	(4.21%)
Administration services	2,430	2,269	3,405	3,395	71.37%	71.58%	161	7.10%	(10)	(0.29%)
Depreciation and amortization	13,221	12,216	15,072	15,770	87.72%	83.84%	1,005	8.23%	698	4.63%
	<b>54,540</b>	<b>52,777</b>	<b>61,047</b>	<b>60,052</b>	<b>89.34%</b>	<b>90.82%</b>	<b>1,763</b>	<b>3.34%</b>	<b>(995)</b>	<b>(1.63%)</b>
<b>Earnings from operations before financial and other revenues and expenditures</b>	<b>10,525</b>	<b>13,320</b>	<b>10,743</b>	<b>11,368</b>	<b>97.97%</b>	<b>92.58%</b>	<b>(2,795)</b>	<b>(20.98%)</b>	<b>625</b>	<b>5.82%</b>
<b>Financial and other revenues</b>										
Interest	51	177	39	58	130.77%	87.93%	(126)	(71.19%)	19	48.72%
Other	125	141	139	139	89.93%	89.93%	(16)	(11.35%)	0	0.00%
	<b>176</b>	<b>318</b>	<b>178</b>	<b>197</b>	<b>98.88%</b>	<b>89.34%</b>	<b>(142)</b>	<b>(44.65%)</b>	<b>19</b>	<b>10.67%</b>
<b>Financial and other expenditures</b>										
Interest on long term debt	4,045	4,313	4,772	4,443	84.77%	91.04%	(268)	(6.21%)	(329)	(6.89%)
Repayment on long term debt	12,110	11,421	13,442	13,287	90.09%	91.14%	689	6.03%	(155)	(1.15%)
Amortization of debt discount	110	100	124	123	88.71%	89.43%	10	10.00%	(1)	(0.81%)
Dividend/grant in lieu of taxes	322	0	398	388	80.90%	82.99%	322	0.00%	(10)	(2.51%)
Other	26	26	30	30	86.67%	86.67%	0	0.00%	0	0.00%
	<b>16,613</b>	<b>15,860</b>	<b>18,766</b>	<b>18,271</b>	<b>88.53%</b>	<b>90.93%</b>	<b>753</b>	<b>4.75%</b>	<b>(495)</b>	<b>(2.64%)</b>
<b>Loss for the year</b>	<b>\$ (5,912)</b>	<b>\$ (2,222)</b>	<b>\$ (7,845)</b>	<b>\$ (6,706)</b>	<b>75.36%</b>	<b>88.16%</b>	<b>\$ (3,690)</b>	<b>166.07%</b>	<b>\$ 1,139</b>	<b>(14.52%)</b>

HALIFAX WATER  
 UNAUDITED STATEMENT OF EARNINGS - STORMWATER - NSUARB  
 APRIL 1, 2020 - FEBRUARY 28, 2021 (11 MONTHS)  
 ACTUAL YEAR TO DATE COMPLETE: 91.67%

	ACTUAL YEAR TO DATE		APR 1/20 MAR 31/21 BUDGET	APR 1/20 MAR 31/21 FORECAST	ACTUAL YEAR TO DATE as % of BUDGET	ACTUAL YEAR TO DATE as % of FORECAST	From Prior Year		Budget to Forecast	
	THIS YEAR '000	LAST YEAR '000	'000	'000			\$ Change	% Change	\$ Change	% Change
<b>Operating revenues</b>										
Stormwater site generated service	\$ 5,565	\$ 5,630	\$ 6,047	\$ 6,004	92.03%	92.69%	\$ (65)	(1.15%)	\$ (43)	(0.71%)
Stormwater right of way service	3,515	3,515	3,835	3,835	91.66%	91.66%	0	0.00%	0	0.00%
Late payment and other connection fees	6	93	106	63	5.66%	9.52%	(87)	(93.55%)	(43)	(40.57%)
Miscellaneous	95	86	92	92	103.26%	103.26%	9	10.47%	0	0.00%
	<b>9,181</b>	<b>9,324</b>	<b>10,080</b>	<b>9,994</b>	<b>91.08%</b>	<b>91.87%</b>	<b>(143)</b>	<b>(1.53%)</b>	<b>(86)</b>	<b>(0.85%)</b>
<b>Operating expenditures</b>										
Stormwater collection	4,434	4,387	5,821	5,279	76.17%	83.99%	47	1.07%	(542)	(9.31%)
Engineering and information services	456	714	1,273	1,270	35.82%	35.91%	(258)	(36.13%)	(3)	(0.24%)
Regulatory services	1,359	1,355	1,627	1,544	83.53%	88.02%	4	0.30%	(83)	(5.10%)
Customer services	240	320	303	298	79.21%	80.54%	(80)	(25.00%)	(5)	(1.65%)
Administration services	395	362	554	552	71.30%	71.56%	33	9.12%	(2)	(0.36%)
Depreciation and amortization	1,287	944	1,365	1,753	94.29%	73.42%	343	36.33%	388	28.42%
	<b>8,171</b>	<b>8,082</b>	<b>10,943</b>	<b>10,696</b>	<b>74.67%</b>	<b>76.39%</b>	<b>89</b>	<b>1.10%</b>	<b>(247)</b>	<b>(2.26%)</b>
<b>Earnings from operations before financial and other revenues and expenditures</b>	<b>1,010</b>	<b>1,242</b>	<b>(863)</b>	<b>(702)</b>	<b>(117.03%)</b>	<b>(143.87%)</b>	<b>(232)</b>	<b>(18.68%)</b>	<b>161</b>	<b>(18.66%)</b>
<b>Financial and other revenues</b>										
Interest	32	91	9	34	355.56%	94.12%	(59)	(64.84%)	25	277.78%
	<b>32</b>	<b>91</b>	<b>9</b>	<b>34</b>	<b>355.56%</b>	<b>94.12%</b>	<b>(59)</b>	<b>(64.84%)</b>	<b>25</b>	<b>277.78%</b>
<b>Financial and other expenditures</b>										
Interest on long term debt	627	555	924	702	67.86%	89.32%	72	12.97%	(222)	(24.03%)
Repayment on long term debt	1,647	1,339	1,973	1,834	83.48%	89.80%	308	23.00%	(139)	(7.05%)
Amortization of debt discount	17	12	20	20	85.00%	85.00%	5	41.67%	0	0.00%
Dividend/grant in lieu of taxes	56	0	62	68	90.32%	82.35%	56	0.00%	6	9.68%
	<b>2,347</b>	<b>1,906</b>	<b>2,979</b>	<b>2,624</b>	<b>78.78%</b>	<b>89.44%</b>	<b>441</b>	<b>23.14%</b>	<b>(355)</b>	<b>(11.92%)</b>
<b>Earnings (loss) for the year</b>	<b>\$ (1,305)</b>	<b>\$ (573)</b>	<b>\$ (3,833)</b>	<b>\$ (3,292)</b>	<b>34.05%</b>	<b>39.64%</b>	<b>\$ (732)</b>	<b>127.75%</b>	<b>\$ 541</b>	<b>(14.11%)</b>



**HALIFAX WATER**  
**UNAUDITED STATEMENT OF EARNINGS - REGULATED AND UNREGULATED ACTIVITIES - NSUARB**  
**APRIL 1, 2020 - FEBRUARY 28, 2021 (11 MONTHS)**  
**ACTUAL YEAR TO DATE COMPLETE: 91.67%**


	ACTUAL YEAR TO DATE		APR 1/20 MAR 31/21	APR 1/20 MAR 31/21	ACTUAL YEAR TO DATE	ACTUAL YEAR TO DATE	From Prior Year		Budget to Forecast	
	THIS YEAR	LAST YEAR	BUDGET	FORECAST	as % of BUDGET	as % of FORECAST	\$ Change	% Change	\$ Change	% Change
	'000	'000	'000	'000						
<b>REGULATED ACTIVITIES</b>										
<b>Operating revenues</b>										
Water	\$ 43,717	\$ 44,050	\$ 48,083	\$ 48,010	90.92%	91.06%	\$ (333)	(0.76%)	\$ (73)	(0.15%)
Wastewater	63,958	64,820	70,365	70,166	90.89%	91.15%	(862)	(1.33%)	(199)	(0.28%)
Stormwater	9,080	9,145	9,882	9,839	91.88%	92.29%	(65)	(0.71%)	(43)	(0.44%)
Public fire protection	6,694	6,485	7,074	7,336	94.63%	91.25%	209	3.22%	262	3.70%
Private fire protection	816	804	884	1,074	92.31%	75.98%	12	1.49%	190	21.49%
Other operating revenue	934	1,134	1,206	1,060	77.45%	88.11%	(200)	(17.64%)	(146)	(12.11%)
	<b>125,199</b>	<b>126,438</b>	<b>137,494</b>	<b>137,485</b>	<b>91.06%</b>	<b>91.06%</b>	<b>(1,239)</b>	<b>(0.98%)</b>	<b>(9)</b>	<b>(0.01%)</b>
<b>Operating expenditures</b>										
Water supply and treatment	9,086	8,503	10,562	10,397	86.03%	87.39%	583	6.86%	(165)	(1.56%)
Water transmission and distribution	10,546	9,989	12,311	11,867	85.66%	88.87%	557	5.58%	(444)	(3.61%)
Wastewater collection	12,919	12,266	13,388	13,153	96.50%	98.22%	653	5.32%	(235)	(1.76%)
Stormwater collection	4,434	4,387	5,821	5,279	76.17%	83.99%	47	1.07%	(542)	(9.31%)
Wastewater treatment	18,145	17,677	20,571	19,635	88.21%	92.41%	468	2.65%	(936)	(4.55%)
Engineering and information services	8,337	8,819	9,204	9,083	90.58%	91.79%	(482)	(5.47%)	(121)	(1.31%)
Regulatory services	3,582	3,441	4,359	4,144	82.17%	86.44%	141	4.10%	(215)	(4.93%)
Customer services	4,410	4,639	5,373	5,161	82.08%	85.45%	(229)	(4.94%)	(212)	(3.95%)
Administration services	5,160	5,334	7,933	7,909	65.04%	65.24%	(174)	(3.26%)	(24)	(0.30%)
Depreciation and amortization	23,980	21,437	27,349	28,724	87.68%	83.48%	2,543	11.86%	1,375	5.03%
	<b>100,599</b>	<b>96,492</b>	<b>116,871</b>	<b>115,352</b>	<b>86.08%</b>	<b>87.21%</b>	<b>4,107</b>	<b>4.26%</b>	<b>(1,519)</b>	<b>(1.30%)</b>
<b>Earnings from operations before financial and other revenues and expenditures</b>	<b>24,600</b>	<b>29,946</b>	<b>20,623</b>	<b>22,133</b>	<b>119.28%</b>	<b>111.15%</b>	<b>(5,346)</b>	<b>(17.85%)</b>	<b>1,510</b>	<b>7.32%</b>
<b>Financial and other revenues</b>										
Interest	202	473	87	226	232.18%	89.38%	(271)	(57.29%)	139	159.77%
Other	33	149	40	40	82.50%	82.50%	(116)	(77.85%)	0	0.00%
	<b>235</b>	<b>622</b>	<b>127</b>	<b>266</b>	<b>185.04%</b>	<b>88.35%</b>	<b>(387)</b>	<b>(62.22%)</b>	<b>139</b>	<b>109.45%</b>
<b>Financial and other expenditures</b>										
Interest on long term debt	6,527	6,542	8,807	7,261	74.11%	89.89%	(15)	(0.23%)	(1,546)	(17.55%)
Repayment on long term debt	18,634	17,063	21,860	20,663	85.24%	90.18%	1,571	9.21%	(1,197)	(5.48%)
Amortization of debt discount	195	170	228	220	85.53%	88.64%	25	14.71%	(8)	(3.51%)
Dividend/grant in lieu of taxes	5,417	4,655	6,114	5,953	88.60%	91.00%	762	16.37%	(161)	(2.63%)
	<b>30,773</b>	<b>28,430</b>	<b>37,009</b>	<b>34,097</b>	<b>83.15%</b>	<b>90.25%</b>	<b>2,343</b>	<b>8.24%</b>	<b>(2,912)</b>	<b>(7.87%)</b>
<b>Earnings (loss) for the year - Regulated</b>	<b>\$ (5,938)</b>	<b>\$ 2,138</b>	<b>\$ (16,259)</b>	<b>\$ (11,698)</b>	<b>36.52%</b>	<b>50.76%</b>	<b>\$ (8,076)</b>	<b>(377.74%)</b>	<b>\$ 4,561</b>	<b>(28.05%)</b>

HALIFAX WATER  
 UNAUDITED STATEMENT OF EARNINGS - REGULATED AND UNREGULATED ACTIVITIES - NSUARB  
 APRIL 1, 2020 - FEBRUARY 28, 2021 (11 MONTHS)  
 ACTUAL YEAR TO DATE COMPLETE: 91.67%

	ACTUAL YEAR TO DATE		APR 1/20 MAR 31/21 BUDGET	APR 1/20 MAR 31/21 FORECAST	ACTUAL YEAR TO DATE as % of BUDGET	ACTUAL YEAR TO DATE as % of FORECAST	From Prior Year		Budget to Forecast	
	THIS YEAR '000	LAST YEAR '000	'000	'000			\$ Change	% Change	\$ Change	% Change
<b>UNREGULATED ACTIVITIES</b>										
<b>Operating revenues</b>										
Septage tipping fees	436	474	505	505	86.34%	86.34%	(38)	(8.02%)	0	0.00%
Leachate and other contract revenue	388	404	473	436	82.03%	88.99%	(16)	(3.96%)	(37)	(7.82%)
Airplane effluent	28	77	105	40	26.67%	70.00%	(49)	(63.64%)	(65)	(61.90%)
Miscellaneous	35	35	38	38	92.11%	92.11%	0	0.00%	0	0.00%
	<b>887</b>	<b>990</b>	<b>1,121</b>	<b>1,019</b>	<b>79.13%</b>	<b>87.05%</b>	<b>(103)</b>	<b>(10.40%)</b>	<b>(102)</b>	<b>(9.10%)</b>
<b>Operating expenditures</b>										
Water supply and treatment	14	28	28	28	50.00%	50.00%	(14)	(50.00%)	0	0.00%
Wastewater treatment	479	662	842	588	56.89%	81.46%	(183)	(27.64%)	(254)	(30.17%)
Wastewater collection	43	23	111	111	38.74%	38.74%	20	86.96%	0	0.00%
Sponsorships and donations	64	73	68	68	94.12%	94.12%	(9)	(12.33%)	0	0.00%
Administration services	0	0	110	110	0.00%	0.00%	0	0.00%	0	0.00%
Depreciation and amortization	16	16	81	18	19.75%	88.89%	0	0.00%	(63)	(77.78%)
	<b>616</b>	<b>802</b>	<b>1,240</b>	<b>923</b>	<b>49.68%</b>	<b>66.74%</b>	<b>(186)</b>	<b>(23.19%)</b>	<b>(317)</b>	<b>(25.56%)</b>
<b>Earnings from operations before financial and other revenues and expenditures</b>	<b>271</b>	<b>188</b>	<b>(119)</b>	<b>96</b>	<b>(227.73%)</b>	<b>282.29%</b>	<b>83</b>	<b>44.15%</b>	<b>215</b>	<b>(180.67%)</b>
<b>Financial and other revenues</b>										
Other - leases and rentals	285	313	308	308	92.53%	92.53%	(28)	(8.95%)	0	0.00%
Other - energy projects	196	147	185	185	105.95%	105.95%	49	33.33%	0	0.00%
	<b>481</b>	<b>460</b>	<b>493</b>	<b>493</b>	<b>97.57%</b>	<b>97.57%</b>	<b>21</b>	<b>4.57%</b>	<b>0</b>	<b>0.00%</b>
<b>Financial and other expenditures</b>										
Other	51	47	68	47	75.00%	108.51%	4	8.51%	(21)	(30.88%)
	<b>51</b>	<b>47</b>	<b>68</b>	<b>47</b>	<b>75.00%</b>	<b>108.51%</b>	<b>4</b>	<b>8.51%</b>	<b>(21)</b>	<b>(30.88%)</b>
<b>Earnings for the year - Unregulated</b>	<b>\$ 701</b>	<b>\$ 601</b>	<b>\$ 306</b>	<b>\$ 542</b>	<b>229.08%</b>	<b>129.34%</b>	<b>\$ 100</b>	<b>16.64%</b>	<b>\$ 236</b>	<b>77.12%</b>
<b>Total earnings (loss) for the year (Regulated and Unregulated)</b>	<b>\$ (5,237)</b>	<b>\$ 2,739</b>	<b>\$ (15,953)</b>	<b>\$ (11,156)</b>	<b>32.83%</b>	<b>46.94%</b>	<b>\$ (7,976)</b>	<b>(291.20%)</b>	<b>\$ 4,797</b>	<b>(30.07%)</b>

**TO:** Craig MacMullin, MBA, CPA, CGA, Chair, and Members of the Halifax Regional Water Commission Board

**SUBMITTED BY:** Jamie Hannam  
Digitally signed by Jamie Hannam  
Date: 2021.03.18 17:24:36 -03'00'  
\_\_\_\_\_  
Jamie Hannam, P.Eng.  
Director, Engineering and Information Services

  
Digitally signed by Allan Campbell  
Date: 2021.03.19 08:14:48 -03'00'  
\_\_\_\_\_  
*On behalf of*  
Louis de Montbrun, CPA, CA  
Director, Corporate Services/CFO

**APPROVED:** Cathie O'Toole  
Digitally signed by Cathie O'Toole  
Date: 2021.03.18 19:13:07 -03'00'  
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Cathie O'Toole, MBA, FCPA, FCGA, ICD.D  
General Manager

**DATE:** March 19, 2021

**SUBJECT:** Capital Expenditures and Forecast for the Eleven Months Ended February 28, 2021

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## **ORIGIN**

Capital expenditure and forecast reporting.

## **BACKGROUND**

The Halifax Regional Water Commission (Halifax Water) Board is required to review periodic financial information throughout the year.

## **DISCUSSION**

The Engineering and Information Services department has been actively updating forecasted capital expenditures to the end of the 2020/21 fiscal year based on actual expenditures year to date and knowledge of project timelines and contract pricing. Below is the breakdown by asset class and project status for the eleven (11) months ending February 28, 2021.

# ITEM # 5.1

## Halifax Water Board

### March 25, 2021

## Capital Expenditure and Forecast Report

Budget Category	Total Budget Available	Expenditures to March 31, 2020	Expenditures April 1, 2020 to February 28, 2021	Total Expenditures to February 28, 2021	Remaining Budget Available as of February 28, 2021	Total Forecasted Expenditures to March 31, 2021	Total Forecasted Expenditures to the End of the Project	Remaining Budget Available	Total Expenditures to February 28, 2021 as a Percentage of Total Budget Available	Total Expenditures to February 28, 2021 as a Percentage of Total Forecasted Expenditures to the End of the Project
<b>Active</b>										
Water	\$ 73,287,268	\$ 11,316,132	\$ 27,313,992	\$ 38,630,124	\$ 34,657,144	\$ 49,374,445	\$ 63,891,735	\$ 9,395,533	52.7%	60.5%
Wastewater	49,170,986	7,100,956	20,258,219	27,359,175	21,811,811	30,420,344	40,719,768	8,451,218	55.6%	67.2%
Stormwater	9,185,873	499,878	3,631,262	4,131,140	5,054,733	5,505,846	8,425,293	760,580	45.0%	49.0%
	<b>131,644,127</b>	<b>18,916,966</b>	<b>51,203,473</b>	<b>70,120,439</b>	<b>61,523,688</b>	<b>85,300,635</b>	<b>113,036,796</b>	<b>18,607,331</b>	<b>53.3%</b>	<b>62.0%</b>
<b>Pending</b>										
Water	22,046,440	27,888	-	27,888	22,018,552	-	11,592,440	10,454,000	0.1%	0.2%
Wastewater	28,776,000	-	-	-	28,776,000	1,260,000	8,329,000	20,447,000	0.0%	0.0%
Stormwater	784,238	-	-	-	784,238	-	-	784,238	0.0%	0.0%
	<b>51,606,678</b>	<b>27,888</b>	<b>-</b>	<b>27,888</b>	<b>51,578,790</b>	<b>1,260,000</b>	<b>19,921,440</b>	<b>31,685,238</b>	<b>0.1%</b>	<b>0.1%</b>
<b>Closed</b>										
Water	94,628	94,628	-	94,628	-	-	94,628	-	100.0%	100.0%
Wastewater	-	-	-	-	-	-	-	-	0.0%	0.0%
Stormwater	-	-	-	-	-	-	-	-	0.0%	0.0%
	<b>94,628</b>	<b>94,628</b>	<b>-</b>	<b>94,628</b>	<b>-</b>	<b>-</b>	<b>94,628</b>	<b>-</b>	<b>100.0%</b>	<b>100.0%</b>
	<b>\$ 183,345,433</b>	<b>\$ 19,039,482</b>	<b>\$ 51,203,473</b>	<b>\$ 70,242,955</b>	<b>\$ 113,102,478</b>	<b>\$ 86,560,635</b>	<b>\$ 133,052,864</b>	<b>\$ 50,292,569</b>	<b>38.3%</b>	<b>52.8%</b>

The Total Budget Available of \$183.3 million represents total approved budgets for pending and active projects as at the end of March 31, 2021.

Total Expenditures to February 28, 2021 of \$70.2 million include expenditures of \$19.0 million incurred prior to April 1, 2020 and expenditures of \$51.2 million in the current fiscal year. This results in a Remaining Budget Available as of February 28, 2021 of \$113.1 million.

Project Managers have forecasted that total expenditures to the end of the 2020/21 fiscal year will be \$86.6 million. Based on the forecast, \$16.3 million will be spent in March 2021.

The Total Project Forecast represents the total expenditures on capital projects expected by the time of project completion. For multi-year projects, expenditures relating to future year budgets are excluded.

Remaining Budget Available is the Total Budget Available less the Total Forecasted Expenditures to the End of the Project. Halifax Water is forecasting to be underspent on capital projects relative to the approved budgets. In the Active project category, there is approximately \$18.6 million that may be able to be reallocated to existing projects or used to fund future projects. In the Pending project category, there is \$19.9 million that is awaiting approval and \$31.7 million that have been deferred or cancelled. For projects that are deferred or cancelled, there will be funding available that could be reallocated to existing projects, if required, or used to fund future capital budgets. A strategy is currently being developed to reallocate this funding.

As projects are completed, they will be moved to the closed category. This will occur throughout the year, however, most projects are closed in the last quarter of the fiscal year.

**ATTACHMENT**

Project details by category and status

Report prepared by:	<div><div>Alicia Scallion</div><div><small>Digitally signed by Alicia Scallion Date: 2021.03.18 21:27:27 -03'00'</small></div></div>
	Alicia Scallion, CPA, CA, Manager, Accounting, (902)-497-9785

Status	Service	Asset Category	Total Budget Available	Expenditures to March 31, 2020	Expenditures April 1, 2020 to February 28, 2021	Total Expenditures to February 28, 2021	Remaining Budget Available as of February 28, 2021	Total Forecasted Expenditures to March 31, 2021	Total Forecasted Expenditures to the End of the Project	Remaining Budget Available	Total Expenditures to February 28, 2021 as a Percentage of Total Budget Available	Total Expenditures to February 28, 2021 as a Percentage of Total Forecasted Expenditures to the End of the Project
Active	W	Water - Land	215,000	307,599	37,676	345,275	(130,275)	341,000	341,000	(126,000)	160.6%	101.3%
		Water - Transmission	3,948,274	461,962	800,928	1,262,890	2,685,384	2,993,000	4,017,000	(68,726)	32.0%	31.4%
		Water - Distribution	6,277,600	105,572	3,071,831	3,177,403	3,100,196	4,102,000	5,012,080	1,265,520	50.6%	63.4%
		Water - Structures	24,945,455	2,022,975	12,611,148	14,634,123	10,311,331	19,621,248	23,428,214	1,517,241	58.7%	62.5%
		Water - Treatment Facilities	2,991,982	-	265,585	265,585	2,726,397	741,000	1,618,000	1,373,982	8.9%	16.4%
		Water - Energy	170,000	-	-	-	170,000	-	170,000	-	0.0%	0.0%
		Water - Security	50,000	-	72,355	72,355	(22,355)	78,000	78,000	(28,000)	144.7%	92.8%
		Water - Equipment	8,170,278	1,413,848	3,523,456	4,937,303	3,232,975	5,488,849	6,930,000	1,240,278	60.4%	71.2%
		Water - Corporate Projects	26,518,679	7,004,176	6,931,012	13,935,189	12,583,491	16,009,348	22,297,441	4,221,238	52.5%	62.5%
	<b>W Total</b>		<b>73,287,268</b>	<b>11,316,132</b>	<b>27,313,992</b>	<b>38,630,124</b>	<b>34,657,144</b>	<b>49,374,445</b>	<b>63,891,735</b>	<b>9,395,533</b>	<b>52.7%</b>	<b>60.5%</b>
	WW	Wastewater - Trunk Sewers	500,000	-	6,841	6,841	493,159	15,000	15,000	485,000	1.4%	45.6%
		Wastewater - Collection System	26,139,927	4,089,113	11,092,040	15,181,153	10,958,773	14,298,064	18,959,000	7,180,927	58.1%	80.1%
		Wastewater - Force mains	550,000	13,117	72,957	86,073	463,927	70,000	70,000	480,000	15.6%	123.0%
		Wastewater - Structures	7,709,000	1,652,847	2,229,757	3,882,605	3,826,395	5,482,000	7,396,000	313,000	50.4%	52.5%
		Wastewater - Treatment Facility	8,001,065	741,391	3,256,808	3,998,200	4,002,865	5,806,983	7,536,935	464,130	50.0%	53.0%
		Wastewater - Energy	176,500	108,785	255,173	363,958	(187,458)	399,555	508,057	(331,557)	206.2%	71.6%
		Wastewater - Security	400,000	147,664	255,113	402,777	(2,777)	400,000	400,000	-	100.7%	100.7%
		Wastewater - Equipment	1,284,000	229,505	503,768	733,273	550,727	551,953	933,177	350,823	57.1%	78.6%
		Wastewater - Corporate Projects	4,365,494	80,745	2,585,762	2,666,507	1,698,987	3,359,000	4,856,600	(491,106)	61.1%	54.9%
		Wastewater - Unregulated	45,000	37,788	-	37,788	7,212	37,788	45,000	-	84.0%	84.0%
	<b>WW Total</b>		<b>49,170,986</b>	<b>7,100,956</b>	<b>20,258,219</b>	<b>27,359,175</b>	<b>21,811,811</b>	<b>30,420,344</b>	<b>40,719,768</b>	<b>8,451,217</b>	<b>55.6%</b>	<b>67.2%</b>
	SW	Stormwater - Pipes	3,070,000	90,904	553,213	644,118	2,425,882	1,596,300	2,054,247	1,015,753	21.0%	31.4%
		Stormwater - Culverts/Ditches	2,915,000	255,010	2,436,100	2,691,110	223,890	3,189,000	3,286,000	(371,000)	92.3%	81.9%
		Stormwater - Structures	2,378,000	155,455	57,722	213,177	2,164,823	180,000	2,279,000	99,000	9.0%	9.4%
		Stormwater - Corporate Projects	822,873	(1,491)	584,226	582,735	240,139	540,546	806,046	16,827	70.8%	72.3%
	<b>SW Total</b>		<b>9,185,873</b>	<b>499,878</b>	<b>3,631,262</b>	<b>4,131,140</b>	<b>5,054,734</b>	<b>5,505,846</b>	<b>8,425,293</b>	<b>760,580</b>	<b>45.0%</b>	<b>49.0%</b>
<b>Active Total</b>			<b>131,644,127</b>	<b>18,916,966</b>	<b>51,203,473</b>	<b>70,120,439</b>	<b>61,523,688</b>	<b>85,300,635</b>	<b>113,036,796</b>	<b>18,607,330</b>	<b>53.3%</b>	<b>62.0%</b>
Pending	W	Water - Land	580,000	-	-	-	580,000	-	450,000	130,000	0.0%	0.0%
		Water - Transmission	3,912,400	-	-	-	3,912,400	-	2,675,000	1,237,400	0.0%	0.0%
		Water - Distribution	34,000	-	-	-	34,000	-	-	34,000	0.0%	0.0%
		Water - Structures	2,300,000	-	-	-	2,300,000	-	2,000,000	300,000	0.0%	0.0%
		Water - Treatment Facilities	9,949,000	-	-	-	9,949,000	-	4,470,000	5,479,000	0.0%	0.0%
		Water - Energy	455,000	-	-	-	455,000	-	330,000	125,000	0.0%	0.0%
		Water - Corporate Projects	4,816,040	27,888	-	27,888	4,788,152	-	1,667,440	3,148,600	0.6%	1.7%
	<b>W Total</b>		<b>22,046,440</b>	<b>27,888</b>	<b>-</b>	<b>27,888</b>	<b>22,018,552</b>	<b>-</b>	<b>11,592,440</b>	<b>10,454,000</b>	<b>0.1%</b>	<b>0.2%</b>
	WW	Wastewater - Collection System	8,149,000	-	-	-	8,149,000	1,260,000	3,541,000	4,608,000	0.0%	0.0%
		Wastewater - Force mains	60,000	-	-	-	60,000	-	-	60,000	0.0%	0.0%
		Wastewater - Structures	10,674,000	-	-	-	10,674,000	-	3,000,000	7,674,000	0.0%	0.0%
		Wastewater - Treatment Facility	7,975,500	-	-	-	7,975,500	-	1,738,000	6,237,500	0.0%	0.0%
		Wastewater - Energy	1,662,500	-	-	-	1,662,500	-	50,000	1,612,500	0.0%	0.0%
		Wastewater - Security	100,000	-	-	-	100,000	-	-	100,000	0.0%	0.0%
		Wastewater - Equipment	150,000	-	-	-	150,000	-	-	150,000	0.0%	0.0%
		Wastewater - Corporate Projects	5,000	-	-	-	5,000	-	-	5,000	0.0%	0.0%
	<b>WW Total</b>		<b>28,776,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>28,776,000</b>	<b>1,260,000</b>	<b>8,329,000</b>	<b>20,447,000</b>	<b>0.0%</b>	<b>0.0%</b>
	SW	Stormwater - Pipes	381,238	-	-	-	381,238	-	-	381,238	0.0%	0.0%
		Stormwater - Culverts/Ditches	280,000	-	-	-	280,000	-	-	280,000	0.0%	0.0%
		Stormwater - Structures	93,000	-	-	-	93,000	-	-	93,000	0.0%	0.0%
		Stormwater - Corporate Projects	30,000	-	-	-	30,000	-	-	30,000	0.0%	0.0%
	<b>SW Total</b>		<b>784,238</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>784,238</b>	<b>-</b>	<b>-</b>	<b>784,238</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Pending Total</b>			<b>51,606,678</b>	<b>27,888</b>	<b>-</b>	<b>27,888</b>	<b>51,578,790</b>	<b>1,260,000</b>	<b>19,921,440</b>	<b>31,685,238</b>	<b>0.1%</b>	<b>0.1%</b>
Closed	W	Water - Equipment	94,628	94,628	-	94,628	-	-	-	-	100.0%	100.0%
	<b>W Total</b>		<b>94,628</b>	<b>94,628</b>	<b>-</b>	<b>94,628</b>	<b>-</b>	<b>-</b>	<b>94,628</b>	<b>-</b>	<b>100.0%</b>	<b>100.0%</b>
<b>Closed Total</b>			<b>94,628</b>	<b>94,628</b>	<b>-</b>	<b>94,628</b>	<b>-</b>	<b>-</b>	<b>94,628</b>	<b>-</b>	<b>100.0%</b>	<b>100.0%</b>
<b>Grand Total</b>			<b>183,345,433</b>	<b>19,039,482</b>	<b>51,203,473</b>	<b>70,242,955</b>	<b>113,102,478</b>	<b>86,560,635</b>	<b>133,052,865</b>	<b>50,292,568</b>	<b>38.3%</b>	<b>52.8%</b>

**ITEM # 5.1**  
**Halifax Water Board**  
**March 25, 2021**  
**ATTACHMENT**

**TO:** Craig MacMullin, MBA, CPA, CGA, Chair, and Members of the  
Halifax Regional Water Commission Board

**SUBMITTED BY:** **Jamie Hannam** Digitally signed by Jamie Hannam  
Date: 2021.03.18 14:09:37 -03'00'  
\_\_\_\_\_  
Jamie Hannam, P.Eng., Director, Engineering & IS

**APPROVED:** **Cathie O'Toole** Digitally signed by Cathie O'Toole  
Date: 2021.03.18 14:23:54 -03'00'  
\_\_\_\_\_  
Cathie O'Toole, MBA, FCPA, FCGA, ICD.D, General Manager

**DATE:** March 17, 2021

**SUBJECT:** **Williams Lake Road Wastewater Pump Station Rehabilitation  
(Construction Phase)**

---

### **ORIGIN**

2019/20 & 2020/21 Capital Budgets and operational requirement to maintain system integrity.

### **RECOMMENDATION**

It is recommended the Halifax Water Board approve the construction phase of the Williams Lake Road Wastewater Pumping Station Rehabilitation project in the amount of \$3,190,000, for a revised total project cost of \$3,400,000.

### **BACKGROUND & DISCUSSION**

The Williams Lake Road pump station was constructed in the mid 1960's and has an existing firm capacity of approximately 151 l/s conveyed by two extended shaft dry-pit pumps and two close coupled dry-pit pumps. The station received partial mechanical/electrical upgrades in the early 1980's and in the mid 1990's but this equipment is nearing the end of its useful lifecycle and requires replacement. Access to the dry-well side of the station is by ladder and Operations staff have identified the need for improved access/egress.

Work at the station will include replacement of mechanical and electrical equipment, installation of stair access to the station's drywell and repairs or replacement of any deficiencies identified through the inspection and design process.

This pump station rehabilitation is a priority based on the Wastewater Pump Station asset management plan.

In late 2019, Engineering Services were awarded to CBCL limited. The design report has since been completed and the drawings are presently at the 90% review stage. Based on the construction estimate in the CBCL design report, the estimated total project cost is \$3,400,000 (see attached project cost estimate). Funding in the amount of \$210,000 was previously approved for design phase services.

The construction phase of this project was planned for the 2022/23 and 2023/24 fiscal years with the amount of \$3,190,000 proposed for the two capital budget years respectively (as detailed within the current Five-Year Capital Plan).

In parallel, within the Pump Station asset class, construction funding in the amount of \$3,000,000 was allocated in the 2020/21 Capital Budget for the Autoport Pump Station Replacement project. However, due to a delay in finalizing the required land acquisition, the construction phase of the Autoport project will not proceed until the summer of 2022 at the earliest.

To continue positive progress within the Pump Station renewal program, it is proposed to undertake the Williams Lake project utilizing the funding availability from within the Autoport project and complete the work in 2021/22 and 2022/23 fiscal years.

### **BUDGET IMPLICATIONS**

The total estimated project cost for the Williams Lake Road Wastewater Pump Station project is \$3,400,000. With \$210,000 previously approved, the balance of required funding is \$3,190,000.

The Autoport Wastewater Pump Station project has \$3,000,000 in available funding, from the 2020/21 Capital Budget. The Autoport project requires \$250,000 to complete the land acquisition process. Thus, \$2,750,000 is available for the Williams Lake Road project. The construction phase of the Autoport project will be included within a near term future capital budget.

\$440,000 will be included within the 2022/23 Capital Budget to align with the second year of the construction phase of the Williams Lake Road project.



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 “Required to ensure infrastructure system integrity and safety”.

**ALTERNATIVES**

None

**ATTACHMENT**

Project Cost Estimate

Report Prepared by:	<i>Original signed by</i> _____ Greg Rice, P.Eng. Wastewater Stormwater Infrastructure Engineer
Financial Reviewed by:	<i>Louis de Montbrun</i> _____ Louis de Montbrun, CPA, CA Director, Corporate Services/CFO, 902-490-3685

**ITEM #5.2**

Halifax Water Board

March 25, 2021

ATTACHMENT

11-Mar-2021

**Williams Lake Road PS Upgrade  
Project Cost Estimate**

<b>Item</b>	<b>Total Cost</b>
Construction (See attached Engineer's estimate) *	\$2,400,000
Consultant Costs (Construction Phase)	\$135,000
Construction Contingency (15% of above)	\$380,250
Consultant Costs (Design Phase)	\$215,000
Sub-total	<b>\$3,130,250</b>
Net HST (4.286%)	\$134,163
Sub-total	\$3,264,413
Halifax Water Staff and Related Expenses	\$30,000
Sub-total	\$3,294,413
Interest & Overhead (1%)	\$32,944
<b>Total Project Cost Estimate</b>	<b>\$3,400,000</b>

\* Includes contractor O/H &amp; Profits and Escalation



# OPINION of PROBABLE CONSTRUCTION COSTS

William's Lake Pump Station, Halifax NS  
Lift Station Upgrades

DATE:	August 10, 2020
CBCL FILE No.:	201004.00
PREPARED BY:	PG/AT
EST. DESCRIPTION :	Class D Estimate

No.	DESCRIPTION	COST	Ratio
	<b>ESTIMATED CONSTRUCTION COSTS</b>		
	Civil Work	\$ 46,000	
	Demolition & Removals	\$ 26,000	
	Reinforced Concrete	\$ 198,000	
	Masonry and Walls	\$ 32,000	
	Roof Structure and Roofing	\$ 19,000	
	Miscellaneous Metals	\$ 68,000	
	Building Finish	\$ 11,000	
	Temporary Works	\$ 32,000	
	Pump Equipment	\$ 382,000	
	Process Mechanical	\$ 428,000	
	Material Handling and Building Equipment	\$ 10,000	
	Process Integration (instrumentation & control)	\$ 60,000	
	Building Mechanical	\$ 192,000	
	Electrical	\$ 519,000	
	<b>SUB-TOTAL COSTS (Excluding below contingencies, allowance and factors)</b>	<b>\$ 2,023,000</b>	
	General Contractor, Fees, Overheads and Profit 15%	\$ 304,000	
	<del>Design Development Contingency - Note 1 20%</del>	<del>\$ 466,000</del>	
	Escalation / Inflation (Based on 2021 dollars) - Note 3 2%	\$ 55,860	
	<del>Location Factor (Excluding Process Equipment) - Note 4 1.00</del>	<del>\$ -</del>	
	<del>Construction Contingency (Excluding Process Equipment) - Note 2</del>	<del>\$ -</del>	
	<b>TOTAL CONSTRUCTION COSTS (A)</b>	<b>\$2,849,000</b>	
	Taxes (HST) 15%	\$ 427,350	
	<b>TOTAL ESTIMATE OF PROBABLE COST c/w HST</b>	<b>\$3,277,000</b>	

THIS OPINION OF PROBABLE COSTS IS PRESENTED ON THE BASIS OF EXPERIENCE, QUALIFICATIONS, AND BEST JUDGEMENT. IT HAS BEEN PREPARED IN ACCORDANCE WITH ACCEPTABLE PRINCIPLES AND PRACTICES. MARKET TRENDS, NON-COMPETITIVE BIDDING SITUATIONS, UNFORESEEN LABOUR AND MATERIAL ADJUSTMENTS AND THE LIKE ARE BEYOND THE CONTROL OF CBCL LIMITED. AS SUCH WE CANNOT WARRANT OR GUARANTEE THAT ACTUAL COSTS WILL NOT VARY FROM THE OPINION PROVIDED.

- Note 1** \* A Design Development Contingency is to allow for increases of qty's; material costs; as the work is better defined  
**Note 2** \*\* A Construction Contingency is to allow for cost of additional work over and above the contract Awarded price.  
**Note 3** \*\*\* The Escalation/Inflation allowance is for increases in construction costs from time the budget to Tender Call  
**Note 4** \*\*\*\* The Location Factor is for variances between constr. costs at the location of the project & historical costs data

**TO:** Craig MacMullin, MBA, CPA, CGA, Chair, and Members of the Halifax Regional Water Commission Board

**SUBMITTED BY:** Heidi Schedler  
Digitally signed by Heidi Schedler  
Date: 2021.03.19 10:55:31 -03'00'  
Heidi Schedler, General Counsel and Corporate Secretary

**APPROVED:** Cathie O'Toole  
Digitally signed by Cathie O'Toole  
Date: 2021.03.19 10:53:01 -03'00'  
Cathie O'Toole, MBA, FCPA, FCGA, ICD.D, General Manager

**DATE:** March 1, 2021

**SUBJECT:** **Corporate Governance Manual**

---

#### **ORIGIN**

January 28, 2016 approval of the Halifax Water Corporate Governance Manual.

September 27, 2018 approval of public Board meetings.

March 20, 2019 approval of the Board Meeting Protocol – Public Meetings.

September 24, 2020 approval of the updated Halifax Water Corporate Governance Manual.

#### **RECOMMENDATION**

It is recommended that the Halifax Water Board approve the revisions to the Corporate Governance Manual, as attached.

#### **BACKGROUND**

On September 24, 2020, the Board approved its updated Corporate Governance Manual and terms of reference for each of the Board committees.

#### **DISCUSSION**

The 2020 update to the Corporate Governance Manual (Manual) approved by the Board was done to ensure that the Board policies remain relevant and in keeping with principles of good governance.

The Board committed to reviewing the Manual for further updates at least annually. The attached redlined version of the Manual sets out revisions that include:

- Addition of policy surrounding the position of staff representative on the Board,
- Additions of language confirming the applicability of FOIPOP legislation, and
- Revisions to the terms of reference for committees surrounding composition to allow committees composition to be developed without being restricted by public versus private representative Commissioners.

**ATTACHMENT**

Halifax Water Corporate Governance Manual - Approved September 24, 2020

Report Prepared by:

**Heidi  
Schedler**

Digitally signed by Heidi  
Schedler  
Date: 2021.03.19  
10:55:52 -03'00'

Heidi Schedler, General Counsel and Corporate Secretary



# **Halifax Water**

## **Corporate Governance Manual**

Approved September 24, 2020



**STRAIGHT from**  
**the SOURCE**

# Halifax Water Corporate Governance Manual

Approved September 24, 2020

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**STRAIGHT from  
the SOURCE**

Halifax Water  
Corporate Governance Manual

Approved September 24, 2020

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STRAIGHT from  
the SOURCE



# Halifax Water

## Corporate Governance Manual

Approved September 24, 2020

### INTRODUCTION

#### 1.1 Legislative Authority

Halifax Water is a corporation continued by the [Halifax Regional Water Commission Act](#), S.N.S. 2007 c. 55, as amended ([Act](#)) for the purpose of acquiring, owning and operating water, wastewater and stormwater systems, facilities and utilities. In accordance with the [Act](#), Halifax Water is governed by a Board of Commissioners appointed by Halifax Regional Municipality (HALIFAX) Council.

#### 1.2 Background

Halifax Water has provided potable water and fire protection services to the residents of the former City of Halifax since 1945. In 1996, in conjunction with the Halifax metro municipal amalgamation, the utility took on a regional mandate with the transfer of water assets from the City of Dartmouth and the Halifax County Municipality to Halifax Water. On August 1, 2007, HALIFAX transferred its municipal wastewater and stormwater assets to Halifax Water, at which time these services became regulated under the *Public Utilities Act*, R.S.N.S. 1989, c. 380, as amended.

#### 1.3 Purpose of this Manual

The purpose of this Corporate Governance Manual (Manual) is to ensure that Halifax Water has effective corporate governance systems to guide the organization in achieving its corporate objectives. This Manual is a supplement to the [Act](#) and the common law principles of corporate governance.

#### 1.4 Approval of the Corporate Governance Manual

The Halifax Water Board of Commissioners (Board) is the approving authority for this Manual and will review it annually or as the Board considers necessary.

### 2. OBJECTIVES AND ACCOUNTABILITY

#### 2.1 Objectives for governance

Halifax Water's objectives for governance are to ensure that:

- a. the Board is representative of and accountable to its stakeholders;
- b. accountability, consultation, respect and transparency are reflected in the governance of Halifax Water; and
- c. Commissioners are accountable, qualified and possess the necessary skills to direct and guide Halifax Water to effectively manage its opportunities, risks, and ongoing needs.

# Halifax Water

## Corporate Governance Manual

Approved September 24, 2020

### 2.2 Accountability

The Board is accountable to stakeholders for fulfilling the roles and responsibilities set out in the Act and this Manual.

### 2.3 Governance Style

The Board of Commissioners will govern in accordance with the [Act](#) and this Manual. In carrying out its roles and responsibilities pursuant to the Act and this Manual, the Board and the Commissioners shall consider the following:

- a. All interactions are respectful, courteous, and civil,
- b. Respect confidentiality of people and transparency of process,
- c. Be accountable for your actions and behaviours,
- d. Provide a safe, accessible work environment,
- e. Promote an inclusive environment,
- f. Treat employees and customers equitably,
- g. Lead by example, and
- h. Be positive and collaborative.

Commissioners, including non-voting Commissioners, shall participate in discussion as equals and dissenting points of view shall be encouraged for full exploration of an issue. Commissioners shall participate respectfully and productively in any discussion.

## 3. BOARD OF COMMISSIONERS

### 3.1 Appointment and Term of Commissioners

Commissioners of the Board are appointed and hold office in accordance with the [Act](#).

### 3.2 Role and Responsibilities of the Board of Commissioners

Further to the [Act](#), the Board has the following governance responsibilities:

- a. Oversee and approve, as appropriate:
  - i. the financial management, including setting the budget and appointing auditors,
  - ii. organizational performance measures and objectives,
  - iii. the mission, vision, and values,
  - iv. strategic plans and budgets,
  - v. the development of by-laws and policies,
  - vi. organizational performance measures and objectives
  - vii. the budget for the Board and its Committees,
  - viii. the remuneration and expenses policy for Commissioners,
  - ix. standards for Commissioner conduct and ethics, including this Manual,
  - x. the creation of and terms of reference for Board Committees,
  - xi. protocols, registers, policies for the identification and management of risks,
- b. Appoint:

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- i. the Board Chair and Vice-Chair;
- ii. the Secretary and Treasurer;
- iii. the General Manager;
- c. Approve and adjust as appropriate the terms of employment and remuneration of the General Manager, as negotiated and recommended by the Executive Committee;
- d. Review and evaluate the General Manager's performance annually;
- e. Delegate to the General Manager, Committees or others such powers and duties as deemed necessary to assist in fulfilling these responsibilities.

### 3.3 Appointment of Chair and Vice-Chair

It has been customary that the Chair is appointed from among the private resident Commissioners and the Vice Chair from the HALIFAX Council Commissioners. The term of office of the Chair and Vice Chair are as approved by the Board.

### 3.4 Role and Responsibilities of the Chair

Further to the [Act](#), the Chair of the Board has the following responsibilities:

- a. Lead, facilitate and encourage fulfillment of the various roles and responsibilities set out in this Manual,
- b. Set the time and place for all meetings of the Board, in consultation with the Board and the General Manager,
- c. Ensure that all business set out in the agenda of the Board meetings is discussed and, if necessary, brought to resolution, [and](#)
- d. Make all Commissioners aware of the General Manager's terms of employment and annual evaluation.

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### 3.5 Role and Responsibilities of the Vice Chair

Further to the [Act](#), the Vice Chair has the following responsibilities:

- a. Exercise the roles and responsibilities of the Chair during an absence or vacancy in the office of the Chair, [and](#)
- b. Provide support to the Chair as needed.

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### 3.6 Role and Responsibilities of the HALIFAX Staff Commissioner

Further to the [Act](#), the Commissioner appointed as HALIFAX staff representative has the following responsibilities:

- a. [Act in accordance with the Commissioner Code of Conduct \(Appendix I\), including acting in the best interest of Halifax Water and reporting conflicts as they arise,](#)
- b. [Attend all Board meetings, unless otherwise provided leave of the Board,](#)
- c. [Provide notification to the Chair or the Secretary of any absence from a meeting as soon as possible in advance of that meeting,](#)

**Commented [HS1]:** This is the section we discussed previously – adding in some policy relating to the role of the staff representative.

**Deleted:** <#>Sit as Chair of the Audit and Finance Committee of the Board. ¶

**Commented [HS2]:** To be hyperlinked.

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- d. Participate in training and development, as appropriate, including attendance at workshops, conferences and seminars relevant to governance, and
- e. Sharing information between the Board and HALIFAX, as needed and without breaching confidentiality, for the purpose of facilitating operations of either Halifax Water or HALIFAX.

### 3.7 Role and Responsibilities of Commissioners

Further to the [Act](#), Commissioners have the following responsibilities:

- a. Act in accordance with the Commissioner Code of Conduct (Appendix I), including acting in the best interest of Halifax Water and reporting conflicts as they arise,
- b. Act as an agent and trustee of Halifax Water in the execution of its mandate and the protection of its assets,
- c. Participate respectfully in deliberations with fellow Commissioners,
- d. Support final decisions and/or motions adopted by the Board,
- e. Review all briefing material sent out prior to all meetings,
- f. Attend all Board meetings and all Committee meetings, unless otherwise provided leave of the Board,
- g. Provide notification to the Chair or the Secretary of any absence from a meeting as soon as possible in advance of that meeting,
- h. Sit on Board Committees, as required and approved by the Board,
- i. Maintain confidentiality of corporate information as required and/or directed, and
- j. Participate in training and development, as appropriate, including attendance at workshops, conferences and seminars relevant to governance.

### 3.8 Board Committees

The Board approves following committees and their attached terms of reference:

- a. Executive Committee (Appendix II),
- b. Audit and Finance Committee (Appendix III),
- c. Environment, Health and Safety Committee (Appendix IV), and
- d. Enterprise Risk Management Committee (Appendix V).

### 3.9 Role and Responsibilities of Board Committee Chairs

Further to the terms of reference for each Board Committee, Committee Chairs have the following responsibilities:

- a. Preside over Committee meetings,
- b. Establish meeting agendas in consultation with the General Manager,
- c. Fill any vacant position(s) on the Committee in a timely manner;
- d. Report to the Board the activities, decisions and recommendations of the Committee.

### 3.10 Commissioner Code of Conduct

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The Commissioner Code of Conduct (Appendix I), shall be reviewed and signed by each Commissioner following appointment or re-appointment and otherwise annually.

### 3.11 Confidentiality of Information

Halifax Water is subject to the freedom of information and protection of privacy provisions of Part XX of the [Municipal Government Act](#). Commissioners and the Board shall uphold and protect the confidentiality of information received through the Board, including, but not limited to:

- a. The content of any Halifax Water customer file,
- b. *In camera* deliberations and/or decisions,
- c. Personnel matters, and
- d. Sensitive commercial information.

Any disclosure of non-confidential information should be limited to such individuals as are necessary to assist Commissioners in effectively carrying out their functions as Commissioners.

### 3.12 Conflict of Interest

Where a conflict of interest, as defined in the Commissioner Code of Conduct (Appendix I), is declared by a Commissioner or the Chair, the conflicted Commissioner must refrain from voting on and participating in any way in any matter directly or indirectly related to the subject matter of the conflict. This includes refraining from any attempt to influence decision making on any such matter.

## 4. GENERAL MANAGER, SECRETARY AND TREASURER

### 4.1 Role and Responsibilities of the General Manager

The General Manager is accountable to the Board and shall be evaluated in accordance with the General Manager performance management process established by the Board of Commissioners.

Further to the [Act](#), the General Manager is conferred with full authority, scope and executive powers by the Board to carry out the following responsibilities:

- a. Act in the best interest of Halifax Water,
- b. Provide strategic leadership and vision to Halifax Water,
- c. Supervise and manage the day-to-day operations of Halifax Water in a responsible and sustainable manner, including effectively staffing the organization,
- d. Develop and implement appropriate plans and budgets,
- e. Encourage and facilitate effective relationships with stakeholders, including development of an effective communications strategy,
- f. Ensure policies and procedures are developed, maintained, disclosed and updated as appropriate,
- g. Promote a culture of integrity, accountability, respect and civility,
- h. Ensure legal, regulatory and environmental compliance,

**Commented [HS3]:** This addition was requested by Lovelace during the December/January workshop. Act name to be hyperlinked.

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- i. Advise the Chair and/or the Board in a timely manner of any risks, issues, events or pending matters that may impact the Board's roles or responsibilities,
- j. Recommend organizational performance measures to the Board,
- k. Attend all Board and Board Committee meetings in a non-voting, *ex officio* capacity,
- l. Present to the Board an annual succession plan for key positions within Halifax Water, which includes a plan for temporary acting capacity,
- m. Delegate such duties and responsibilities as appropriate to ensure effective day-to-day operations, and
- n. Any such other duties as the Board may direct or delegate from time to time.

### 4.2 Limitations of the General Manager

The General Manager shall not cause or allow any practices, activity, decision or organizational circumstances which are contrary to an approved motion of the Board, unlawful or in violation of commonly acceptable business or professional ethics.

The General Manager is not authorized to utilize funds in a manner contrary to the law or regulatory requirements.

### 4.3 Appointment of Secretary

The Board appoints General Counsel of Halifax Water as Secretary to the Board, who shall hold this position until such time as the Board, by resolution, determines otherwise.

### 4.4 Role and Responsibilities of the Secretary

The Secretary reports to the Chair and Committee Chairs on matters relating to the Board or Board Committees and to the General Manager for day-to-day operational matters.

Further to the [Act](#), the Secretary has the following responsibilities:

- a. Notify Commissioners of meetings and communications as directed by the Chair or the General Manager,
- b. Attend all Board and Board Committee meetings in a non-voting, *ex officio* capacity,
- c. Provide advice to the Board, Chair and/or Board Committees on governance or other issues, as needed,
- d. Maintain all official results of the Board and Board Committees, including policy decisions and minutes of all official meetings,
- e. Distribute to Commissioners all relevant Board materials and documents as directed by the Chair, the Committee Chairs, or the General Manager,
- f. Organize logistical support for Board and Board Committee meetings, including training and development events,
- g. Provide other support functions to the Board and the Chair, as needed;
- h. Provide support to the General Manager and Treasurer, as needed.

### 4.5 Appointment of Treasurer

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The Board appoints the Chief Financial Officer of Halifax Water as Treasurer to the Board, who shall hold this position until such time as the Board, by resolution, determines otherwise.

### 4.6 Role and Responsibilities of the Treasurer

The Treasurer reports to the Chair and Committee Chairs on matters relating to the Board or Board Committees and to the General Manager for day-to-day operational matters.

Further to the [Act](#), the Treasurer has the following responsibilities:

- a. Manage the finances of Halifax Water,
- b. Implement appropriate systems of internal financial controls,
- c. Manage organizational risk, from a financial perspective,
- d. Develop long term financial plans and rate strategies to ensure adequate cash flow,
- e. Administer the Halifax Water Employees' Pension Plan and support the Board in their role as Administrators and Trustees of the Pension Plan,
- f. Treasury operations and controls,
- g. Manage daily cash balances,
- h. Track and analyze actual revenues and expenses against the annual budget,
- i. Liaise with bankers, auditors and regulators, as appropriate,
- j. Provide reports to the Board relating to the finances of Halifax Water,
- k. Attend all Board and Audit and Finance Committee meetings in a non-voting, *ex officio* capacity,
- l. Inform the Board of key financial events, trends, concerns, and fiscal health, and
- m. Report any fraud, significant policy violations or legislative non-compliance to the Chair of the Audit Committee and General Manager.

## 5. PENSION GOVERNANCE

The Board is responsible for the administration of the Halifax Water Employees' Pension Plan, including establishing the Pension Plan's governance framework and policies. The Board is responsible for approving amendments to the Pension Plan text, the trust agreements, contribution rates and funding, the audited financial statements, actuarial valuations and assumptions.

## 6. OPERATIONS

### 6.1 Board Agendas

Board meeting agendas shall be established in consultation with the Board Chair and Vice Chair, the General Manager and Secretary.

The Board approves the meeting agenda at the commencement of each meeting.

Sufficient time shall be allocated for the meeting as a whole and for individual agenda items to enable all views to be heard and considered before a decision is taken.

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Items requested by Commissioners may be added to the agenda with the approval of the Board. Such items may be discussed at the meeting introduced, deferred to another meeting, and/or referred to staff.

The Chair or the Board may refer any matter on the agenda to a Board Committee, as appropriate.

### 6.2 Meetings

At the discretion of the Chair, and in consultation with the General Manager, a minimum of five Board meetings shall be held each fiscal year, not including the annual general meeting. These meetings may follow the Template Board Meeting Business Cycle (Appendix VII).

The Board and Board Committees may meet and/or render decisions in person, virtually, by telephone or via other forum that allows for effective meetings and decision-making.

### 6.3 Annual General Meeting

The Board shall hold an annual general meeting (AGM) once per year, which shall be open to the public. The agenda of the AGM shall include presentation of strategic initiatives, major capital initiatives, and year-end financial results.

### 6.4 Open Board Meetings

Halifax Water promotes a high degree of openness and transparency to maintain the confidence of stakeholders. Halifax Water Board meetings are open to the public, which is accomplished by allowing members of the public to attend in-person meetings, live-broadcasting meetings where possible, and/or posting audio/video recordings of Board meetings on the Halifax Water website in a timely manner.

All Board meeting agendas and materials will be available to the public via the Halifax Water website.

Only at the AGM will members of the public be provided an opportunity to speak and/or ask questions of the Board or Halifax Water staff. At all other public meetings of the Board, members of the public are permitted to observe only. Members of the public may request meetings with Halifax Water staff at any time.

Meetings of Board Committees are not open to the public.

### 6.5 In Camera Board Meetings

Board meetings are open to the public, with the exception of the following matters, which shall be discussed and deliberated *in camera*:

- a. Acquiring or disposing of property,
- b. Personnel matters,
- c. Labour relations issues,



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- d. Specific customer case files,
- e. Contract negotiations,
- f. Litigation and potential litigation,
- g. Legal advice,
- h. Security, and
- i. Other confidential matters designated by the Board of Commissioners.

*In camera* meetings may be attended by the General Manager, Secretary and Treasurer. The Board may meet without Halifax Water staff, as necessary and approved by the Chair of the Board.

Minutes or motions of any Board *in camera* sessions shall be kept separate from published Board minutes and motions.

### 6.6 Board Committees

The Board may establish standing or ad hoc committees as required to fulfill its responsibilities. Board Committees shall have terms of reference approved by the Board, setting out, among other things, the composition of the Committee.

### 6.7 Authority to Preside

The Chair of the Board shall preside at all meetings of the Board, except when absent or unable to preside.

Where the Chair is absent or is unable to preside at any meeting of the Board, the Vice Chair shall preside at that meeting of the Board.

Where the Chair and Vice Chair are absent or unable to preside any meeting of the Board, the Chair shall appoint a Commissioner of the Board to preside at that meeting.

### 6.8 Quorum

In accordance with the [Act](#), a quorum of the Board is four voting Commissioners.

### 6.9 Attendance

Commissioners are expected to attend all Board or Committee meetings. In accordance with the [Act](#), a Commissioner of the Board shall cease to be a Commissioner after absence from three consecutive meetings without leave of the Board.

A Commissioner participating virtually or via conference call is deemed present at the meeting.

Any Commissioner unable to attend a Board meeting shall give prior notice to the Chair and/or the Secretary.

The Chair or the Board, in consultation with the General Manager, may invite stakeholders or experts to Board or Board Committee meetings, whether *in camera* or open to the public.

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### 6.10 Meeting Conduct

The Board shall use Robert's Rules of Order to conduct its proceedings.

### 6.11 Motions and Voting

Motions require a mover and a seconder from the voting Commissioners.

Motions are carried by majority vote.

Commissioners may only abstain from a vote in a case of a conflict of interest recognized by the Chair.

### 6.12 Meeting Materials

The Secretary shall ensure distribution of all available materials relevant to the meeting agenda to all Commissioners.

### 6.13 Minutes

The Secretary or staff designate shall record minutes of all Board and Board Committee meetings, which shall include:

- a. the date and location of the meeting,
- b. attendance of Commissioners, staff and any other presenters,
- c. decisions including approval of agenda, previous minutes and motions,
- d. any specific reference, comment or discussion point requested for inclusion by a Commissioner, and
- e. action items for follow up.

Minutes of *in camera* sessions and Board Committee meetings are confidential.

### 6.14 Commissioner Orientation

Each new Board Commissioner shall receive, as soon as practicable upon appointment, an orientation to the Board and Halifax Water, which may include items such as:

- a. the [Act](#), other relevant legislation and regulations,
- b. an overview of Halifax Water including relevant financial, statistical and operational information,
- c. this Manual,
- d. the Commissioner Code of Conduct,
- e. an overview of the General Manager evaluation process and remuneration,
- f. the Halifax Water Employees' Pension Plan and the Board's role as Administrator and Trustee of the Pension Plan, and
- g. other material, as appropriate.

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### 6.15 Commissioner Education

The Board recognizes the importance of providing ongoing training, development and education for its Commissioners on water, wastewater and stormwater issues as well as governance roles and responsibilities.

To facilitate ongoing education, Halifax Water may, from time-to-time, retain membership in relevant professional organizations providing educational opportunities. Commissioners are encouraged to participate in opportunities relevant to the work of the Board identified by the Chair and/or the General Manager.

### 6.16 Remuneration and Expenses

Commissioners are compensated in accordance with approved policies of the Board.

The *per diem* rate shall be reviewed and approved by the Board annually, based on a comparison group of similar boards.

Commissioners shall be reimbursed by Halifax Water for reasonable expenses incurred on Board business in accordance with Halifax Water's Employment Expense Reimbursement Policy, which shall be reviewed and confirmed by the Treasurer.

### 6.17 Post-Appointment

Commissioners agree:

- a. within six months after leaving office, to not accept appointment to a board of directors with which Halifax Water has had dealings during the six-month period immediately prior to leaving office (excepting employment unrelated to the business of Halifax Water);
- b. to not act for, or on behalf of, any person or entity, in respect of any ongoing negotiations before the Board; and
- c. to not draw on privileged information, or on the services of Halifax Water's employees, in an effort to secure future employment.

**Appendix I**  
**Commissioner Code of Conduct**

## Halifax Water Commissioner Code of Conduct

### Purpose

The purpose of this code of conduct is to set Halifax Water's expectation for Commissioners to conduct themselves in an ethical and businesslike manner.

Commissioners are expected to exercise their duties and responsibilities set out in the *Halifax Regional Water Commission Act* ([Act](#)) and in the Halifax Water Corporate Governance Manual (Manual) honestly, in good faith, in the best interests of Halifax Water, which supersedes the personal interest of any individual Commissioner.

This code of conduct provides guidance to Commissioners on appropriate behaviours and on recognizing and properly managing conflicts of interest fairly and expeditiously.

### Key Responsibilities

Commissioners are expected to:

- a. conduct themselves in a manner that instills public confidence in the conduct of Halifax Water,
- b. exercise their duties and responsibilities with the degree of care, diligence and skill expected of a competent and prepared director of a board of a public entity,
- c. act with honesty and integrity,
- d. be respectful of others and their opinions,
- e. be independent and impartial,
- f. not be influenced by self-interest, outside pressure, expectation of reward or fear of criticism,
- g. owe primary business loyalty to Halifax Water,
- h. avoid conflicts of interest,
- i. disclose any perceived or real conflicts of interest to the Chair of the Board or the Secretary,
- j. work collaboratively with the Chair of the Board to resolve and/or manage conflicts of interest, and
- k. comply with all other relevant policies and governance documents.

### Conflict of Interest

A conflict of interest arises when a Commissioner is placed in a situation where their personal or financial interest, or that of a family member or a close, personal contact, conflicts with the interests of Halifax Water or with the Commissioner's responsibility to Halifax Water.

Conflicts can be actual, potential and/or perceived.

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The standard that will be applied to determine whether a conflict of interest exists is that of an independent observer who might reasonably question whether the Commissioner's actions or decisions are determined by or could result in a gain or benefit to the Commissioner, family member or close, personal contact.

A conflict of interest depends on the situation, and not on the character or actions of the Commissioner.

### **Duty to Disclose**

Commissioners must make written, full, timely and ongoing disclosure of conflicts of interest to the Chair of the Board or the Secretary.

This code and the attached acknowledgement form must be reviewed and completed by every Commissioner upon being appointed to the Board. Thereafter, ongoing, written disclosure must be made by Commissioners as conflicts of interest arise.

Early disclosure of conflicts of interest is key to successful resolution.

### **Deemed Conflicts**

A conflict of interest will arise in the following situations:

- When the Commissioner has a financial interest, beyond any compensation approved by the Board, in the outcome of a decision of Halifax Water.
- When the Commissioner is related to, in a close relationship, or in a financial relationship with a supplier or contractor conducting business with Halifax Water.
- When the Commissioner accepts a gift, payment or service in connection with their position on the Board that exceeds \$250 in value.
- When the Commissioner uses information gained from their position on the Board for personal gain.
- When the decision of the Board relates to a family member and/or close, personal contact of a Commissioner.
- When the Commissioner offers or accepts monetary or other gifts or payment from an external source in connection with their position on the Board.

Any other situation that could lead to a conflict of interest must be disclosed by the Commissioner, in accordance with this policy, and discussed with the Board Chair or the Secretary.

## Commissioner Code of Conduct Acknowledgment

I \_\_\_\_\_ (print name), have read and understand the Commissioner Code of Conduct.

I confirm that I have declared and/or will declare any and all actual, potential and/or perceived conflicts in accordance with the Commissioner Code of Conduct.

I agree to:

1. Exercise the powers of my office and fulfil my responsibilities honestly, in good faith and in the best interests of Halifax Water.
2. Carry out my duties and responsibilities as a Board member in a diligent, reasonable and prudent manner.
3. Keep confidential all information which comes to my attention and possession in my capacity as a Board member unless the Board of Directors determines such information to have a status other than confidential.
4. Conduct myself respectfully, having respect for others, their opinions and the collective decisions of the Board.
5. Declare any conflict of interest immediately upon it coming to or being brought to my attention.
6. Offer my resignation as a Board member upon the Board resolving that I have breached the Commissioner Code of Conduct.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Witness: \_\_\_\_\_

Date: \_\_\_\_\_

## Appendix II

### Executive Committee

### Terms of Reference



## Halifax Water Board Executive Committee Terms of Reference

### 1. Role

The role of the Executive Committee (Committee) is to provide oversight over Halifax Water Board (Board) governance and functions and to foster effective relationships between the Board and Halifax Water senior management.

### 2. Composition and Operations

1. This Committee shall consist of the Chair of the Board, the Vice-Chair of the Board and one member of the Board who shall be a public representative.
2. The General Manager and Secretary shall be non-voting, *ex officio* members of this Committee. The Secretary shall act as recording secretary.
3. It is customary for the Chair of the Board to be the Chair of this Committee. The Committee may appoint any member as the Chair of this Committee, as appropriate.
4. Quorum for meetings shall be two voting members.
5. Members may attend meetings in person, via telephone or virtually.
6. The Committee shall meet at least four times per year. The Chair, in consultation with the General Manager, may cancel a meeting at their discretion.

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### 3. Duties and Responsibilities

In fulfilling its role, the Committee shall:

1. Oversee the governance of the Board, Board members and Board committees;
2. Monitor and assess the relationship between the Board and Halifax Water senior management and make recommendations to the Board, where necessary, to ensure the independence of the Board;
3. Review annually the performance of the Board, Board members and Board committees;
4. Recommend and approve, where necessary, education for the Board and/or Board members;
5. Oversee and make recommendations to the Board on the selection and appointment of the Board Chair and a succession plan for the Board Chair;

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6. The Board members of the Committee will oversee and make recommendations to the Board on the selection, performance management, and compensation of the General Manager;
7. Set the schedule and agenda for Board meetings;
8. Liaise with external bodies, as necessary, such as Halifax Regional Municipality (HRM);
9. Make recommendations to HRM regarding the recruitment and appointment of Board members, including competency requirements;
10. Make recommendations to the Board regarding Board member compensation, including the Board Chair and committee chairs.
11. Review and approve the Halifax Water Board member insurance policy;

In fulfilling its role and responsibilities, the Committee may:

12. Consult with stakeholders or experts, upon consultation with and in collaboration with the General Manager.

#### 4. Accountability

The Committee is accountable to the Board.

#### 5. Review

The Committee shall review these terms of reference at least once annually and recommend any changes to the Board for approval.

**Appendix III**  
**Audit and Finance Committee**  
**Terms of Reference**

**Halifax Water Board  
Audit and Finance Committee  
Terms of Reference**

**1. Role**

The role of the Audit and Finance Committee (Committee) is to assist the Halifax Water Board (Board) in overseeing:

1. Halifax Water's financial results, internal controls and independent auditors; and
2. The Halifax Regional Water Commission Employee's Pension Plan (Pension Plan) financial reporting and audit process.

**2. Composition and Operations**

1. This Committee shall consist of at least three Board members.
2. The General Manager, Treasurer and Secretary are non-voting, *ex officio* members of this Committee.
3. The Committee shall elect a Chair from amongst its members.
4. Quorum for meetings shall be two members. Members may attend meetings in person, via telephone or virtually.
5. Halifax Water shall assign an employee as the staff liaison to the Committee, who shall be a non-voting member of the Committee.
6. The Committee shall meet at least four times per year. The Chair, in consultation with the staff-liaison, may cancel a meeting at their discretion.

**Deleted:** and shall be comprised of a majority of public representative Board members

**Deleted:** public resident

**3. Duties and Responsibilities**

In fulfilling its role, the Committee shall:

1. Review and monitor the Halifax Water and the Halifax Water Employee Pension Plan (Pension Plan) financial information, management certifications, internal controls and other financial reporting for accuracy, fairness and appropriateness;
2. Review and recommend for approval by the Board any significant changes to accounting policies or practices and/or internal control procedures;
3. Monitor the independent audit and recommend for approval by the Board the associated financial statements relating to either Halifax Water or the Pension Plan;
4. Identify and review any significant financial risks to Halifax Water, and report to the Board as appropriate;

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5. Review and monitor the progress of plans developed in response to any internal or external audits, and report to the Board as appropriate;

In fulfilling its role and responsibilities, the Committee may:

6. Investigate any matter relating to Halifax Water financial control processes or internal controls;
7. Seek explanation from Halifax Water management of any significant financial variance between reporting periods; and
8. Consult with stakeholders or experts, upon consultation with and in collaboration with the General Manager.

#### 4. Accountability

The Committee is accountable to the Board.

#### 5. Review

The Committee shall review these Terms of Reference at least once annually and recommend any changes to the Board for approval.

**Appendix IV**  
**Environment, Health and Safety Committee**  
**Terms of Reference**

## Halifax Water Board Environment, Health and Safety Committee Terms of Reference

### 1. Role

The role of the Environment, Health and Safety Committee (Committee) is to monitor compliance with and make recommendations to the Halifax Water Board (Board) on organizational policies, standards and practices relating to the environment, occupational health and safety, and organizational security.

### 2. Composition and Operations

1. This Committee shall consist of at least three Board members.
2. The General Manager and Secretary are non-voting, *ex officio* members of this Committee.
3. The Committee shall elect a Chair from amongst its members.
4. Quorum for meetings shall be two members. Members may attend meetings in person, via telephone or virtually.
5. Halifax Water shall assign an employee as the staff liaison to the Committee, who shall be a non-voting member of the Committee.
6. The Committee shall meet at least four times per year. The Chair, in consultation with the staff-liaison, may cancel a meeting at their discretion.

**Deleted:** and shall be comprised of both public representative Board members and council Board members

**Deleted:** public resident

### 3. Duties and Responsibilities

In fulfilling its role, the Committee shall:

1. Review and monitor compliance with environmental, occupational health and safety and organizational security related regulatory requirements, including sufficiency of resource allocation;
2. Review quarterly and annual environmental, occupational health and safety and organizational security reports;
3. Receive regular updates from the staff liaison and/or management relating to environmental, occupational health and safety and organizational security issues and/or incidents;
4. Review the results of environmental, occupational health and safety and organizational security audits, whether internal or external;
5. Review the organizational Environmental Management System;

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6. Be aware of organizational controls in place to detect environmental, occupational health and safety and organizational security weaknesses;
7. Recommend, where appropriate, internal or external investigation of environmental and/or occupational health and safety issues;
8. Report to and make recommendations to the Board, as appropriate;

In fulfilling its role and responsibilities, the Committee may:

9. Consult with stakeholders or experts, upon consultation with and in collaboration with the General Manager.

### 4. Accountability

The Committee is accountable to the Board.

### 5. Review

The Committee shall review these Terms of Reference at least once annually and recommend any changes to the Board for approval.



**Appendix V**  
**Enterprise Risk Management Committee**  
**Terms of Reference**

**Halifax Water Board  
Enterprise Risk Management Committee  
Terms of Reference**

**1. Role**

The role of the Enterprise Risk Management Committee (Committee) is to assist the Board in fulfilling its oversight responsibilities of Halifax Water's risk management practices, procedures and policies.

**2. Composition and Operations**

1. This Committee shall consist of the chair of the Executive Committee, the chair of the Environmental Health and Safety Committee, and the chair of the Audit and Finance Committee.
2. The Committee shall elect a Chair from amongst its members.
3. The General Manager, Treasurer and Secretary shall be non-voting, *ex officio* members of this Committee.
4. Quorum for meetings shall be two voting members.
5. Members may attend meetings in person, via telephone or virtually.
6. The Committee shall meet at least four times per year. The Chair, in consultation with the General Manager may cancel a meeting at their discretion.
7. Halifax Water shall assign an employee as the staff liaison to the Committee, who shall be a non-voting member and the recording secretary of the Committee.

**Commented [HS4]:** I believe we want CFO on this committee as well. Correct me if I am wrong.

**3. Duties and Responsibilities**

In fulfilling its role, the Committee shall:

1. Provide input to the General Manager regarding and recommend to the Board approval of Halifax Water's risk management policy and plan, including:
  - a. Risk assessment;
  - b. Risk appetite and tolerance;
  - c. Risk matrix;
  - d. Risk management framework;
2. Review Halifax Water's risk management policy and plan at least annually;
3. Regularly monitor Halifax Water's risk profile and exposure to risk, and advise the Board as appropriate;
4. Review and assess the effectiveness of Halifax Water's risk management processes and recommend for approval by the Board any changes, as appropriate;

## Halifax Water Corporate Governance Manual

Approved March 25, 2021

Deleted: September 24, 2020

5. Promote open discussion of risk;

In fulfilling its role, the Committee may:

6. Request further information from the General Manager relating to any risk or potential risk facing Halifax Water;
7. Request input from other Board committees; and
8. Consult with stakeholders or experts, upon consultation with and in collaboration with the General Manager.

#### 4. Accountability

The Committee is accountable to the Board.

#### 5. Review

The Committee shall review these terms of reference at least once annually and recommend any changes to the Board for approval.

## Appendix VI

### Template Board Meeting Business Cycle

Halifax Water Template Board Meeting Business Cycle

	June	September	November	January	March
Business Decisions and Key Information	Audited financial statements Corporate balanced scorecard results Benefit plan renewals or adjustments if required Accountability report Cost containment report Lead service line renewal program report Capital cost contribution program report	Completed capital projects for previous fiscal year Annual report Fall debenture Asset renewal management plan report	Enterprise risk management update (review of risks and risk tolerance) Special Utility and Review Board applications, if required	Annual business plan Annual operating budget Annual capital budget Customer survey results Employee survey results	Corporate balanced scorecard targets Spring debenture Employee survey results General Manager performance evaluation
	Capital approvals Quarterly operating results New policies and amendment of existing policies requiring Board approval				
Pension	Audited pension financial statements Actuarial valuation, if a valuation year			Pension plan budget Assumptions to be used in actuarial valuation, if a valuation year	
	Quarterly pension plan performance Quarterly pension investment performance				
Info Reports	Financial and capital budget updates Bank balance Quarterly compliance statement				

Other Meetings:

AGM	Strategic initiatives Major capital initiatives Year-end financial results	July, or as otherwise scheduled by the Board
Other Meetings	Ratification of collective agreements Special rate or regulatory applications Commissioner training Governance and strategy workshops	As needed in February, April, May, October or December.

**TO:** Craig MacMullin, MBA, CPA, CGA, Chair, and Members of the  
Halifax Regional Water Commission Board

**SUBMITTED BY:** Cathie O'Toole  
Digitally signed by Cathie O'Toole  
Date: 2021.03.19  
11:52:36 -03'00'  
Cathie O'Toole, MBA, FCPA, FCGA, ICD.D, General Manager

**DATE:** March 17, 2020

**SUBJECT:** Corporate Balanced Scorecard - 2021/22 Program

---

**ORIGIN:**

Annual Corporate Performance Measurement.

**RECOMMENDATION:**

The Board approve:

1. Corporate Balanced Scorecard targets for the 2021/22 fiscal year as detailed in the attached Corporate Balanced Scorecard summary.
2. The Organizational Award Program tied to the outcomes of 12 Organizational Indicators as detailed in the attached presentation.

**BACKGROUND:**

Halifax Water has been utilizing a Corporate Balanced Scorecard (CBS) to measure performance since 2001. At that time, the CBS was viewed to be an excellent framework to connect the mission of the utility with the everyday activities of staff. The CBS development was very inclusive in 2001 and followed a process to identify Critical Success Factors (CSFs) in support of the mission, establish Organizational Indicators (OIs) to measure performance and set targets for continuous improvement. In March 2002, the Board approved an organizational award program tied to eight OIs which were the most objective and outward looking. This program was well received by staff and ensured that rewards were linked to strategic outcomes. With the transfer of wastewater/stormwater assets from HRM to Halifax Water on August 1, 2007, a broader mission, vision and CBS were developed to ensure it was inclusive of all services provided by the utility.

**DISCUSSION:**

The mission of Halifax Water is “*to provide world class services to our customers and our environment*”. The statement is simple, recognizes the connection between customers and the environment with the “one-water” mandate, and places the responsibility on employees to make Halifax Water a world class utility.

The vision statement for Halifax Water is:

- *We will provide our customers with high quality water, wastewater, and stormwater services.*
- *Through 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*

The vision statement expanded on the values and principles of a world class utility in fulfilling its mission and captures the medium to long-term aspirations of Halifax Water. With the vision statement developed, staff then selected the critical success factors that support the mission, and through an interactive process, settled on the following:

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

There are OIs established for each CSF to enable performance measurement and establishment of targets. Each year, the OIs are reviewed and refined based on operational objectives and approved budgets.

Changes proposed for 2021/22 OI Targets

1. The Customer Satisfaction target is recommended to increase from 90% to 95%. A customer satisfaction rating of 96% has been achieved in each of the past two years, but maintaining the current level of customer satisfaction will be challenged by stormwater service expansion, a cost of service hearing, and a potential rate application.
2. It is recommended that the target percentage of public health and environmental regulatory infractions be simplified to focus on infractions resulting in a summary offense tickets. It formerly included written Ministerial Orders (Warnings or Directives) or Prosecutions. The rule set and process for summary offense tickets is clearly defined and captures issues which may also result in Ministerial Orders or Prosecutions.
3. It is recommended that the target for 21/22 capital expenditures (% of budget spent by end of fiscal year) be adjusted downward from 80%-90% to 70% -80%. The capital budget expenditures in 20/21 were impacted by the timing of the Cogswell redevelopment and deferral of some integrated projects with the municipality. The final results for 20/21 will not be finalized until the end of the fiscal year. It is recommended that the target for 21/22 be set at a more realistic level given uncertainty of some projects, the on-going pandemic, and some review of what percentage of spend other municipalities or municipal utilities are achieving.

The attached Corporate Balance Scorecard Summary identifies the CSFs and OIs for 2021/22, as well as a projection of actual results for 2020/21. Final results will be available after completion of the 2020/21 fiscal year audit, and will be reported to the Halifax Water Board at the June Board meeting.

Consistent with prior years and the methodology approved by the Halifax Water Board, the most objective OIs have been considered for the organizational award program. Of the 30 OIs detailed in the attachment, 12 are recommended for inclusion in the award program. These 12 OIs are reflective of seven CSFs which are critical to our mission and the most objective and outward looking. The recognition of an organizational award hinges on a minimum score of 7.0 to give a passing grade out of a maximum score of 12.0. Funds for the award program are connected to the operating expense to revenue ratio being below the target for the fiscal year. In this regard, if the operating expense to revenue ratio is met, funds are already embedded in the operational budget. The Operating Expense to Revenue ratio OI has been modified this year to reflect a target that incorporates the equivalent of \$2 million in expense reduction.

The targets for these OIs are meant to be stretch goals, such that the utility is pushing for both efficiency and effectiveness in its service delivery. In many cases, the improvements in efficiency will realize enough savings to pay for the award program itself. The water loss control initiative is a prime example of how the utility has realized gains in efficiency



with financial savings in the order of \$650,000 per year. In keeping with the cost containment theme, water and wastewater service cost per connection measures under Responsible Financial Management have targets to realize 2% savings compared to the approved operations budget. In addition, under the Environmental Stewardship theme, the utility is expected to reduce energy consumption (and therefore greenhouse gas emissions) as a result of capital improvements. The continuation of the organization award tied to the outcomes of the CBS helps promote a high level of performance and will realize future savings for the utility.

### **BUDGET IMPLICATIONS**


Funds for the Award Program are available with the realization of the operating expense to revenue ratio below the target amount. In this regard, funds would be embedded within the 2021/22 Operations Budget. In many cases, meeting the OI targets will realize direct savings to the utility, improved operational effectiveness, and/or improved customer service.

### **ALTERNATIVES**

None recommended.

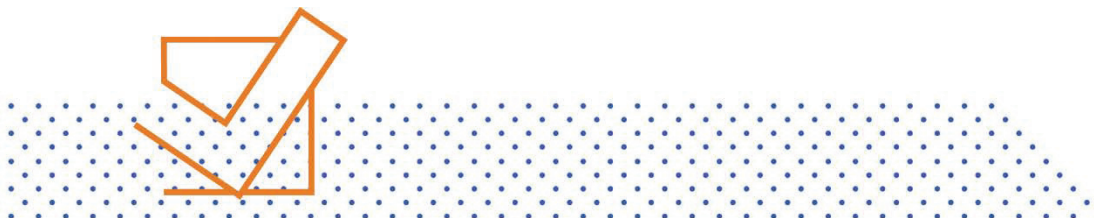
### **ATTACHMENT**

Summary Corporate Balanced Scorecard

Report Prepared by:	<div style="display: flex; justify-content: space-between; align-items: flex-start;"><div style="text-align: center;"><b>Cathie O'Toole</b></div><div style="font-size: small; text-align: right; color: #808080;">Digitally signed by Cathie O'Toole Date: 2021.03.19 11:53:08 -03'00'</div></div> <hr style="border: 0.5px solid black; margin: 5px 0;"/> <div style="text-align: center;"><b>Cathie O'Toole, MBA, FCPA, FCGA, ICD.D, 902-490-4840</b></div>
Financial Reviewed by:	<div style="display: flex; justify-content: space-between; align-items: flex-start;"><div style="text-align: center;"> <b>Allan Campbell</b></div><div style="font-size: small; text-align: right; color: #808080;">Digitally signed by Allan Campbell Date: 2021.03.19 11:30:54 -03'00'</div><div style="text-align: right; color: #808080;"><i>On behalf of</i></div></div> <hr style="border: 0.5px solid black; margin: 5px 0;"/> <div style="text-align: center;"><b>Louis de Montbrun, CPA, CA Director, Corporate Services/CFO Service, 902-490-3685</b></div>

**ITEM 8**  
**Halifax Water Board**  
**March 25, 2021**  
**ATTACHMENT**

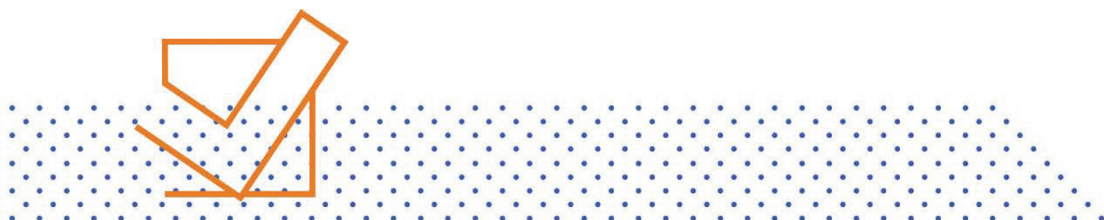
Organizational Indicators	2019/20 Results	2020/21 Target	2020/21 Projected Result	21/22 Target
<b>High Quality Drinking Water</b>				
Adherence with 5 objectives of Water Quality Master Plan for all water systems - Percentage of sites achieving targets	82	80 - 100/100	75	80
Bacteriological tests - Percentage free from Total Coliform	99.9%	99.3%	99.9	99.9
Customer satisfaction about water quality - Percentage from customer survey	87%	85%	84%	85%
<b>Service Excellence</b>				
Customer satisfaction with service - Percentage from customer survey *Note 1	96%	90%	96%	95%*
Water service outages - Number of connection hours/1000 customers *Note 2	133	200	>200*	200
Wastewater service outages – Number of connection hours/1000 customers	1.64	8	0.59	4
Average speed of answer – Percentage of calls answered within 20 seconds.	32%	70%	71%	70%
<b>Responsible Financial Management</b>				
Operating expense/revenue ratio percentage	78%	83.8%	82.2%	82%
Annual cost per customer connection – Water	\$469	\$522	\$518	\$543
Annual cost per customer connection – Wastewater	\$718	\$721	\$715	\$758
<b>Effective Asset Management</b>				
Water leakage control – target leakage allowance of 160 litres/service connection/day *Note 3	176	160-170	190*	160-170
I&I reduction - Number of inspections to identify private property discharge of stormwater into the wastewater system *Note 4	1086	450	1308*	900
Peak flow reduction from wet weather management capital projects *Note 5	Data is not available	34-38 l/sec	70 l/sec*	5-10 l/sec*
Percentage of time GIS and Cityworks are available	99.88%	96-98%	+98%	96-98%
Capital budget expenditures - Percentage of budget spend by end of fiscal year *Note 6	Data is not available	80-90% approved	60-70%	70-80%
<b>Workplace Safety and Security</b>				
Average score on internal safety audits	89%	85-95%	96%	85-95%
NS Labour and Advanced Education compliance - # of Incidents with written compliance orders	0	0-2	0	0-2
Lost time accidents - Number of accidents resulting in lost time per 100 employees	1.6	2.0-3.0	0.79	1.5-2.0
Safe driving - Number of traffic Accidents per 1,000,000 km driven (maximum of 5)	4.2	4	5.5	4



Training - Number of employees trained or re-certified before due date *Note 7	81%	80-90%	59%*	80-90%
Percentage of completed safety talks	81%	80-90%	63%	80-90%
<b>Regulatory Compliance</b>				
Percentage of public health and environmental regulatory infractions resulting in a summary offense ticket *Note 8	0 SOTs	0-2	0	0-2
Percentage of WWTFs complying with NSE approval permits (Project for 20/21 at end of February)	91.2%	95-100%	93%	95-100%
<b>Environmental Stewardship</b>				
Number of ICI properties inspected by Pollution Prevention each year *Note 9	500	440 *recommended target	257	500
Energy management kwh/m3 reduction associated with capital projects	4.67%	3%	+3%	3%
Bio-solids residual handling - % of sludge meeting bio-solids concentration targets	99.2%	92-97%	98.5%	92-97%
<b>Motivated and Satisfied Employees</b>				
Number of arbitrations divided by total number of grievances	0.07	0	0	0
Percentage of jobs filled with internal candidates	65%	80%	75%	80%
Employee satisfaction survey result	B+	A	B+	
Average number of days absenteeism	7.54	<7	5.88	<7

#### Notes:

1. The Customer Satisfaction target is recommended to increase from 90% to 95%. Maintaining the current level of customer satisfaction of 96% will be challenged by stormwater service expansion, a cost-of-service hearing, and a potential rate application.
2. Water service outage hours for 2020/21 are likely going to exceed the target, due to the significant Cobequid Road water main breaks in 2020. Final results will not be known until the end of the fiscal year.
3. Water leakage index for 2020/21 cannot be finalized until the end of the year and is difficult to project. Q1 was impacted by significant additional flushing to maintain water quality in the distribution system in areas where flows were lower than normal due to the impact of COVID-19 on water demand and changed consumption patterns. The COVID-19 related flushing will be removed from the final calculation.
4. I&I reduction target was lowered in 20/21 as it was thought that COVID-19 might impact the number of inspections on private property. This was not the case, and there was a record setting number of inspections of private property discharge of stormwater entering the wastewater system.
5. Peak Flow Reduction 2020-21 Projected Result: The data from WWMP15AB demonstrated a reduction in the range of 70 l/sec (in a significant 6 km portion, of the total 7.4 km lined sections). Data was compromised for 1.4 km of the lined section, therefore that data is not included. 2021-22 New Target: Crescent Ave East 1.5 km Sewershed CIPP Lining – Target 5-10 L/sec peak flow reduction
6. Capital budget expenditures (20/21) capital budget impacted by timing of Cogswell redevelopment and deferral of some integrated projects with the municipality. % spend for 20/21 will not be finalized until the end of the fiscal year. Target for 21/22 adjusted to be more realistic given uncertainty of some projects, the on-going pandemic, and some review of what % of capital budgets other municipalities or municipal utilities are able to deliver.
7. The number of employees trained and re-certified before due date will probably be higher once final year end reporting is complete. Some areas have not yet reported.
8. The target percentage of public health and environmental regulatory infractions has been simplified to focus on infractions resulting in a summary offense ticket. It formerly included written Ministerial Orders (Warnings or Directives) or Prosecutions. The rule set and process for summary offense tickets is clearly defined.
9. The target for ICI properties inspected by Pollution Prevention was lowered in 20/21 as it was thought that COVID-19 might impact the number of inspections.



**TO:** Craig MacMullin, MBA, CPA, CGA, Chair, and Members of the  
Halifax Regional Water Commission Board

**SUBMITTED BY:** **Susheel Arora** Digitally signed by  
Susheel Arora  
Date: 2021.03.18  
15:27:20 -03'00'  
Susheel Arora, M.A.Sc., P.Eng., Director, Wastewater and  
Stormwater Services

**APPROVED:** **Cathie O'Toole** Digitally signed by Cathie  
O'Toole  
Date: 2021.03.18  
15:47:47 -03'00'  
Cathie O'Toole, MBA, FCPA, FCGA, ICD.D, General Manager

**DATE:** March 17, 2021

**SUBJECT:** **Halifax Water Odour Strategy & Service Level**

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### **ORIGIN**

Seasonal odour complaints within the wastewater and combined sewer collection systems.

### **RECOMMENDATION**

It is recommended that the Halifax Water Board endorse Halifax Water's established response and level of service to respond to odour complaints within the wastewater and combined collection systems.

### **BACKGROUND & DISCUSSION**

Developing a level of service related to odour complaints and a strategy to achieve the level of service was one of the strategic objectives in the approved 2020/21 business plan.

Odour issues are ubiquitous in wastewater treatment processes and collection systems. Halifax Water has historical experience and data regarding collection system odours, complaints, and delivering odour control solutions and programs. Halifax Water's effort and level of service have increased progressively over time. Halifax Water's current odour management is a combination of preventative and reactive operational responses to areas that have experienced recurring odour complaints.

**ITEM #9**  
**Halifax Water Board**  
**March 25, 2021**

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Halifax Water has 82,000 wastewater customers, serves a population of approximately 376,000, and receives approximately 150 odour complaints per year. Approximately 50% of the 150 odour complaints are being addressed by internal plumbing maintenance.

When a customer complaint is received, it is triaged based on the details provided on one of two paths, Category A or Category B operational response. The established level of service for reactionary responses to odour complaints for each path is shown in the table below.

Category A (Emergency)				
	Description of Problem	Required Action	Customer communication	Work Timelines
Odour	Odour emanating from a manhole, catchbasin, or other Halifax Water infrastructure	Schedule flushing and/or repairs.	Wastewater and Stormwater Services to contact within 2 hrs. In the event of a repeat caller or a prolonged period of dry hot weather, item will be classified as a Category B issue.	Investigate problem and begin remediation within 4 hrs.
Category B				
Odour	Odour emanating from a manhole, catchbasin, or other Halifax Water infrastructure	Schedule flushing and/or repairs.	Wastewater and Stormwater Services to contact next business day.	Investigate problem within 1 week and initiate repair/maintenance if required within 2 weeks.

*\*Category B is for repeat callers on a similar issue/location within a short period of time.*

Based on initial field investigation, staff can generally determine if any work is required to resolve the complaint and act accordingly.

In addition to the complaint driven response, Halifax Water has regularly scheduled preventative maintenance routines in place for problematic areas to prevent odour complaints.

Further to the above efforts, Halifax Water staff maintain and regularly review the odour complaint log, as these calls are treated as a high priority. If the above measures do not provide a reduction in complaints, or if the issue causing the odour cannot be eliminated or managed with the above measures, a long-term permanent solution may be required. Further mitigative solutions such as liquid phase or vapour phase treatment methods require consideration for funding, design, installation, operation and maintenance before implementation. As a result of a previous consultant study and recommendation, Halifax Water optimized liquid phase chemical dosing at a select location to minimize odours.

An internal review of Halifax Water's management and response to odour complaints within the collection system confirms consistency with industry best practices and a level of service that at a minimum is consistent with other municipalities/utilities that were engaged as part of the review. In particular, Halifax Water's record keeping of odour complaints provides the required basis for understanding and evaluating persistent odour complaints in the future. The Executive Summary of the Halifax Water report is attached.

It is noteworthy that odours are inherently part of operating and maintaining wastewater collection systems, and often due to the complexity, elimination of all isolated odour

complaints is not feasible nor practical, and mitigation is the most realistic solution available to the utility. This report finds the positioning of Halifax Water in its performance of odour control to be positive relative to other municipalities/utilities. Therefore, continuation of current activities, enhanced monitoring and targeted odour mitigation measures are an appropriate response at this time. The extended dry summer periods and low flows may result in a higher number of complaints in the future, if this occurs Halifax Water will be exploring additional capital investments in its systems to mitigate odours.

This report summarizes Halifax Water efforts for odour issues related to Wastewater Collection Systems only. Halifax Water also encounters odour complaints from its Wastewater Treatment Facilities (WWTFs). All large and medium sized WWTFs are equipped with multiple barrier odour control systems which perform to high standard. The complaints have significantly reduced over time due to a combination of operational optimization and capital investments. If there is an odour issue at a WWTF it is generally attributed to a malfunction of mechanical equipment.

### **BUDGET IMPLICATIONS**

Halifax Water currently operates chemical dosing to minimize odours at select locations that experience persistent complaints in the collection system. This average annual cost of approximately \$150,000 is managed operationally. Further chemical and mechanical odour control systems would be scoped and budgeted as individual capital projects as required. There are no other additional budget implications at this time.

### **ATTACHMENT**

Executive Summary, Level of Service – Odour Control Management Report (March 2021)

Report Prepared by:

*Original signed by*

Josh DeYoung, P.Eng., Operations Engineer  
Wastewater & Stormwater Services, 902-830-6540

Financial Reviewed by:



Digitally signed by Allan  
Campbell  
Date: 2021.03.18  
15:37:32 -03'00'

*On behalf of*

Louis de Montbrun, CPA, CA  
Director, Corporate Services/CFO, 902-490-3685

# Halifax Water

## Level of Service & Odour Control Management

## Executive Summary

### Level of Service – Odour Control Management Report

This report provides a synopsis of Halifax Water’s historical and prospective efforts to manage and respond to odour complaints within the wastewater and combined collection systems.

Halifax Water is responsible for operating and maintaining municipal wastewater, stormwater & combined systems from “drains back to the source again”. In this regard, Halifax Water has a mandate to protect the environment while providing essential collection and treatment services to its customers. Inherently in delivering this service, conditions arise that require investigation, research and corrective action to address system operation inefficiencies. While the potential for odours exists within many parts of the wastewater and combined collection systems, the focus of this report is on odours inherent in the collection system and, as such, wastewater treatment facilities (WWTF) are beyond the scope of this report.

Nuisance odours within the collection system are a sensitive but complex issue that present concerns to the public and pose challenges to utility staff. By implementing practicable odour control management, these concerns can be mitigated. Effective odour control management requires cooperation with the community and developing confidence in Halifax Water’s efforts with respect to collection system odour identification and the level of service provided to the public.

Halifax Water has historical experience with collection system odours and delivering odour control efforts at progressively increasing levels of service over time. Halifax Water’s current odour management is a combination of preventative and reactive operational responses to areas that have experienced recurring odour complaints.

Halifax Water received approximately 150 odour complaints per year since formal tracking of odour complaints began with the implementation of Halifax Water’s computerized maintenance management system, Cityworks in December of 2018. Historically, odours originating from inside the building made-up approximately 50% of the complaints received. These were commonly addressed by internal plumbing maintenance and required no further action by Halifax Water.

Based on the details provided in the customer complaints, Halifax Water’s Customer Care Centre triages the complaint on one of two paths, Category A or Category B operational response. The established level of service for reactionary responses to odour complaints for each path is shown in the table below.



Category A (Emergency)				
	Description of Problem	Required Action	Customer communication	Work Timelines
Odour	Odour emanating from a manhole, catchbasin, or other Halifax Water infrastructure	Schedule flushing and/or repairs.	Wastewater and Stormwater Services to contact within 2 hrs. In the event of a repeat caller or a prolonged period of dry hot weather, item will be classified as a Category B issue.	Investigate problem and begin remediation within 4 hrs.
Category B				
Odour	Odour emanating from a manhole, catchbasin, or other Halifax Water infrastructure	Schedule flushing and/or repairs.	Wastewater and Stormwater Services to contact next business day.	Investigate problem within 1 week and initiate repair/maintenance if required within 2 weeks.

*\*Category B is for repeat callers on a similar issue/location within a short period of time.*

Halifax Water staff maintain an odour complaint log (populated from Cityworks data) and review the log on a regular basis to evaluate complaints. Based on initial field investigation, staff can determine if any work is required to resolve the complaint and act accordingly.

In addition to the complaint driven response, an analysis of recurring complaints allows Halifax Water to regularly schedule preventative maintenance routines for problematic areas to prevent odour complaints. Often odour complaints may be received just prior to scheduled maintenance activities, in which case the maintenance can often be fast-tracked when resources are available.

Quick response maintenance activities include but are not limited to:

- Investigation – identify the source (inside or outside the building, vent pipes, catchbasins if it is a combined system, nearby pumping stations, etc.);
- Video (CCTV) inspection of the collection system;
- Clear any blockages in main, repair as required;
- Flush/clean mains or pumping stations with sewer jet/vacuum trucks;
- Jet (higher pressure) mains with sewer jet/vacuum trucks;
- Clean catchbasins/manholes;
- Install carbon filters or deodorant blocks within manholes or catchbasins;
- Meet with the customer depending on nature of complaint;
- Monitor H<sub>2</sub>S gas longer term with portable gas monitors

If the above measures do not provide a reduction in complaints, or if the issue causing the odour cannot be eliminated or managed with the above measures, a long-term permanent solution may be required. Liquid phase and vapour phase treatments are technologies that can assist in reducing the formation of odours, improving health and safety and minimizing the potential for corrosion of the infrastructure. Liquid phase treatment, as the name suggests, includes treatment of the wastewater itself and vapour phase treatment considers treatment of the vapours within the collection system. Further mitigative solutions such as liquid phase or vapour phase treatment methods require consideration for funding, design, installation, operation and maintenance before implementation.

As a result of a previous consultant study and recommendation, Halifax Water optimized chemical dosing to minimize odours at select locations that experience persistent complaints in the collection system. This average annual cost of approximately \$150,000.00 is managed operationally.

A review and benchmarking exercise has determined that Halifax Water's management and response to odour complaints within the collection system is consistent with industry best practices and a level of service that at a minimum is consistent with other municipalities/utilities in Canada that were engaged as part of this report. In particular Halifax Water's record keeping of odour complaints provides the basis for understanding and evaluating persistent odour complaints in the future.

It is noteworthy that odours are inherently part of operating and maintaining wastewater collection systems, and often due to the complexity, elimination of all isolated odour complaints is not feasible nor practical, and mitigation is the most realistic solution available to the utility. Due to the nature of wastewater systems, odours are experienced by most if not all municipalities/utilities with collection systems with high sewage residence times in the pipes.

This report finds the positioning of Halifax Water positive with respect to other municipalities/utilities.

In summary, Halifax Water is in a respectable position with regard to receiving and responding to odour complaints and overall odour management. To ensure odour concerns in the collection system remain a high priority, recommendations on a few specific areas for improvement are identified below.

Based on the review of current practices, recommendations discussed include but are not limited to:

- Continue monitoring odours within the collections system based on odour complaints, with an eye for improved monitoring technologies available.
- Document regularly scheduled odour related maintenance across the service area to identify potential efficiencies in work plans.
- Explore the opportunity to add more odour related assets to Halifax Water's computerized maintenance management system (CMMS) Cityworks to more effectively track installations and maintenance over time.
- Continue to share information between three operational regions within Halifax Water and seek input from in-house staff with expertise.
- Add educational information to Halifax Water's website and establish public outreach through social media regarding general collection system odour and inform the public on the importance of reporting odour concerns through Halifax Water's Customer Care Centre.
- Work with Customer Care Centre to further develop scripts to improve the data collected from an odour complaint call.
- Reassess existing level of service by end of 2025 (Five-year return period).

This report also identifies the fact that the assessment has limitations. Some limitations include: a focus solely on collection system odour complaints as Wastewater Treatment Facilities (WWTFs) have engineered odour management systems installed as part of the infrastructure, external municipality/utility input was limited to those responding as part of this report, and the odour complaint records only date back to Halifax Water's implementation of managing odour complaints through the current CMMS, Cityworks in 2018.

**TO:** Craig MacMullin, MBA, CPA, CGA, Chair, and Members of the Halifax Regional Water Commission Board

**SUBMITTED BY:** Louis de Montbrun Digitally signed by Louis de Montbrun  
Date: 2021.03.17  
14:32:31 -03'00'  
Louis de Montbrun, CPA, CA, Director, Corporate Services/CFO

 Digitally signed by Reid Campbell  
Date: 2021.03.17  
16:20:12 -03'00'  
Reid Campbell, P.Eng. Director, Water Services

Susheel Arora Digitally signed by Susheel Arora  
Date: 2021.03.17  
13:53:08 -03'00'  
Susheel Arora, M.A.Sc., P.Eng. Director, Wastewater & Stormwater Services

Kenda MacKenzie Digitally signed by Kenda MacKenzie  
Date: 2021.03.17  
13:59:42 -03'00'  
Kenda MacKenzie, P.Eng. Director, Regulatory Services

**APPROVED:** Cathie O'Toole Digitally signed by Cathie O'Toole  
Date: 2021.03.17  
15:11:21 -03'00'  
Cathie O'Toole, MBA, CPA, CGA, ICD.D, General Manager

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

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### **INFORMATION REPORT**

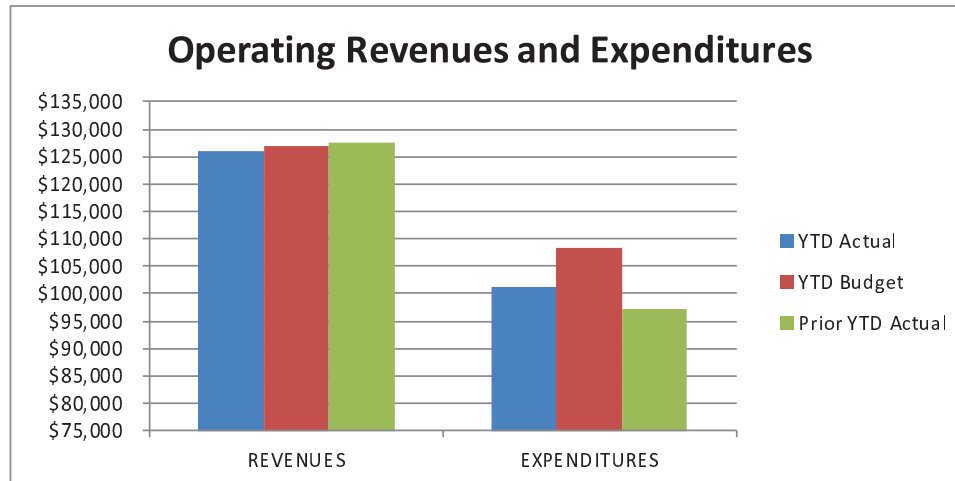
**ORIGIN:**

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.

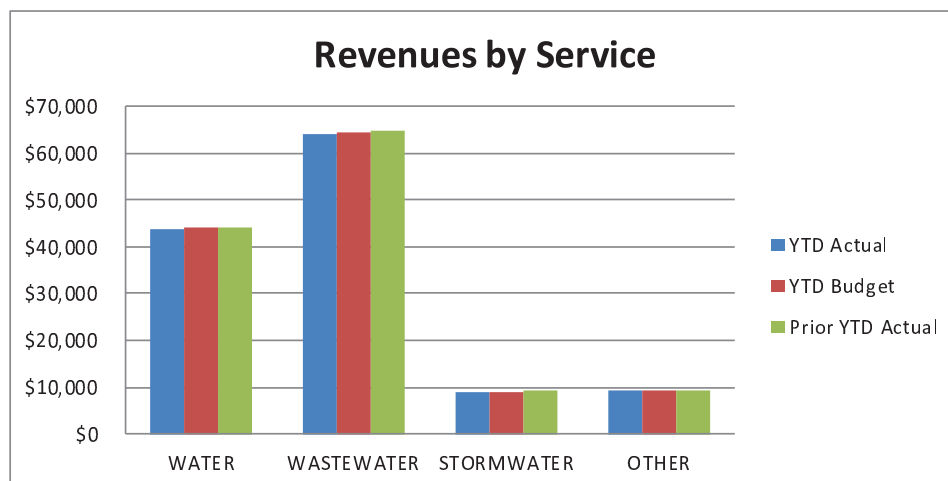
**FINANCIAL**

**HALIFAX WATER**  
**UNAUDITED FINANCIAL INFORMATION**  
**APRIL 1, 2020 - FEBRUARY 28, 2021 (11 MONTHS)**  
**'000**



**OPERATING REVENUES AND EXPENDITURES**

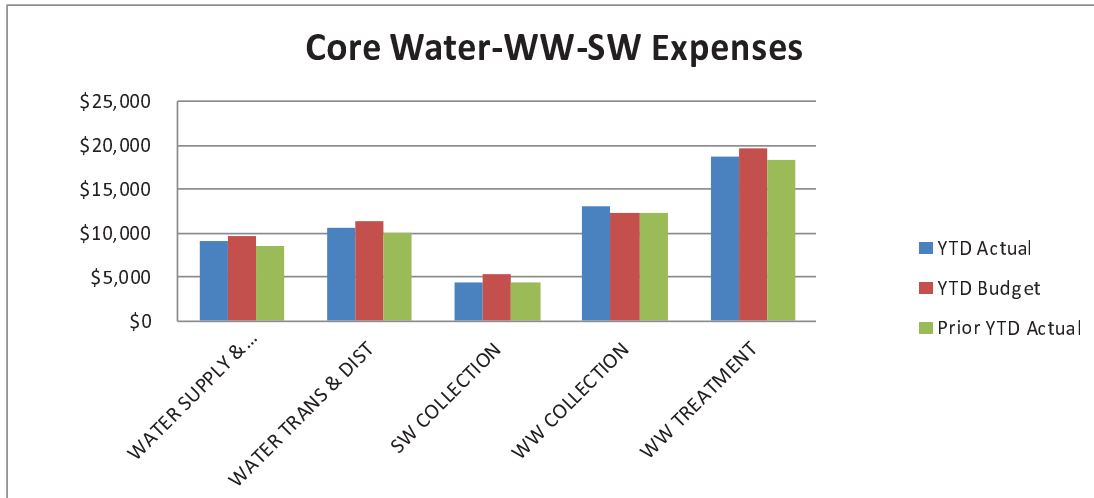
	YTD Actual	YTD Budget	Prior YTD Actual	% of Budget
REVENUES	\$126,086	\$127,068	\$127,428	90.96%
EXPENDITURES	\$101,215	\$108,273	\$97,294	85.69%
	<b>\$24,871</b>	<b>\$18,795</b>	<b>\$30,134</b>	<b>121.30%</b>



**REVENUES BY SERVICE (METERED SALES AND SITE GENERATED CHARGE)**

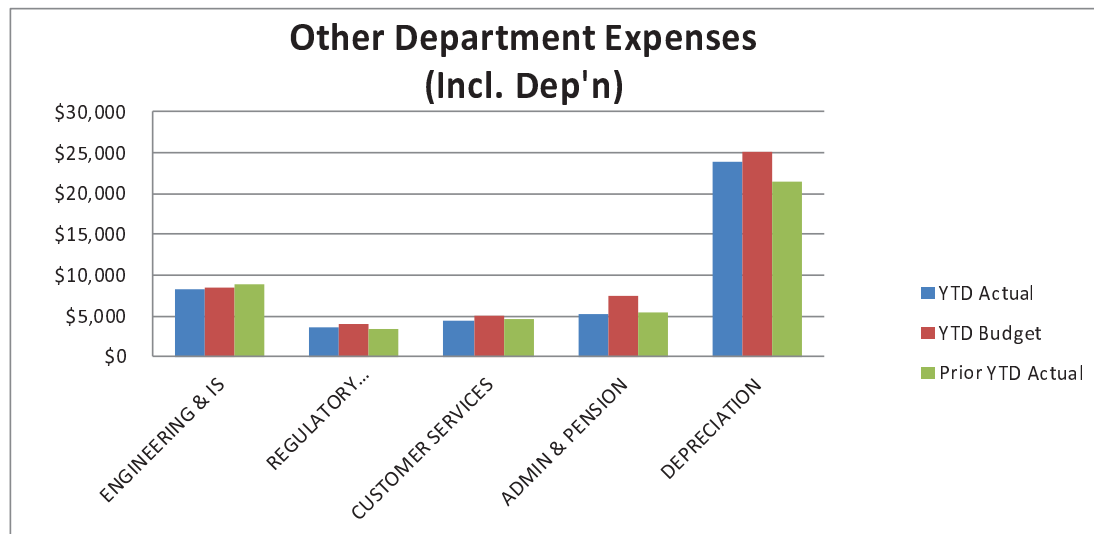
	YTD Actual	YTD Budget	Prior YTD Actual	% of Budget
WATER	\$43,717	\$44,078	\$44,050	90.92%
WASTEWATER	\$63,958	\$64,503	\$64,820	90.89%
STORMWATER	\$9,080	\$9,059	\$9,145	91.88%
OTHER	\$9,331	\$9,428	\$9,413	90.72%
	<b>\$126,086</b>	<b>\$127,068</b>	<b>\$127,428</b>	<b>90.96%</b>

**HALIFAX WATER**  
**UNAUDITED FINANCIAL INFORMATION**  
**APRIL 1, 2020 - FEBRUARY 28, 2021 (11 MONTHS)**  
**'000**



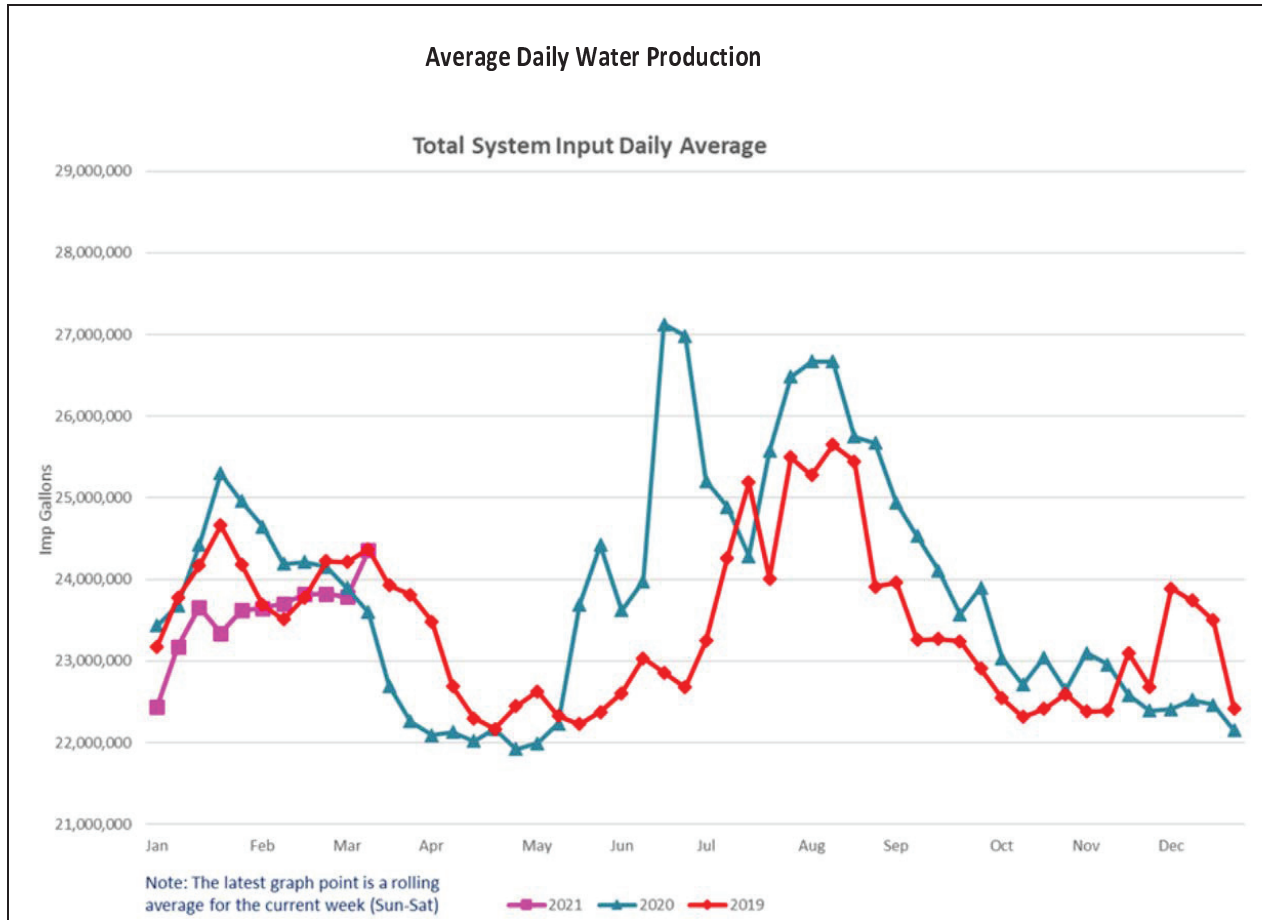
**CORE WATER-WW-SW EXPENDITURES**

	YTD Actual	YTD Budget	Prior YTD Actual	% of Budget
WATER SUPPLY & TRTMT	\$9,100	\$9,708	\$8,531	85.93%
WATER TRANS & DIST	\$10,546	\$11,285	\$9,989	85.66%
SW COLLECTION	\$4,434	\$5,336	\$4,387	76.17%
WW COLLECTION	\$12,962	\$12,375	\$12,289	96.02%
WW TREATMENT	\$18,624	\$19,629	\$18,339	86.98%
	<b>\$55,666</b>	<b>\$58,333</b>	<b>\$53,535</b>	<b>87.48%</b>



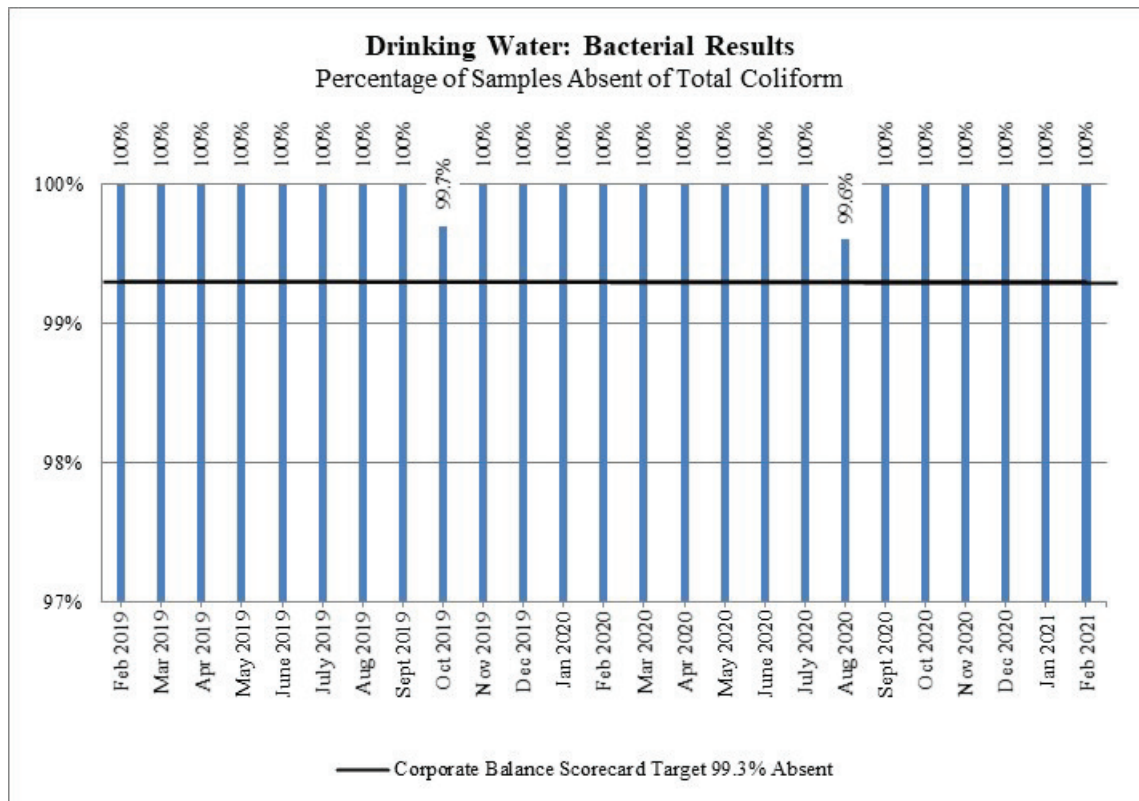
**OTHER DEPARTMENT EXPENSES (INCL DEP'N)**

	YTD Actual	YTD Budget	Prior YTD Actual	% of Budget
ENGINEERING & IS	\$8,337	\$8,437	\$8,819	90.58%
REGULATORY SERVICES	\$3,582	\$3,996	\$3,441	82.17%
CUSTOMER SERVICES	\$4,460	\$4,962	\$4,675	82.39%
ADMIN & PENSION	\$5,174	\$7,399	\$5,371	64.11%
DEPRECIATION	\$23,996	\$25,145	\$21,453	87.48%
	<b>\$45,549</b>	<b>\$49,939</b>	<b>\$43,759</b>	<b>83.61%</b>



Regional Water Main Break/Leak Data		
Year	Total Breaks/Leaks	Current 12 Month Rolling Total (up to February 28, 2021)
2019/20	191	171
2018/19	226	
2017/18	206	
2016/17	216	
2015/16	226	
<b>Total</b>	<b>1071</b>	
<b>Yr. Avg.</b>	<b>214.2</b>	

Water Accountability
Losses per Service Connection/Day (International Water Association Standard)
<i>Period Ending December 31, 2020</i>
Real Losses: 196 litres
CBS Target: 160



Water Quality Master Plan Objectives`				
2020-2021 Q3				
Objective	Total Sites	% Sites Achieving Target	All Sites: 90th Percentile < 15 µg/L	CBSC Awarded Points
Disinfection	63	97%	---	17
Total Trihalomethanes	25	72%	---	0
Haloacetic Acids	21	100%	---	20
Particle Removal	5	98%	---	18
Corrosion Control	105	---	4.28	20
Summary Total				75

Score: 75/100



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																	
	Rolling Averages - December 2020, January and February 2021																	
	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)		Toxicity	Trend
NSE Limit	Avg.	NSE Limit	Avg.	NSE Limit	Avg.	NSE Limit	Avg.	NSE Limit	Avg.	NSE Limit	Avg.	NSE Limit	Avg.	NSE Limit	Avg.			
Halifax	50	39	40	29	5000	0	6-9	6.9	-	-	-	-	-	-	-	Not acutely lethal	Continued	
Dartmouth	50	47	40	42	5000	0	6-9	6.7	-	-	-	-	-	-	-	Not acutely lethal	Improved	
Herring Cove	50	25	40	19	5000	0	6-9	6.9	-	-	-	-	-	-	-	Not acutely lethal	Continued	
Eastern Passage	25	10	25	11	200	0	6-9	6.9	-	-	-	-	-	-	-	Not acutely lethal	Continued	
Mill Cove	25	16	25	17	200	18	6-9	6.6	-	-	-	-	-	-	-	Not acutely lethal	Continued	
Springfield	20	5	20	5	200	14	6-9	6.9	-	-	-	-	-	-	-	-	Continued	
Frame	20	5	20	2	200	10	6-9	7.1	-	-	-	-	-	-	-	-	Continued	
Middle Musq.	20	5	20	6	200	38	6-9	7.2	-	-	-	-	-	-	-	-	Continued	
Uplands	20	6	20	6	200	19	6-9	6.8	-	-	-	-	-	-	-	-	Continued	
Aerotech	5	2	5	1	200	10	6-9	7.2	5.7 W 1.2 S	0.9	0.13	0.06	-	6.5	11.1	Not acutely lethal	Continued	
North Preston	10	9	10	29	200	10	6-9	6.7	3	0.2	1.5	1.0	-	-	-	-	Declined	
Lockview	20	5	20	11	200	10	6.5-9	6.9	8.0 S	1.7	1.2 S	0.3	-	-	-	-	Improved	
Steeves (Wellington)	20	5	20	1	200	10	6.5-9	6.8	14.4 S	5.6	1.0 S	0.1	-	-	-	-	Continued	
BLT	15	6	20	20	200	11	6-9	6.9	5 W 3 S	1	3 W 1 S	1	0.02 *	0.10	-	Not acutely lethal	Improved	
Avg. of all Facilities	13		14		11		6.9		2.0		0.6		0.10		11.1			

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)

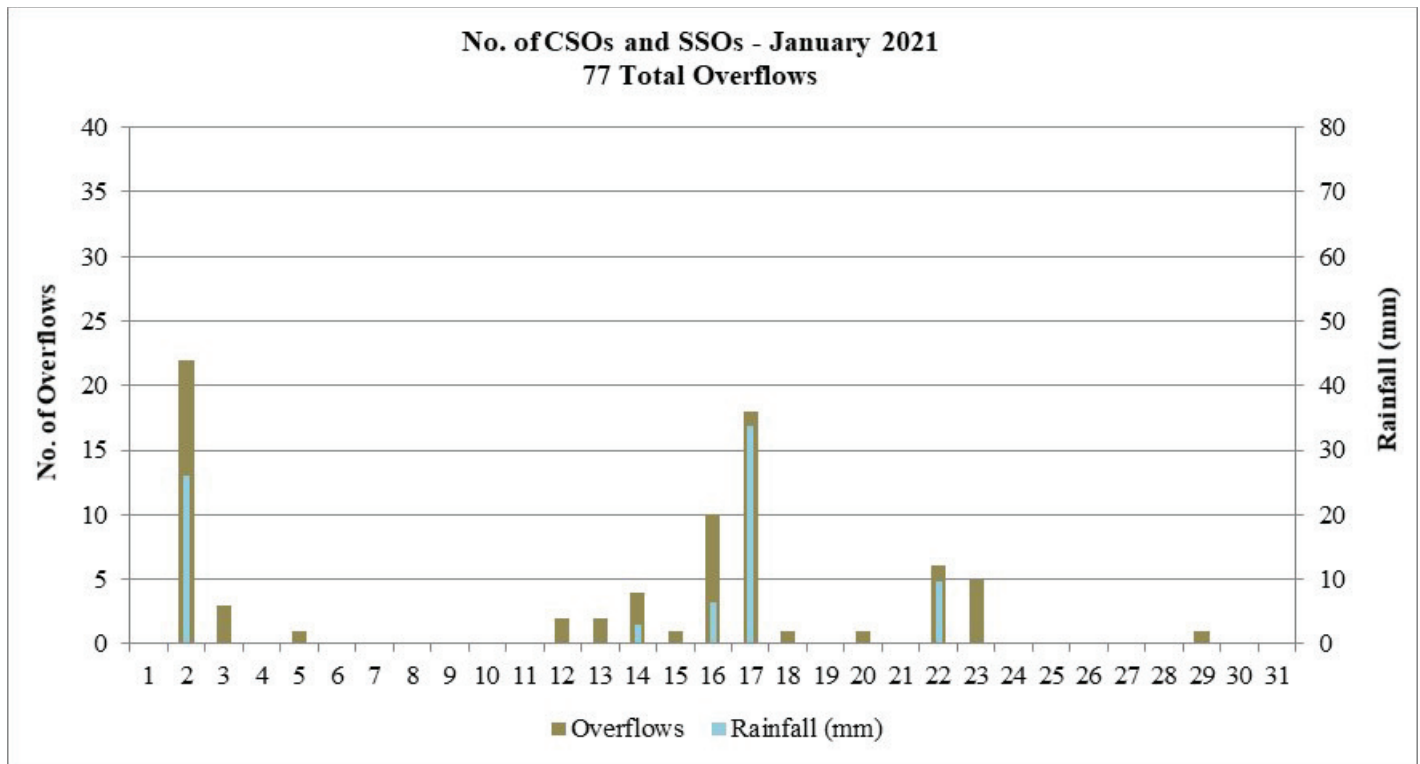
Continued - All parameters remain essentially unchanged since the last report

Improved - One or more parameter(s) became compliant since the last report

Declined - One or more parameter(s) became non-compliant since the last report

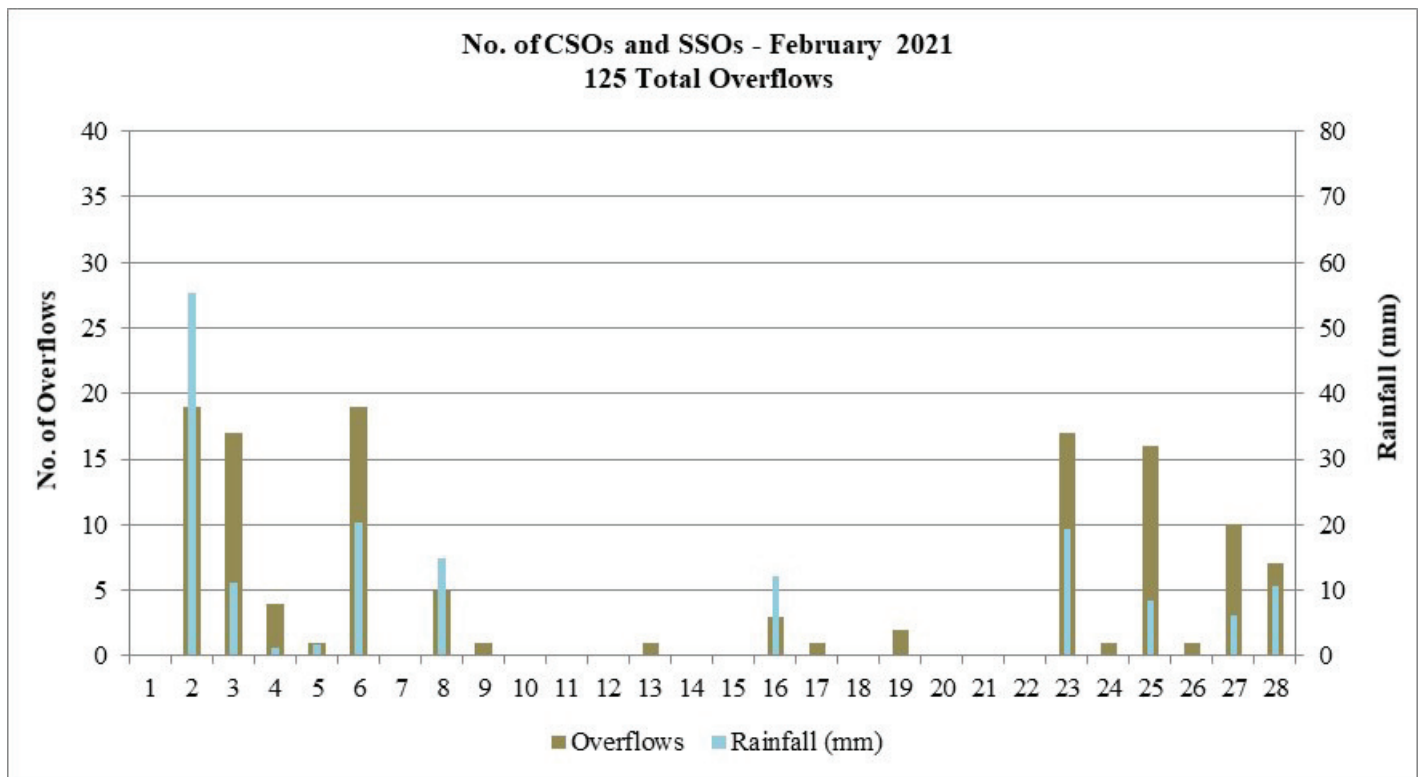
LEGEND

	NSE Compliant
	NSE Non-Compliant



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

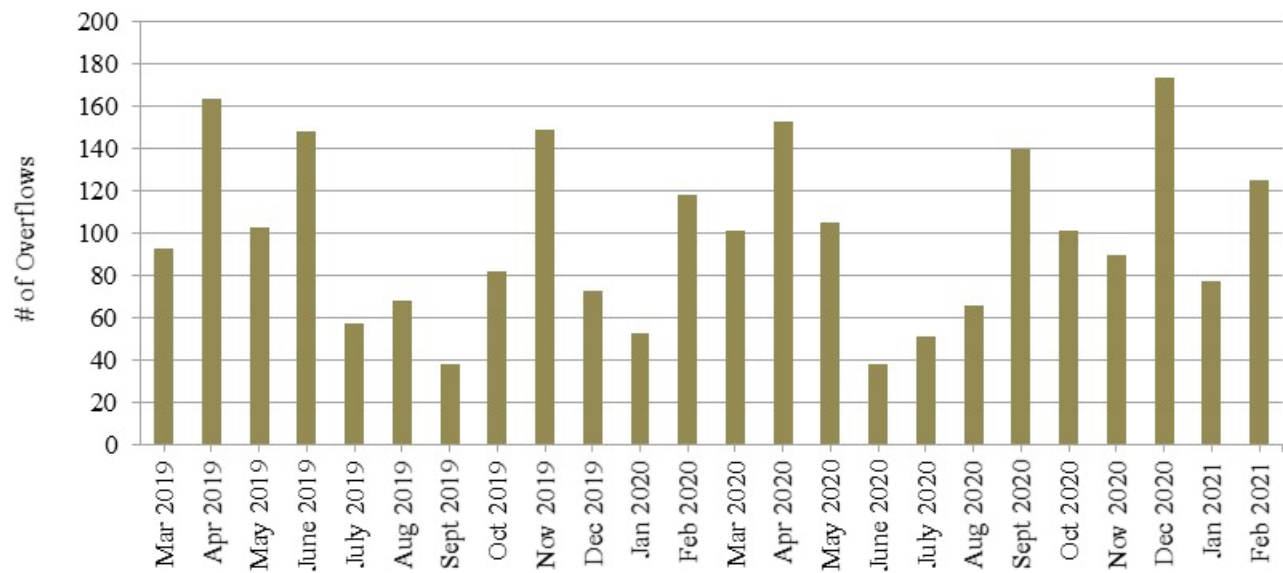
- Rainfall data is from Halifax Water's rain gauge at the Halifax WWTF.
- There were nine overflows on days when there was no recorded rainfall, as follows:
  1. January 5: The CSO at Duffus St PS was due to a pump restriction from the Halifax WWTF.
  2. January 12 and 13: The CSOs at Sackville St CSO were due to blockages caused by debris.
  3. January 15: The CSO at King St PS & CSO was due to emergency repairs.
  4. January 18: The CSO at Old Ferry Rd PS & CSO was due to reduced flow capacity at the Dartmouth WWTF to accommodate scheduled maintenance and upgrades.
  5. January 20: The CSO at Duffus St PS was due to a pump restriction from the Halifax WWTF.
  6. January 29: The CSO at Maitland St PS & CSO was due to 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 seven overflows on days when there was no recorded rainfall, as follows:
  1. February 9: The CSO at Maitland St PS & CSO was due to a blockage caused by debris.
  2. February 13 The CSO at Grove St CSO was due to a blockage caused by debris.
  3. February 17: The CSO at Chain Rock PS & CSO was due to a blockage caused by debris.
  4. February 19: The CSOs at Melva St PS & CSO and Lyle St CSO were due to reduced flow capacity at the Dartmouth WWTF to accommodate scheduled maintenance and upgrades.
  5. February 24: The SSO at the Mill Cove Surge Tank was due to rain on the previous day.
  6. February 26: The SSO at the Mill Cove Surge Tank was due to rain on the previous day.

**No. of CSOs and SSOs - Trend Chart**  
March 2019 to February 2021



**TO:** Craig MacMullin, MBA, CPA, CGA, Chair, and Members of the  
Halifax Regional Water Commission Board

**SUBMITTED BY:** Jamie Hannam Digitally signed by Jamie  
Hannam  
Date: 2021.03.18  
14:13:43 -03'00'  
Jamie Hannam, P.Eng. Director, Engineering & IS

**APPROVED:** Cathie O'Toole Digitally signed by Cathie  
O'Toole  
Date: 2021.03.18  
11:50:43 -03'00'  
Cathie O'Toole, MBA, FCPA, FCGA, ICD.D, General Manager

**DATE:** March 17, 2021

**SUBJECT:** **Lake Major Water Supply Plant (WSP) – Clarifier Component  
Replacement Project – Phase II**

---

### **INFORMATION REPORT**

#### **ORIGIN**

The Halifax Water 2020/21 Capital Budget.

#### **BACKGROUND**

Halifax Water is planning to rehabilitate various treatment components at the Lake Major WSP based on the recommendations of the *Lake Major Water Supply Plant Process Optimization Study* (the Study) that was completed in 2016. The scope of the proposed rehabilitation includes filters, pumping station, clarifiers, pre-oxidation, new mixers, and related equipment. The sequence of this multi-year rehabilitation program has recently been reviewed and agreed upon at the steering committee level and is part of the overall Water Supply Enhancement Program (WSEP).

The Lake Major WSP is equipped with a dual train (two clarifiers with two cells per clarifier) *Degremont Ultrapulsator* clarifier that promotes flocculation after chemical mixing and prior to the water entering the filters. Each clarifier unit consists of a plate settler system on the bottom and a tube settler system on top. The Study determined that the tubes are no longer performing effectively. There have been various operational challenges that have been brought on by the deterioration of these clarifiers. Additionally, these tubes have sagged, and the Study noted concerns regarding the structural integrity of the tubes and supports. As such, the replacement of the deteriorating clarifier components has become an urgent requirement due to the risk of failure at any point in time.

The WSEP program schedule identifies the replacement of the clarifiers as a critical early component. Even with a prioritized near-term start, the final completion and commissioning of the new clarifier system will be well into 2026. Given the critical near failure condition of the current clarifiers it is recommended to undertake a full like-for-like replacement of the existing clarifier components to extend their service life to 2026 and mitigate the critical risk of a clarifier failure.

The urgent nature of this work was envisioned in 2019, and \$285,000 was approved (out of 2018/19 budget year) in February 2019 to purchase the clarifier parts and have them on site in case of a failure as these parts carry a significant lead time in manufacturing. The clarifier replacement project has matured since then and Halifax Water currently has one cell (half of a clarifier) worth of parts on site. A price to carry out the replacement of this cell has been obtained through a public procurement process. The price to replace one cell of clarifier equipment is approximately \$100,000.

### **DISCUSSION**

In planning the execution strategy for this project and after having further discussion with various stakeholders, it was identified that it would be best to have all equipment on hand (for all four cells) and continue with the rehabilitation process one cell at a time once the rehabilitation begins in order to avoid significant schedule delays. Additionally, since the equipment has a very long lead time, it is best to have it all on site and ready to be installed at the start of the process.

As outlined above, one cell worth of equipment is on hand. The second cell's equipment is on order. Funding for the supply and rehabilitation of these first two cells was approved on Oct 28, 2020.

The estimated total cost to replace the second full clarifier (2 cells) is detailed in the table below:

## ITEM # 2-I

HRWC Board

March 25, 2021

Item	Total Cost
Design/Engineering and onsite inspection	\$ 65,000
Equipment Cost	\$ 366,000
Construction Cost (including equipment)	\$ 200,000
Contingency (15%)	\$ 94,650
Sub-total	\$ 725,650
net HST	\$ 31,101
Sub Total	\$ 756,751
Int. and Overhead	\$ 7,568
Total Project Cost Estimate =	\$ 764,319
Total Project Cost Estimate (Rounded) =	\$ 765,000

Based on this estimate and the previous approvals, the total estimated project cost for the clarifier component replacement project is \$1,530,000. The completion of this project will provide five years of secure clarifier operation as the \$38M new clarifier and pre-treatment system is designed, constructed, and commissioned.

The clarifier replacement project is complex and poses some operational and therefore customer, reputational, and regulatory risks. A multi-functional, cross departmental team is engaged in the planning for the project to ensure continuity of service to customers and adherence to water quality objectives.

A risk analysis has been conducted, and risk mitigation activities will be taken in alignment with the risk appetite and tolerances that have been established through Enterprise Risk Management Framework, and Halifax Water's Risk Policy.

Planning to undertake this work has been ongoing for approximately 2 years. Continuity of services to customers served by Lake Major will depend on employing a number of back-up systems, including sending water from the Pockwock system across the Macdonald bridge and use of the Lyle Street booster pumping station which is used to help push water from the bridge line into the Dartmouth system.

The original plan was to conduct each of the four clarifier cell replacements in two 60-hour shutdowns of the plant for a total of 8 shutdowns. Because any use of backup systems and changing flow patterns in the distribution system can risk discolored water, the project team determined that the overall preferred approach would be to complete all four clarifier cell replacements in one extended shut down lasting approximately four weeks. The following activities have taken place or will take place to mitigate the risk of the shut-down:

- Several key components of the Lyle Street booster station have been replaced including the pump motor, variable speed drive and control valving.
- In the coming weeks, several staged testing cycles of the Lyle Street Booster station will be conducted.

- In the Fall of 2020, a 60-hour simulation was conducted of the Lake Major plant operating at reduced capacity to calibrate a hydraulic model of system performance with one clarifier out of service.
- Prior to conducting the shutdown, the areas of the Dartmouth system will be flushed to minimize the opportunity for discolored water. This will be followed with several staged simulations to determine how the system will perform from a water quality perspective.
- A portable stand by generator will be rented to support the Lyle Street station for the duration of the shutdown.
- Staff have developed an application to allow customer water quality complaints to be served to system managers on a map to better direct mitigative flushing measures in the event of discolored water.
- The shutdown is tentatively scheduled for May. This allows time for preparatory testing and flushing to take place in the absence of freezing temperatures and also for the work to be completed prior to the complicating summertime factors such as high demand or algal activity. If the work cannot be completed in May, it will be scheduled in a similar Fall period.
- A detailed customer communications plan will be developed.
- We have begun outreach to Nova Scotia Environment to ensure they agree with our operational plan.
- We have sought the cooperation of several large customers in the Lake Major system who can put large demands on the system and in the case of CFB Shearwater, use their system storage strategically.

### **BUDGET IMPLICATIONS**

The additional funding, in the amount of \$765,000, is available within the 2020/21 Capital Budget under Lake Major WSP – Phase 1 – Temporary Side Stream. This project is not proceeding, therefore, the current request of \$765,000 can be reallocated from this project.

The funding has been approved by the General Manager and is subject to review and approval by the NSUARB. This Information Report is provided to the Halifax Water Board to inform of the importance of the project and the criticality to the continued delivery of high-quality water to our customers.

The proposed expenditure meets the “NO REGRETS- UNAVOIDABLE NEEDS” approach of the 2012 Integrated Resource Plan. The proposed work meets the NR-UN criteria of “Firm regulatory requirement”, “Required to ensure infrastructure system integrity and safety. The project meets these criteria based on the following: The current equipment is failing due to age and end of life (Asset Management), causing treatment



performance/operational issues (Infrastructure System Integrity), and/or regulatory compliance failures (Firm Regulatory Requirement).

**ATTACHMENTS**

***1. Lake Major Water Supply Plant Process Optimization Study (CBCL 2015)***

Report Prepared by: *Original signed by*

---

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



450 Cowie Hill Road  
P.O. Box 8388 RPO CSC  
1 Halifax, Nova Scotia  
Canada B3K 5M

## ITEM # 2-I

Halifax Water  
Board

March 25, 2021

ATTACHMENT 1

**TO:** Cathie O'Toole, MBA, FCPA, FCGA, ICD.D  
General Manager

**SUBMITTED BY:**

*Original signed by*

Jamie Hannam, P. Eng.  
Director, Engineering & Information Services

**DATE:** Oct 9, 2020

**SUBJECT:** Lake Major Water Supply Plant (WSP) Clarifier Component Replacement

---

### ORIGIN

The proposed Halifax Water 2018/19 Capital Budget.

### RECOMMENDATION

The General Manager approve funding in the amount of \$480,000 for the Lake Major WSP - Clarifier Component Replacement project for a revised total project cost of \$765,000.

### BACKGROUND & DISCUSSION

Halifax Water is planning to upgrade various treatment components at the Lake Major WSP. The scope of the proposed upgrades includes filters, pumping station, clarifiers, pre-oxidation, new mixers, and related equipment. The sequence of this multi-year upgrade program is currently being reviewed and is in the planning phase.

The Lake Major WSP is equipped with a dual train Degremont Ultrapulsator clarifier that promotes flocculation after chemical mixing and prior to the water entering the filters. Each clarifier unit consists of a plate settler system on the bottom and a tube settler system on top. The 2016 Optimization Study determined that the tubes are no longer performing effectively. There have been various operational challenges that have been brought on by the deterioration of these



**STRAIGHT from  
the SOURCE**

clarifiers. Additionally, these tubes have sagged, and the study noted concerns regarding the structural integrity of the tubes and supports. As such, the replacement of the deteriorating clarifier components could become an urgent requirement at any point in time. It is recommended that this work occur as soon as possible.

This urgent nature of this work was envisioned last year, where \$285,000 was approved from the 2018/19 capital (in February 2019) to purchase the clarifier parts and have them on site in case of a failure as these parts carry a significant lead time in manufacturing. Halifax Water currently has enough replacement parts on hand to replace one cell (half of one clarifier). The price to engage a contractor to replace the parts/components in one cell of clarifier is approx. \$100,000. This estimate is based on a recently completed public procurement process and is currently pending award.

Based on the risk of the failure to the clarifiers, it is recommended to proceed in a staged approach to replace the two cells in each of the two clarifiers (total of four cells). Based on current quotes and estimates, the overall budget to replace one full clarifier (ie. two cells) is detailed in the table below:

Item	Total Cost
Design/Engineering and onsite inspection	\$ 65,000
Equipment Cost	\$ 366,000
Construction Cost (including equipment)	\$ 200,000
Contingency (15%)	\$ 94,650
Sub-total	\$ 725,650
net HST	\$ 31,101
Sub Total	\$ 756,751
Int. and Overhead	\$ 7,568
Total Project Cost Estimate =	\$ 764,319
Total Project Cost Estimate (Rounded) =	\$ 765,000

Currently, Halifax Water has sufficient funding to engage the contractor to start work on the higher priority cell of the clarifier. This report is requesting the remaining funding to complete the recommended component replacements in the other half of the clarifier.

Based on the successful completion of the work, and subject to funding approval, it is staff's recommendation to continue with component replacements for the second clarifier in the next fiscal year.

### **BUDGET IMPLICATIONS**

Funding in the amount of \$480,000 is available as follows:

\$285,000 is available within the 2019/20 Capital Budget under Lake Major WSP – Clarifier Repair.

\$75,000 is available from the existing LM WSP CLARIFIER UPGRADES project (CWO# 3-2701) as this planned work is incorporated into a larger future project, and \$120,000 is available from the existing LM WSP-REPL LIME FEED & DELIVERY SYS project (CWO# 3-2947) as this project will not be proceeding at this time.

The proposed expenditure meets the “NO REGRETS- UNAVOIDABLE NEEDS” approach of the 2012 Integrated Resource Plan. The proposed work meets the NR-UN criteria of “Firm regulatory requirement”, “Required to ensure infrastructure system integrity and safety. The project meets these criteria based on the following: The current equipment is failing due to age and end of life (Asset Management), causing treatment performance/operational issues (Infrastructure System Integrity), and/or regulatory compliance failures (Firm Regulatory Requirement).

#### **ATTACHMENTS**

1. Supplier Quote
2. Proposal from TISI to replace the equipment

*Original signed by*

Approval:

\_\_\_\_\_  
Cathie O’Toole, MBA, FCPA, FCGA, ICD.D.  
General Manager

October 28, 2020

Date:

Report Prepared By:

*Original signed by*


\_\_\_\_\_  
Tom Gorman, Manager, Water Infrastructure,  
902-490-4716

Financial Approved By:

*Original signed by*

\_\_\_\_\_  
Louis de Montbrun, CPA, CA  
Director, Corporate Services/CFO

**PTO:** Craig MacMullin, MBA, CPA, CGA, Chair, and Members of the  
Halifax Regional Water Commission Board as Trustees of the  
Halifax Water Employees' Pension Plan

**SUBMITTED BY:**  Digitally signed by Allan  
Campbell  
Date: 2021.03.18  
10:50:03 -03'00' *on behalf of*

---

**APPROVED:** Cathie  
O'Toole Digitally signed by Cathie  
O'Toole  
Date: 2021.03.18  
11:58:04 -03'00'

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Cathie O'Toole, MBA, CPA, CGA, ICD.D  
General Manager

**DATE:** March 17, 2021

**SUBJECT:** **Halifax Regional Water Commission Employees' Pension Plan  
Financial Report Fourth (4th) Quarter, 2020**

---

### **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 the Fourth Quarter (January 1 to December 31, 2020). Favourable or unfavourable variances reported compare actual results to annual budget amounts, for the twelve (12) month period in 2020. Yearend audited results for 2018 and 2019 are shown for comparative purposes.

As shown on the statement of changes in net assets available for benefits, net assets available for benefits have increased by \$12.2 million for the twelve (12) month period ending December 31, 2020. The annual budget for 2020 forecasted an increase in net assets available of \$6.8 million. Actual results for the period of \$12.2 million compared to the budget of \$6.8 million result in a favourable variance in the amount of \$5.3 million.

The annual budget forecasted revenue of \$6.0 million. Revenue for the period totaled \$11.1 million, which when compared to the budget of \$6.0 million results in a favourable variance of \$5.1 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 actual increase in the fair value of the investment assets being higher than expected. The increase for the period totaled \$7.5 million compared to the budget of \$3.0 million, a difference of \$4.5 million or 151%. Investment income for the period performed above expectations, showing a favorable variance of \$0.5 million or 16%.

Contributions of \$6.4 million are on budget for the year with a slight underage of less than 0.5% or \$22.5 thousand.

Expenses of \$5.4 million for the year are lower than the annual budget of \$5.6 million resulting in a favourable variance of \$0.2 million or (4%). The main contributors to this favourable variance are termination payments and benefit payments both of which are lower than the originally budgeted amounts. The remainder is related to administrative expenses.

### **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 for the 4<sup>th</sup> Quarter (October 1 to December 31<sup>st</sup>, 2020) 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 results outlined for the 4<sup>th</sup> Quarter as reported in Appendix D show, out of 6 requests, 5 were delivered, by the actuary, within the standard days proposed under the threshold limits. Response time of the actuary continues to improve compared to prior reports showing an average of 7.2 days for Termination Estimates compared to the standard of 11 days. There were no retirement requests in the 4<sup>th</sup> Quarter of 2020 to review for this purpose.

Response time of administrative staff varies and shows 6 termination requests were past the standard number of days initially proposed. This is an anomaly as staff responsible for these requests were in the process of returning to regular duties after being seconded to the VIP Payroll Project for the past 18 months.

**ATTACHMENTS**

APPENDIX A – Financial Report:

*Statement of changes in net assets available for benefits, for the twelve (12) month period ended December 31, 2020.*

APPENDIX B – Regulatory Filing Requirements – 2020

APPENDIX C – Administrative Reporting Requirements – 2020

APPENDIX D – Service Standards Report - 2020

Report Prepared by:

**Heather  
Britten**

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Heather Britten  
Date: 2021.03.18  
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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 twelve (12) month period ended December 31, 2020**

*Benchmark* 100%

	December 31, 2020				Actual (Audited) 2019	Actual (Audited) 2018
	2020 Budget	Actual	Variance Actual versus Budget Favourable (Unfavourable)			
			\$	%		
<b>Revenue</b>						
Net investment income:						
Total investment income	\$3,240,000	\$3,763,614	\$523,614	16%	\$3,644,079	\$2,939,026
Investment manager fees	(\$230,000)	(\$194,968)	\$35,032	(15%)	(\$202,574)	(\$165,670)
Increase (decrease) in the fair value of investment assets	\$3,000,000	\$7,532,426	\$4,532,426	151%	\$10,642,209	\$1,763,098
	<b>\$6,010,000</b>	<b>\$11,101,072</b>	<b>\$5,091,072</b>	<b>85%</b>	<b>\$14,083,715</b>	<b>\$4,536,454</b>
<b>Contributions</b>						
Participants:						
Current service (including additional voluntary contributions)	\$3,236,000	\$3,246,717	\$10,717	0%	\$3,463,328	\$2,845,791
Sponsors:						
Current service	\$3,155,000	\$3,166,735	\$11,735	0%	\$2,972,138	\$2,578,842
Unfunded liability	\$0	\$0	\$0	0%	\$0	\$825,200
	<b>\$6,391,000</b>	<b>\$6,413,451</b>	<b>\$22,451</b>	<b>0%</b>	<b>\$6,435,466</b>	<b>\$6,249,833</b>
<b>Expenses<sup>3</sup></b>						
Benefit payments:						
Benefit payments	\$4,642,000	\$4,552,474	\$89,526	2%	\$4,226,855	\$3,848,218
Termination payments	\$800,000	\$677,237	\$122,763	15%	\$960,187	\$79,849
Death benefit payments	\$0	\$0	\$0	\$0	\$0	\$0
Administrative:						
Actuarial & consulting fees	\$75,000	\$43,843	\$31,157	42%	\$118,659	\$50,409
Audit & accounting fees	\$9,000	\$8,647	\$353	4%	\$8,530	\$8,441
Bank custodian fees	\$25,000	\$30,479	(\$5,479)	(22%)	\$28,636	\$32,303
Insurance	\$9,000	\$8,760	\$240	3%	\$8,760	\$8,347
Miscellaneous	\$15,000	\$16,724	(\$1,724)	(11%)	\$20,610	\$16,195
Professional fees	\$15,000	\$23,151	(\$8,151)	(54%)	\$23,261	\$13,440
Registration fees	\$3,000	\$2,645	\$355	12%	\$2,500	\$2,337
Training (Trustees/ Administration/ Pension Committee)	\$2,000	\$0	\$2,000	100%	\$0	\$0
	<b>\$5,595,000</b>	<b>\$5,363,959</b>	<b>\$231,041</b>	<b>4%</b>	<b>\$5,397,997</b>	<b>\$4,059,539</b>
<b>Increase (decrease) in net assets available for benefits</b>	<b>\$6,806,000</b>	<b>\$12,150,564</b>	<b>\$5,344,564</b>	<b>79%</b>	<b>\$15,121,184</b>	<b>\$6,726,748</b>
<b>Net assets available for benefits, beginning of period</b>	<b>\$141,579,813</b>	<b>\$141,579,813</b>			<b>\$126,458,630</b>	<b>\$119,731,882</b>
Increase (decrease) in net assets available for benefits	<b>\$6,806,000</b>	<b>\$12,150,564</b>			<b>\$15,121,184</b>	<b>\$6,726,748</b>
<b>Net assets available for benefits, end of period</b>	<b>\$148,385,813</b>	<b>\$153,730,377</b>			<b>\$141,579,813</b>	<b>\$126,458,630</b>



**Halifax Regional Water Commission Employees' Pension Plan**  
**Regulatory Filing Requirements - 2020**  
**as at December 31, 2020**

Report	Regulatory Body	Filing Deadline	Date last filed		Comments
1 Annual Form 3 - Summary of Contributions	Superintendent of Pensions	60 days after the beginning of each fiscal year	January 29, 2021	DB Plan	Filed directly with the Trustee, Northern Trust, for the DB Plan.
			January 29, 2021	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	March 1, 2021	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 16, 2020	DB Plan	Audited financial statements were completed and approved by the HW Board on June 25th, 2020. (Extension granted in 2020)
			July 16, 2020	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 is submitted to the regulatory body prior to June 30th each year. (Extension granted in 2020)
4 Annual Information Returns (AIR)	Superintendent of Pensions	June 30th	July 16, 2020	DB Plan	Extension granted in 2020
			July 16, 2020	DC Plan	Extension granted in 2020
5 Actuarial Valuation*	Superintendent of Pensions Canada Revenue Agency	September 30th	September 27, 2019 September 27, 2019		Actuarial Valuation was conducted as of January 1, 2019.
6 Plan Amendments	Superintendent of Pensions	60 days after the amendment approved by the Board	September 27, 2019	DB Plan	Amendment #12 approved by the Board June 20, 2019; Submitted to the Superintendent September 27, 2019. The amendment was pursuant to the contribution rate change as dictated by the Actuarial Valuation of January 1, 2019.
	Canada Revenue Agency		September 27, 2019		
	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.

\* 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 - 2020**  
**as at December 31, 2020**

<b>Report</b>	<b>Filing Deadline/ Recurrence</b>	<b>Date last filed/ Performed</b>		<b>Comments</b>
1 Pensioners' Payroll	Monthly	March 1, 2021		Pensioners are paid the 1st of each month; no exceptions to report for the Fourth Quarter 2020.
2 Contributions to the Trustee	Monthly	March 9, 2021	DB Plan	Remittances due to Northern Trust within 30 days of month end; no exceptions to report for Fourth Quarter 2020.
		January 5, 2021	DC Plan	Remittances due to Industrial Alliance within 30 days of month end; no exceptions to report for Fourth Quarter 2020.
		n/a	Notional Agreement*	
3 Pension Plan Financial Statements	Quarterly	March 25, 2021	DB Plan	Fourth Quarter (October - December 2020)
		n/a	DC Plan	Quarterly statements are not prepared for the Defined Contribution (DC) Plan. A financial report is prepared by Industrial Alliance and that report is filed with the Annual Information Return (AIR) to the regulator annually.
		n/a	Notional Agreement*	Financial statements not required.
4 Investment Performance Review & Compliance with SIP&P	Quarterly	March 25, 2021	DB Plan	Fourth Quarter (October - December 2020) Report prepared quarterly by administration staff for the HW Board of Directors, in conjunction with the quarterly HRM Pension Plan Committee meeting documentation. Statement of Investment Policies & Procedures (SIP&P) is reviewed annually and was last reviewed and approved on December 10, 2020.
5 Annual Pension Statements to Members	June 30th	June 18, 2020	DB Plan	Statements issued annually by June 30th.
		June 18, 2020	DC Plan	Statements issued annually in conjunction with the Defined Benefit (DB) Plan statements. Members also have access to online, real-time reporting.
		June 18, 2020	Notional Agreement*	Statements issued annually in conjunction with the DB Plan statements.
6 Fiduciary Liability Insurance	Annually	November 25, 2020	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 - 2020

Quarter 4 (as at March 11, 2021)		Eckler				HW Staff				Total Average Service Days
Transaction	Standard	Total # Completed	# Past Standard	% within Standard	Average Service Days	Total # Completed	# Past Standard	% within Standard	Average Service Days	
Retirement Estimates	23 Business Days	0	0	0%	0.0	0	0	0%	0.0	0.0
Marriage Breakdown Calculations	33 Business Days					0	0			0.0
Post-Retirement Death Letter	10 Business Days					0	0			0.0
Pre-Retirement Death Benefit	33 Business Days					0	0			0.0
Termination Estimates/ Calculations										
- Standard	23 Business Days	6	1	83%	7.2	6	5	17%	24.2	31.3
- Non Standard (incl RTAs)	33 Business Days					0	0			0.0
Total		6	1	83%	7	6	5	17%	24	
Combined Total (Eckler & Halifax Water)		Total # Completed		# Past Standard		% within Standard				
		6		6		0%				

**TO:** Craig MacMullin, MBA, CPA, CGA, Chair, and Members of the  
Halifax Regional Water Commission Board as Trustees of the  
Halifax Water Employees' Pension Plan

**SUBMITTED BY:** Louis de  
Montbrun

Digitally signed by Louis  
de Montbrun  
Date: 2021.03.17  
18:23:21 -03'00'

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Louis de Montbrun, CPA, CA  
Director, Corporate Services/CFO

**APPROVED:** Cathie  
O'Toole

Digitally signed by Cathie  
O'Toole  
Date: 2021.03.18  
10:06:46 -03'00'

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Cathie O'Toole, MBA, FCPA, FCGA, ICD.D  
General Manager

**DATE:** March 17, 2021

**SUBJECT:** Halifax Regional Municipality Master Trust  
Investment Performance, Fourth Quarter, 2020

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## **INFORMATION REPORT**

### **ORIGIN**

The Halifax Regional Municipality Master Trust (the "Master Trust") 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 the Fourth Quarter of 2020 (October to December) for the Master Trust, of which Halifax Regional Water Commission Employees' Pension Plan (the "Plan") is a part. The fair value of the investment in the Master Trust is determined and updated at year-end, and the Plan's share in the Master Trust at December 31, 2020 was 6.4%, totaling \$153.4 million.

**ITEM # 4-I**  
**Halifax Water Board**  
**March 25, 2021**

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The Master Trust returned 5.48% in the Fourth Quarter, which outperformed the policy benchmark of 4.15% by 1.33%. The return for the 1-year period ended December 31, 2020 is 7.59%, underperforming the policy benchmark of 7.92% by (0.33%). Other historical returns are provided in Table 1 below.

**Table 1 – Returns**

	<b>Current Quarter (Oct to Dec)</b>	<b>1-Year</b>	<b>3 - Year Annualized</b>	<b>4 - Year Annualized</b>	<b>Since Inception (Oct 1999)</b>
Fund Return	5.48%	7.59%	7.33%	8.20%	7.20%
Policy Benchmark	4.15%	7.92%	6.27%	6.91%	5.80%
Excess Return	1.33%	(0.33%)	1.06%	1.29%	1.40%

The total fund returns are subject to investment management fees and plan expenses.

As at December 31<sup>st</sup>, 2020, 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 2 below:

**Table 2– Asset Mix, as at December 31, 2020**

<b>Asset:</b>	<b>Actual</b>	<b>Policy Benchmark</b>
Cash & Equivalents	0.7%	0.0%
Canadian Equity	4.7%	5.4%
Global Equity	32.4%	29.1%
Fixed Income	31.7%	36.8%
Minimum Target Return	30.5%	28.7%

**ATTACHMENT**

**2020 Fourth Quarter Halifax Regional Municipality Master Trust Investment Report**

Report Prepared by:

**Heather  
Britten**

Digitally signed by  
Heather Britten  
Date: 2021.03.17  
16:30:23 -03'00'

Heather S. Britten, B. Comm.  
Quality Assurance Officer (902) 490 1895



# Investment Report

Q4 2020

# Executive Summary

## Compliance

- As at December 31, 2020, the Master Trust (MT) was in compliance with the SIP&P.

## Funded Status

- As at December 31, 2019, the going concern funded ratio and transfer ratio were 91.8% and 63.4% respectively.\*

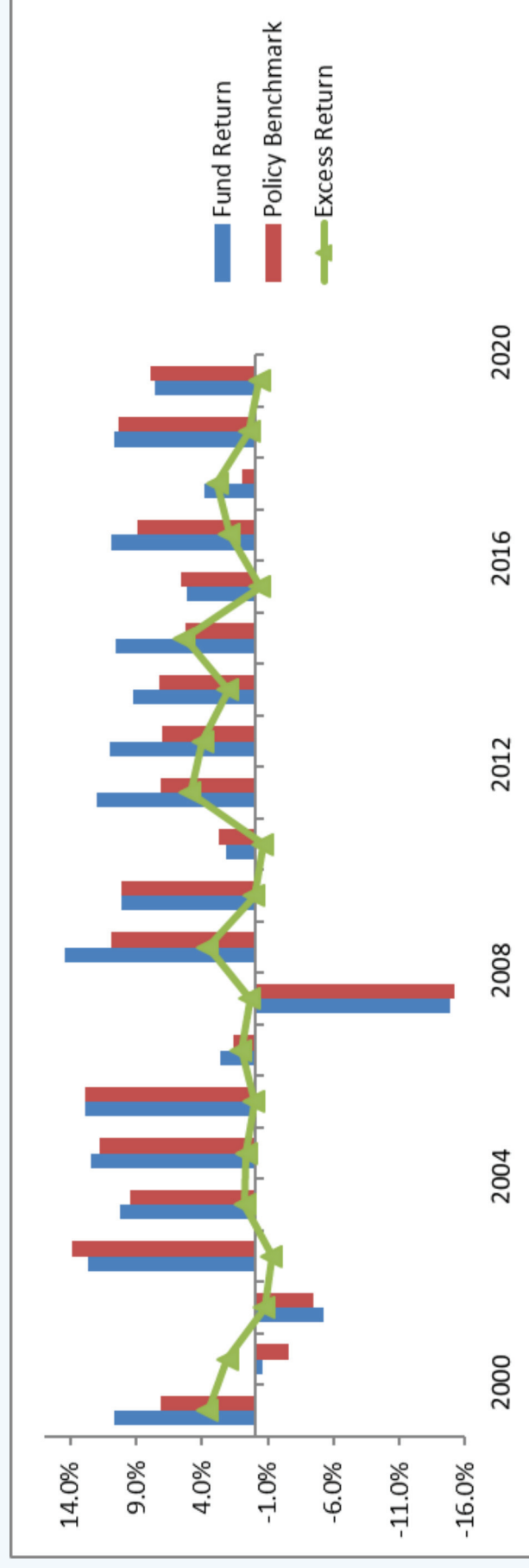
## Master Trust Performance (net of fees)

- In Q4, the MT earned 5.48%, outperforming the policy benchmark return by 1.33%.
- For the one-year period ending December 31, 2020, the MT earned 7.59% underperforming the policy benchmark by 0.33%.
- The MT earned an annualized return of 8.20% over the 4-year period ending December 31, 2020, outperforming the policy benchmark by 1.29% annualized.
- Since inception (October 1999), the MT earned 7.20% annualized, outperforming the Plan's long-term discount rate of 6.25%. The table on the next slide summarizes the calendar year returns for the MT.

\* Per Eckler Valuation Report as at December 31, 2019. Assumes a going concern discount rate of 6.25%.

# 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	2019	2020
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%	10.69%	7.59%
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%	10.28%	7.92%
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%	0.41%	-0.33%



# Executive Summary – Cont.

## Added Value

- In Q4 of 2020, the MT outperformed its policy benchmark by 1.33%.  
Attribution: Minimum Target Return +0.67%, Universe Bonds +0.53%, Global Credit +0.27%, EAFE Equity +0.03%, US Equity +0.01%, Emerging Equity -0.02%, Canadian Equity -0.07%, and World Equity -0.09%.

## Q4 Updates

- Redeemed CAD 20mn from our existing Canadian Corporate Bond manager and reinvested in money market securities.
- Committed CAD 80mn to an international equity fund.
- Committed CAD 100mn to a quantitative global equity fund.
- Committed EUR 20mn to a global private credit fund focused on large senior secured direct lending opportunities.

# Executive Summary – Cont.

## Q4 Updates

- Completed a re-up of EUR 15mn in a new fund with an infrastructure manager focused on global opportunities.
- Completed a re-up USD 15mn in a new fund with a private equity secondaries manager focused on global opportunities.
- Invested EUR 5mn in a GP-led single asset recapitalization of the global market leader in the nuclear pharmaceuticals business alongside a secondaries focused private equity manager.
- Invested USD 3mn in a leading direct-to-consumer weight loss and wellness brand alongside a private equity manager.
- Committed EUR 5mn in the take-private of an Italian fiber services business alongside a Europe focused infrastructure manager.
- Invested GBP 5mn in an affordable residential for-rent development in the UK alongside a Europe focused real estate manager.

# Total Fund Net Returns

As of December 31, 2020

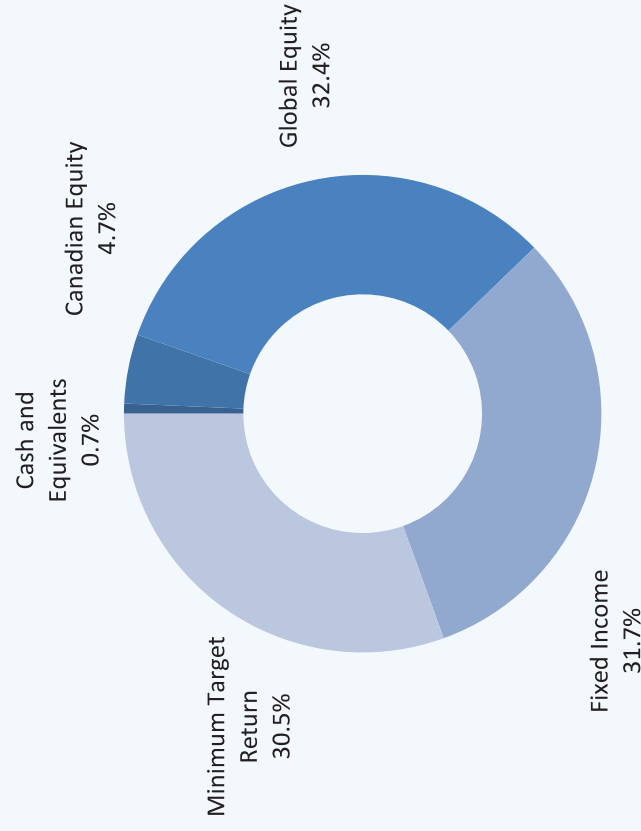
	Q4	1-Year	3-Year Annualized	4-Year Annualized	Since Inception (Oct 1999)
Fund Return	5.48%	7.59%	7.33%	8.20%	7.20%
Policy Benchmark*	4.15%	7.92%	6.27%	6.91%	5.80%
Excess Return	1.33%	-0.33%	1.06%	1.29%	1.40%

\* Effective December 31, 2020, the Policy Benchmark is 3.5% S&P/TSX Index + 1.9% S&P/TSX 60 + 6.1% S&P 500 Hedged Index (\$CAD) + 8.0% MSCI EAFE Index (\$CAN) + 3.8% MSCI Emerging Markets (\$CAN) + 11.2% MSCI World (\$CAN) +16.2% FTSE TMX Canada Universe Bond + 20.6% 3 Month Bankers Acceptance + 28.7% Minimum Target Return.

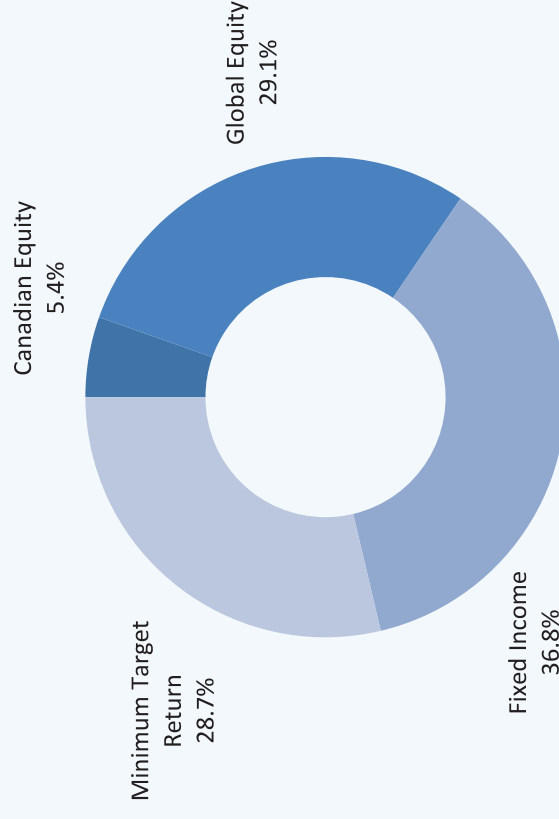
Fund returns are shown net of fees and expenses

# Asset Mix

## Asset Mix As of December 31, 2020



## Asset Mix Policy As of December 31, 2020



\* Effective December 31, 2020, the Policy Benchmark is 3.5% S&P/TSX Index + 1.9% S&P/TSX 60 + 6.1% S&P 500 Hedged Index (\$CAD) + 8.0% MSCI EAFE Index (\$CAN) + 3.8% MSCI Emerging Markets (\$CAN) + 11.2% MSCI World (\$CAN) + 16.2% FTSE TMX Canada Universe Bond + 20.6% 3 Month Bankers Acceptance + 28.7% Minimum Target Return.

# Equity Market Returns

As of December 31, 2020

Index	Q4	1-Year	3-Year Annualized	4-Year Annualized
Canadian Equity (S&P/TSX Composite Index)	8.97%	5.60%	5.74%	6.57%
US Equity (S&P 500 C\$)	6.96%	16.32%	14.81%	14.57%
EAFE Equity (MSCI EAFE C\$)	10.68%	5.92%	4.86%	7.73%
Emerging Markets (MSCI EM C\$)	14.16%	16.23%	6.77%	11.78%
World Equity (MSCI World C\$)	8.69%	13.87%	11.16%	11.95%

- Global equities gained in Q4 as a number of vaccine announcements came online.
- US equities gained in Q4, with November especially strong due to the vaccine news.

\*Source: Northern Trust



# Public Equity – Q4 Summary

- The MT's Equity portfolio returned 9.70% during the quarter, underperforming the equity policy benchmark return of 10.30% by 0.60%, primarily due to underperformance of Emerging and World equities.

## As of December 31, 2020 (C\$ returns)

Equity Mandate	Q4			One year		
	Plan	Benchmark	Relative Performance	Plan	Benchmark	Relative Performance
Canadian Equity	8.05%	8.58%	-0.53%	2.93%	5.59%	-2.65%
US Equity	11.86%	11.75%	0.11%	17.47%	15.79%	1.68%
EAFE Equity	10.65%	10.68%	-0.03%	6.27%	5.92%	0.35%
Emerging Equity	11.79%	14.16%	-2.37%	15.40%	16.23%	-0.83%
World Equity	7.82%	8.69%	-0.87%	7.10%	13.87%	-6.77%
<b>Total</b>	<b>9.70%</b>	<b>10.30%</b>	<b>-0.60%</b>	<b>9.06%</b>	<b>11.62%</b>	<b>-2.56%</b>

\*Source: Northern Trust



# Bond Market Returns

As of December 31, 2020

Index	Q4	1-Year	3-Year Annualized	4-Year Annualized
Canadian Universe Bonds (FTSE TMX Canada Universe Bond)	0.63%	8.68%	5.61%	4.83%
Canadian Government Bonds (FTSE TMX Canada Universe Government)	0.21%	8.69%	5.51%	4.66%
Canadian Corporate Bonds (FTSE TMX Canada Universe Corporate)	1.80%	8.74%	5.90%	5.27%

- Corporate bonds have outperformed Government bonds and the broader Universe over the Q4, 1-year periods, 3-year periods and 4-year periods.

\*Source: Northern Trust



# Public Fixed Income – Q4 Summary

- The MT's diversified Fixed Income portfolio earned 2.55%, which outperformed its benchmark return of 0.36% by 2.19%, primarily due to outperformance of Canadian Corporate Bond.

## As of December 31, 2020 (C\$ returns)

	Q4			One year		
	Plan	Benchmark	Relative Performance	Plan	Benchmark	Relative Performance
Canadian Corporate Bond	6.80%	1.80%	5.00%	16.49%	8.74%	7.75%
Government Bond	0.19%	0.21%	-0.02%	9.44%	8.69%	0.75%
Global Credit Absolute Return	0.87%	0.12%	0.75%	1.31%	0.83%	0.48%
<b>Total</b>	<b>2.55%</b>	<b>0.36%</b>	<b>2.19%</b>	<b>7.90%</b>	<b>4.48%</b>	<b>3.42%</b>

\*Source: Northern Trust





# Private Market – Q4 Summary

- The Minimum Target Return portfolio (private investment portfolio) returned 4.11% in Q4, versus a benchmark of 1.56%, outperforming by 2.55%.

## As of December 31, 2020 (C\$ returns)

	Q4	1-Year	3-Year Annualized	4-Year Annualized	Since Inception (Oct 1999)
MTR Return	4.11%	6.16%	9.95%	10.52%	12.29%
Policy Benchmark	1.56%	6.25%	6.18%	6.24%	6.47%
Excess Return	2.55%	-0.09%	3.77%	4.28%	5.82%

The policy benchmark for the private investment portfolio is the Going Concern Discount rate. The 2020 rate is 6.25%, 2019 is 6.1%, 2018 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.

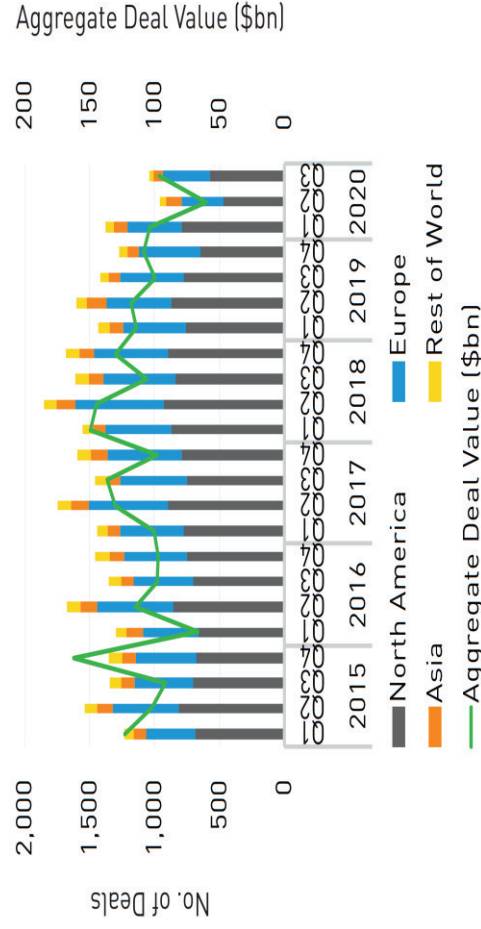
# Private Markets – Commentary

- As a reminder, we note that due to very strong realizations across the MTR portfolio over the last five years, HRM entered 2020 being underweight private investments (~31% vs 40% target). This underweight has helped us navigate the crisis well through i.) having significant dry powder (>\$200mn) at our disposal to take advantage of the market disruption, and ii.) helping capture much of the relative strong performance of public markets in 2020 within total portfolio returns.
- Sponsor backed deal activity in private equity saw a sharp uptick since September in sectors such as technology, healthcare and asset-light financial services. Similarly in infrastructure, valuations and deal activity remained resilient in sectors like digital infrastructure, renewables and regulated utilities. HRM was able to take advantage of this dynamic, investing >CAD 200mn in 2020 across all private asset classes, which marks our highest deployment pace in more than a decade.
- In the second half of 2020, most private businesses in sectors not heavily hit by COVID-19 started to shift focus from workforce productivity, managing financial/liquidity risk, and stabilizing operations to preparing for recovery and growth.

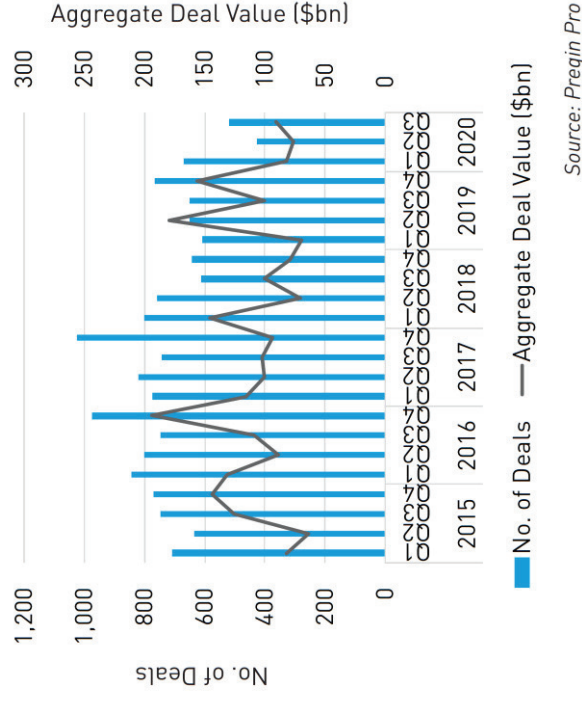
# Private Markets – Deal Activity

- The charts below show the uptick in Q3 for deal activity in both private equity and infrastructure after the trough in Q2.

**Fig. 10: Quarterly Private Equity-Backed Buyout Deals by Region, Q1 2015 – Q3 2020**



**Fig. 11: Global Quarterly Infrastructure Deals, Q1 2015 – Q3 2020**



# Private Markets – Equity Cures/Rescue Finance

- During the June 2020 committee meeting, we said that we expected none of our co-investments to require equity cures. We are pleased to note that this has continued to remain the case. As we look forward into 2021, we will continue to closely monitor all investments in sectors exposed to COVID . Our current expectation continues to be that no rescue financings of any significance will be needed in the near to medium-term.
- There have been instances of equity cures being required in fund portfolios although the quantum of amount required was immaterial in the context of the total portfolio. These rescue financings were required in the hardest hit sectors of restaurants, consumer retail, airports and oil & gas investments.

# Private Markets – 2021 Market Backdrop

- While we intend to continue to invest in private markets to move to our target allocation of 40%, we remain extremely cautious in today's market environment due to the following factors:
  - *While vast swaths of the real economy have been negatively impacted by COVID-19 and will face an uneven recovery over the next several years, public markets have continued to rise and looks potentially overvalued by many traditional metrics, creating a follow-on effect in private markets.*
  - *It is clear that COVID-19 will not be an event isolated to 2020 and that some of the implications of this crisis (digitization, work-from-home (WFH), supply chain resiliency) will continue to be felt for several years into the future. The range of outcomes on several business sectors still remain quite wide. As this presentation was being prepared, Ontario was in a state of lockdown and Canada had just imposed new and stringent travel restrictions. Most countries in Europe had entered yet another wave of severe lockdowns in December / January. The lockdown situation in the US continues to vary by state although the Biden administration has signaled aggressive measures to get the pandemic under control.*
  - *Our base case view in relation to new investments is that most countries where we invest will have to continue dealing with the virus well into H2 2021 with possibly some light at the end of the tunnel towards the end of the year, depending heavily on the success of the mass vaccination campaigns around the world.*
  - *Further, it remains harder to initiate new GP relationships virtually, especially in cases where HRM has never met any of the Partners of a firm in-person. However, our proactive outbound sourcing efforts have helped us as we have been able to maintain the high pace of commitments in 2020 with only one relationship being initiated completely virtually; this was with a well-known middle market private equity firm in existence since 1987.*
- As always, we will continue to maintain a high degree of selectivity as we make new investments in 2021.

# 2020 Performance Detail – Infrastructure

- Infrastructure had the highest allocation in MTR for 2020 (~35%), thus driving the most significant impact for private investments within the total portfolio. Infrastructure was also our best performing asset class for the year posting returns of 10.63%.
- This compares to CAD performance in listed indices of -4.9% for FTSE Global Core Infrastructure 50/50, -10.18% for Dow Jones Brookfield Global Infrastructure Composite Index and -7.32% for S&P Global Infrastructure Index. The 2020 returns also imply 993 bps in premium over Canadian CPI.
- The portfolio remained resilient due to strong asset sales in sectors such as regulated utilities and renewables, and a portfolio tilt decision in 2018 to overweight digital infrastructure assets (data centers, fiber and cell towers). Other than an investment in a Canadian toll road (which posted flat returns despite lower overall traffic volumes), none of our principal investments are expected to be adversely impacted by COVID-19.
- We will continue our investment pace in infrastructure and plan to explore ways to de-risk the portfolio at the margin by exploring more core (lower risk & lower return) type investment opportunities, especially in Canada.

# 2020 Performance Detail – Real Estate

- Real estate had the second highest allocation in MTR for 2020 (31%) and posted returns of 4.62%.
- This compares to CAD performance of -6.8% for MSCI World Real Estate Index and -15.3% for FTSE EPRA Nareit Canada Net TRI Index. The 2020 real estate performance implies a 392 bps premium over Canadian CPI.
- The portfolio remained quite resilient in what was a challenging year for the asset class. Valuations for retail real estate continued its downward trend as people avoided large gatherings. Given the almost universal world-wide mandates of WFH, the office sector also had to navigate a tough year in 2020. Even though there were questions around tenant ability to pay rents given higher unemployment earlier in the year, multi-family real estate proved resilient during the year. Valuations for industrials and logistics properties increased given tailwinds from e-commerce.
- Our real estate portfolio remains Canada focused and with a heavy weight in multi-family. Further, we had very nominal exposures to the most affected sectors of retail and hotels. Our managers reported strong rent collection figures (mostly >90%) in both office and multi-family properties throughout the year.
- Given our relative underweight in real estate, we plan to explore diversified, open-ended real estate funds in 2021 as a way of building exposure to the asset class at a slightly more accelerated pace.



# 2020 Performance Detail – Private Equity

- Private equity had the 3<sup>rd</sup> highest allocation in MTR for 2020 (~19%) and posted returns of 7.35%. This compares to CAD performance of 16.4% for the S&P 500, 14.0% for MSCI World Total Return Index and 5.5% for the S&P/TSX Composite Index.
- As noted during the Q3 meeting, public equity markets rallied in 2020 driven by soaring valuations of technology companies, falling interest rates, government stimulus and to a lesser extent, due to increased retail interest in trading. Excluding the TMT sector, the S&P 500 returned ~4.6% in CAD terms for 2020.
- Separately, while PE performance lagged public markets, the portfolio was still able to post strong positive absolute performance in a year where GDP\* in US, Canada and the European Union contracted by 2.8%, 3.5% and 4.2% respectively.
- Other than exposure within two fund investments (US & Europe focused) to the consumer retail sector, which we are monitoring closely, there are no major red flags or watchlist items within the PE portfolio.
- We had indicated in prior Committee meetings that we expected to face more volatile returns in private equity due to uneven commitment pacing. In hindsight, the lower level of commitments to PE (which implied a lower weighting to the asset class) going into 2020 is now likely to be a net positive from a total portfolio perspective.
- Over the next few years, our priority remains to further invest in private equity to move to target allocation while diversifying the portfolio into healthcare, technology and asset-light financial services.

Source: Bloomberg; YoY rates to Oct 2020; numbers for Nov & Dec not yet released as this report was being prepared.



# 2020 Performance Detail – Private Credit

- Private credit is the smallest allocation in MTR in 2020 (14%) and thus has the lowest impact on total plan returns. Private credit posted returns of 2.68% for the year compared to CAD returns of 1.1% for Credit Suisse Leveraged Loan Total Return Index, 1.1% for the S&P/LSTA US Leveraged Loan 100 Index and 3.5% for the S&P Global Leveraged Loan Index.
- While acceptable returns in relative terms, our private credit portfolio was negatively affected by exposure to previous oil & gas investments. Market consensus at this point is that we hit a trough for oil prices in Q2 2020 and a recovery (albeit uneven) is on the horizon as global transportation volumes pick up. Note that the entirety of our oil & gas exposure comes from a fund investment made in 2013 and a corresponding co-investment done in 2015. We have not invested in hydrocarbon based energy projects since and are very unlikely to do so in the near future.
- Further, since 2016, we have maintained a cautious outlook towards private credit as an asset class based on our market observations of extremely high dry powder, increasingly aggressive borrower behavior and consequently, loosening lender credit standards.
- As part of the ALM work we conducted in 2020, we have identified ways to reduce overall portfolio risk by reducing the target allocation of private credit to 2.5% while investing further in lower risk investment grade type private credit within the fixed income portfolio.

# Liquidity

	Actual 2020 Amounts (\$ mln)
Contributions	\$ 109.2
Dividend & Distribution Income	\$ 16.9
Interest Income	\$ 13.9
Other Income	\$ 0.4
Benefit Payments	-\$ 113.9
Expenses	-\$ 8.0
<b>Total Annual Net CF</b>	<b>\$ 18.5</b>
Liquid Investments*	\$ 1,635.6
Actual Net Distributions	\$ 106.0
Actual Net Capital Calls	-\$ 96.0
<b>Total CF + Liquid Investments + Private Sales – Capital Calls</b>	<b>\$ 1,664.1</b>

\* Liquid investments as at February 24, 2021. Includes all publicly traded equity and fixed income investments

**TO:** Craig MacMullin, MBA, CPA, CGA, Chair, and Members of the  
Halifax Regional Water Commission Board

**SUBMITTED BY:** **Susheel Arora** Digitally signed by  
Susheel Arora  
Date: 2021.03.19  
09:10:16 -03'00'  
Susheel Arora, M.A.Sc., P.Eng. Director, Wastewater and  
Stormwater Services

**APPROVED:** **Cathie O'Toole** Digitally signed by Cathie  
O'Toole  
Date: 2021.03.19  
10:36:44 -03'00'  
Cathie O'Toole, MBA, FCPA, FCGA, ICD.D, General Manager

**DATE:** March 17, 2021

**SUBJECT:** **Update on Wastewater Research Program - Dalhousie  
University**

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## **INFORMATION REPORT**

### **ORIGIN**

2018/2019 Memorandum of Understanding (MOU) between Dalhousie University and Halifax Water that directs research initiatives for the advancement of wastewater effluent quality for the protection of public health and the environment.

### **BACKGROUND**

Halifax Water partnered with Dalhousie University through a Natural Science and Engineering Council of Canada (NSERC) Collaborative Research & Development (CRD) Grant, expanding Halifax Water's existing collaboration with Dalhousie University to strategically approach wastewater service and compliance challenges faced by Halifax Water. Considering the Wastewater System Effluent Regulations and the 2040 timeline for compliance, the research initiative is titled:

**“Horizon 2040: Wastewater Treatment Innovation for Continuous Improvement of Effluent Quality”**

The 2019 Compliance Plan and the 2019 Infrastructure Resource Plan provided an updated and more detailed plan to achieve compliance with future requirements in keeping with the WSER and to address some ongoing exceedances in order to meet current NSE regulations.

It was identified that the three Harbour Solutions Treatment Facilities required short and long-term upgrades to meet these regulations. To further investigate the best way to achieve the effluent requirements, it was determined that the first priority was to investigate optimization and process changes to existing infrastructure that could allow Halifax Water to consistently meet national effluent quality standards, and potentially avoid or mitigate the cost associated with extensive upgrades.

The current research plan is a three phased approach to improve effluent quality:

1. Bench, pilot, and full-scale optimization of coagulation/flocculation processes,
2. Application of innovative UV disinfection technology, and
3. Assessment of contaminants of emerging concern.

In addition, this partnership enhanced research capacity for wastewater treatment and analysis and will result in the training of highly qualified personnel in the wastewater sector, as well as a fully functioning wastewater research laboratory at Dalhousie University to provide robust capacity to emerging wastewater challenges.

Several additional projects have been established through the partnership between Halifax Water and Dalhousie University including SARS-CoV-2 research to monitor for the virus at several wastewater treatment plants in HRM and to learn more about the prevalence of COVID-19 infections in the area. Other projects include the sewer grid application of specialized bacterial cultures and bioaugmentation to assist the Timberlea WWTF in meeting ammonia discharge requirements and assisting the Mill Cove WWTF in troubleshooting process issues.

This report and the attached presentation provides an overview of the progress made to date for the various projects outlined in the awarded NSERC CRD grant (e.g. optimization of coagulation/flocculation processes, application of innovative UV disinfection technology, assessment of contaminants of emerging concern), as well as for the SARS-CoV-2 wastewater research and the additional projects that have been established as result of the partnership between Halifax Water and Dalhousie University.

## **DISCUSSION**

The attached presentation report highlights the work completed to date as well as outlines future activities. Generally, the tasks identified in the research program endorsed by NSERC and Halifax Water are on schedule except for procurement activities of the pilot plant. Halifax Water anticipates an acceleration in all activities in 2021-22 subject to lifting of some Covid 19 restrictions by the health authorities. The project is under budget at this time however, we believe that Dalhousie University is adequately resourced to meet all objectives of the project and leverage all approved funding from NSERC and Halifax Water over the next two years.

**ATTACHMENT**

Progress Research Update – Horizon 2040: Wastewater Treatment Innovation for Continuous Improvement of Effluent Quality

Report Prepared by: *Original signed by*

Chris Fahie, P.Eng.

Superintendent Wastewater Treatment, Phone 902-802-9732



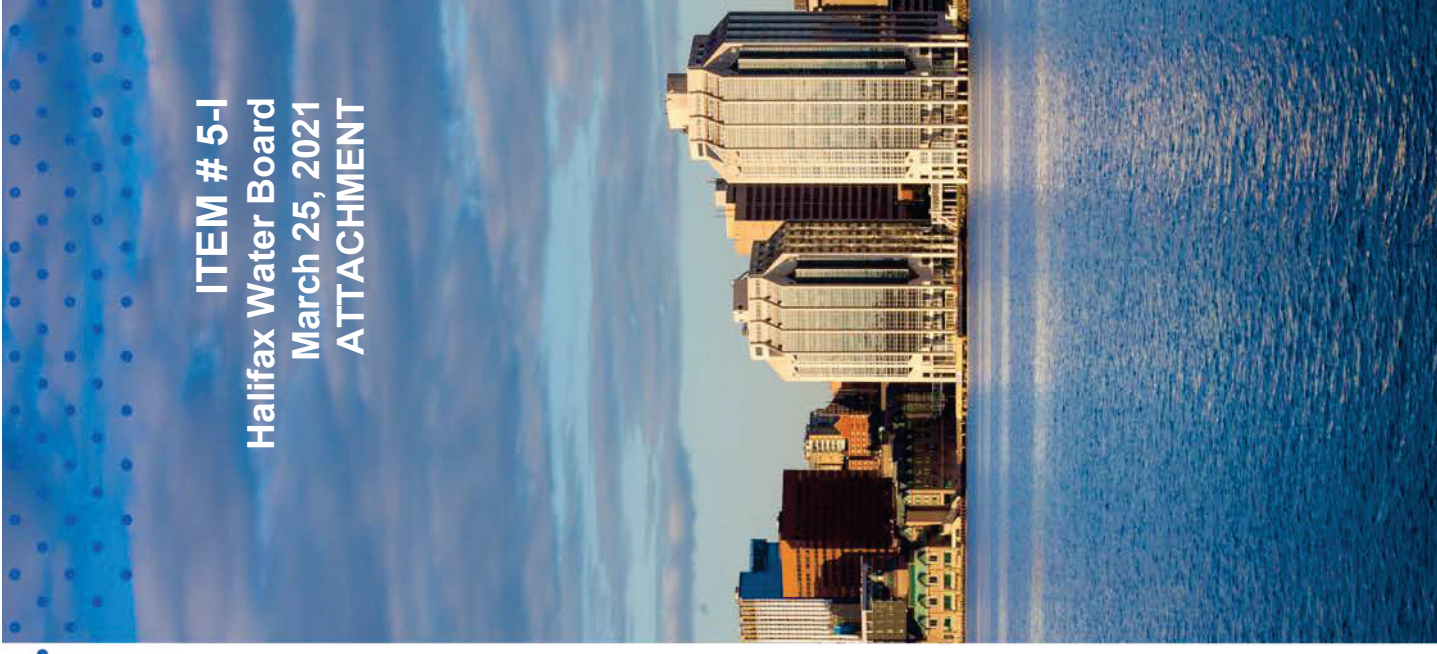
# Progress Research Update

Horizon 2040: Wastewater Treatment  
Innovation for Continuous Improvement of  
Effluent Quality



**STRAIGHT from  
the SOURCE**

ITEM # 5-1  
Halifax Water Board  
March 25, 2021  
ATTACHMENT



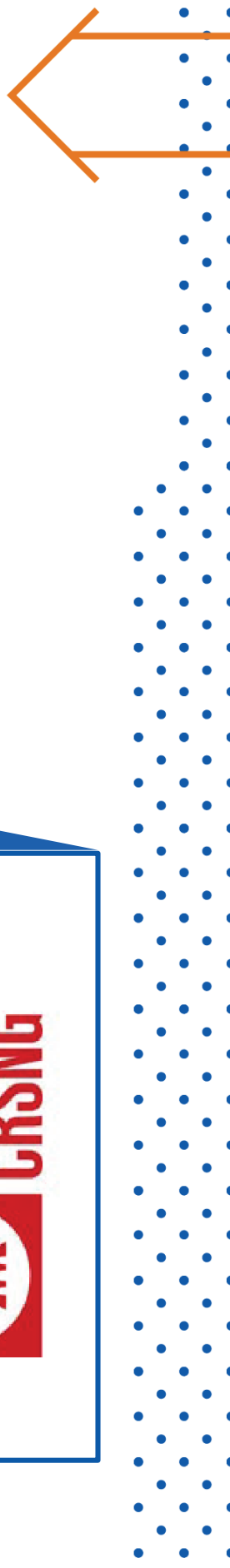
# Dalhousie University Research Partnership

Natural Science and Engineering  
Council of Canada (NSERC)  
Collaborative Research &  
Development (CRD) Grant to  
improve effluent quality from the  
three chemically enhanced  
primary treatment WWTFs in  
Halifax, Dartmouth and Herring  
Cove



## Focus of Work

- 1) Bench- pilot- and full-scale optimization of coagulation/flocculation processes;
- 2) Application of innovative UV disinfection technology;
- 3) Assessment of contaminants of emerging concern; and
- 4) Various other research opportunities

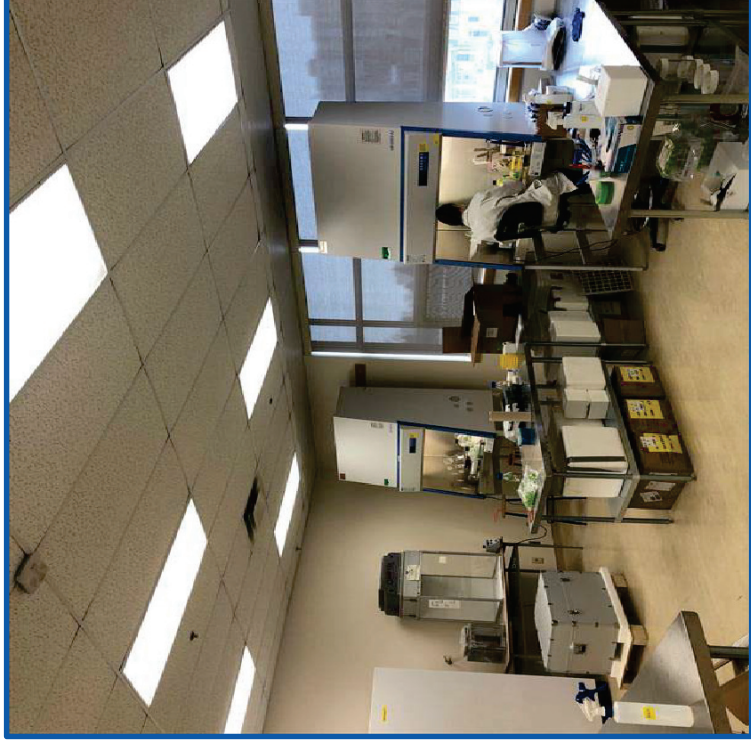




# Establish Laboratory Testing Facility

State-of-the-art Wastewater Treatment and Design Laboratory was completed at Dalhousie University's Sexton Campus in February 2021 .

Used to support the research initiatives of this partnership





# Bench Scale Studies to Full Scale Application

Students from Dalhousie University and HW staff have conducted over 85 bench-scale jar tests since Fall 2020 to identify optimal conditions for improving effluent standards related to permit requirements (BOD and TSS) and determine what chemistry is required to achieve optimal removal efficiencies at the Dartmouth WWTF.



## Preliminary Findings

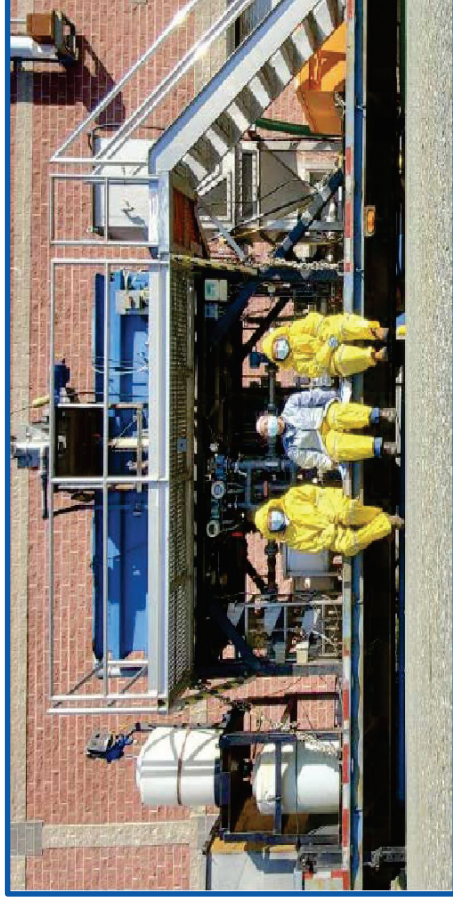
- 1) Historically underdosing chemicals
- 2) Established dosing conditions to maximize removal efficiencies
- 3) Plant staff implementing results full scale to see impacts



# Pilot Scale Testing @ DWWTF

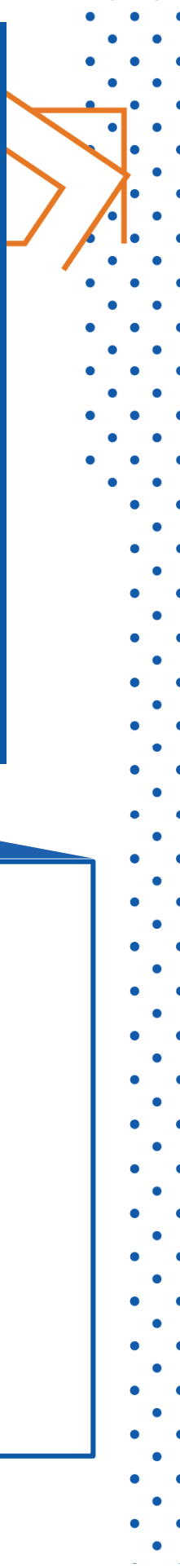
A pilot scale ballasted clarification system was tested at the Dartmouth WWTF in the Summer/Fall of 2020 in order to evaluate the performance of an alternative ballasted flocculation system in parallel to the current primary treatment system.

Focus of study was identified in the Compliance Plan



## Preliminary Findings

- 1) System outperformed existing technology
- 2) Faster recovery from wet weather events



# UV Disinfection Optimization at Dartmouth WWTF

Dalhousie utilized new analytical equipment to determine UV dose and inactivation rates for microorganisms (e.g. *E. coli*) in wastewater samples

Helpful to compare UV treatment types and determine the optimal conditions for treatment

Examined using LED technology for disinfection



## Preliminary Findings

- 1) LED UV technology can achieve same disinfection results
- 2) LED is more economical – energy perspective
- 3) Additional research required to aid design of full-scale applications

# Contaminants of Emerging Concern

Developing methods to detect microplastics and nanoplastics in wastewater which will be used to establish treatment approaches and to remove these contaminants of emerging concern to our environment.

A multiangle light scattering system (MALS) is the key analytical equipment for this research program, which has been installed at Dalhousie in February 2021.

**Dr. Evelyn Dore (Post Doctoral Fellow) and Heather Daurie (CWRS Lab Manager)** have been trained on the equipment and are in the process of developing methods for plastics analysis.



# Additional Research – SARS-CoV2

Environmental surveillance of SARS-CoV-2 in wastewater has the potential to support understanding of COVID-19 occurrence and transmission in communities. As such, wastewater may be monitored for SARS-CoV-2 to determine the prevalence of COVID-19 infections in a given population through wastewater-based epidemiology.

Nova Scotia Health Authority and communication of data to the Nova Scotia Health Authority for public health decision making such as identification of extent of infection in Nova Scotia, early identification of subsequent waves of the virus and informing the safe lifting of social and economic restrictions.

Over 200 samples (consisting of wastewater and biosolids from Halifax Water and other partners) have been received and analyzed by Dalhousie staff

## Preliminary Findings

- 1) Gather baseline data to establish dynamics of SARS-CoV-2 prevalence that may result from travel from outside Nova Scotia
- 2) Aid in making public health decisions related to identifying the extent of inflection in NS, early detection and safety protocols on social and economic restrictions



## Additional Research – Bioaugmentation

Dosing microorganisms in strategic locations in the Timberlea sewershed.

Goal of causing the network to act as a bioreactor and as a result the wastewater is treated prior to entering the treatment facility itself.

This technology could help Halifax Water in meeting national effluent quality standards, and potentially avoid the cost associated with extensive upgrades.

### Preliminary Findings

1. Overall, it appears that there is a noticeable decrease in ammonia-nitrogen concentration in the treated effluent at the Timberlea WWTF since dosing commenced in August 2020.
2. Potential to expand the dosing process to additional Halifax Water treatment facilities





## Additional Research – Trouble Shooting at Mill Cove WWTF

- Halifax Water and Dalhousie University have initiated a sampling program to perform charge analysis via zeta potential on the incoming wastewater, primary influent, centrate, and supernatant in hopes to determine if any of these inputs could be contributing to the poor settling in the primary clarifiers at the Mill Cove WWTF.

### Preliminary Findings

1. These measurements will give insight on whether the issues experienced in the primary clarifiers are physical/chemical in nature, or whether a biological component (e.g. struvite formation) is also contributing.



## Future Activities 2021/2022

- Continue bench scale testing and roll out changes to full scale
- RFQ – Create Expression of Interest for partnership to developed the design parameters and protocols for the large-scale pilot to be built at DWWTF – Select preferred proponent
- Fabricate and commission pilot facility at DWWTF
- Expand bioaugmentation programs

