

March 24, 2016



Ray Ritcey, Chair
Halifax Water
Halifax, Nova Scotia

The regular meeting of the Halifax Water Board will be held on Thursday, March 31, 2016 at 9:00 a.m. in the Boardroom at 450 Cowie Hill Road, Halifax.

AGENDA

In Camera

- 1C Approval of Minutes of In-Camera Meeting held on Thursday, February 25, 2016 (5 minutes)
- 2C Business Arising from Minutes
- 3C Personnel Matter (15 minutes)
- 4C Personnel Matter - Verbal (10 minutes)
- 5C Contractual Matter (15 minutes)
- 6C Security Matter - Presentation (15 minutes)
- 7C Legal Matter - Verbal (10 Minutes)

Regular Meeting

- 1. a) Ratification of In-Camera Motions
b) Approval of the Order of Business and Approval of Additions and Deletions (5 minutes)
- 2. Approval of Minutes of Regular Meeting held on Thursday, February 25, 2016
- 3. Business Arising From Minutes
 - a)
- 4. Operating Results for the Eleven Months Ended February 29, 2016 - Verbal Update (5 minutes)
- 5. Capital Projects: (15 minutes)
 - 5.1 Bedford Pumping Station Rehabilitation (at Mill Cove WWTF)\$3,250,000
 - 5.2 Wastewater Pumping Station Upgrade Program - West Region\$420,000
 - 5.3 JD Kline WSP Replacement of the Lime Feed and Delivery System\$300,000
 - 5.4 Yankeetown Road (near Civic 258) Cross Culvert Replacement.....\$200,000
 - \$4,170,000**
- 6. Building Canada Fund Candidate Projects (15 minutes)
- 7. Capital Funding Approval Policy (15 minutes)
- 8. Blanket Approval of 2016/17 Capital Budget (15 minutes)
- 9. Diligent Board Books - Update - Verbal (5 minutes)
- 10. Date of Next Meeting

Information Reports

- 1-I Operations and Financial Monthly Update
- 2-I Capital Budget Approvals to Date - 2015/16
- 3-I Bank Balance
- 4-I Pension Plan Investment Performance 4th Quarter, 2015



James G. Spurr
Secretary

**HALIFAX REGIONAL WATER COMMISSION
MINUTES**

February 25, 2016

PRESENT: Commissioner Russell Walker, Vice Chair
Commissioner Mike Savage
Commissioner John Traves
Commissioner Don Mason
Commissioner Darlene Fenton
Commissioner David Hendsbee

REGRETS: Commissioner Ray Ritcey, Chair
Commissioner Barry Dalrymple

STAFF: Carl Yates, General Manager, HRWC
Cathie O'Toole, Director, Finance & Customer Service,
HRWC
James Spurr, Legal Counsel, HRWC
Jamie Hannam, Director, Engineering & IT Services, HRWC
Lorna Skinner, Administrative Assistant, HRWC

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CALL TO ORDER

The Chair called the regular meeting to order at 9:00 a.m. in the Board Room of the HRWC, 450 Cowie Hill Road. The Board moved In Camera at 9:00 and the regular meeting reconvened at 9:10 a.m. The Board moved back into In Camera at 9:30 and the regular meeting reconvened at 9:40.

1.a) RATIFICATION OF IN CAMERA MOTIONS

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

MOVED BY Commissioner Savage, seconded by Commissioner Fenton that the Halifax Regional Water Commission Board approve the In Camera minutes of January 28, 2016.

MOTION PUT AND PASSED.

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

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

MOTION PUT AND PASSED

2. APPROVAL OF MINUTES – January 28, 2016

MOVED BY Commissioner Fenton, seconded by Commissioner Savage that the Halifax Regional Water Commission Board approve the minutes of January 28, 2016.

MOTION PUT AND PASSED.

3. BUSINESS ARISING FROM MINUTES**a) 2016/17 Business Plan**

Carl Yates informed the Board that the 2016/17 Business Plan was presented to HRM Council on February 23, 2016. Both the General Manager and Commissioner Savage stated that it was received favourably by Council.

b) Pension Plan Amendment #10

Cathie O'Toole informed the Board that a letter from the Superintendent of Pensions was received on February 24, 2016, officially registering and accepting the Pension Plan Amendment. The next step will be finalizing the actuarial valuation which should be done within four weeks. It is anticipated that the actuarial evaluation will be presented to the Board at the April meeting.

4. OPERATING RESULTS FOR THE NINE MONTHS ENDED DECEMBER 31, 2015

Cathie O'Toole stated the conversion to International Financial Reporting Standards has begun. There was a loss in January of \$922K which was anticipated. A year to date profit of \$915K is projected.

5. CAPITAL PROJECTS

5.1 Lake Major Water Supply Plant (WSP) – New Diesel Generator

A report dated February 18, 2016, was submitted.

5.2 Sackville Cross Road Stormwater System Renewal

A report dated February 11, 2016, was submitted.

Councilor Hendsbee inquired if Items 5.2 and 5.7 would eliminate flooding in the subject areas. Mr. Yates responded that Item 5.7 will help mitigate flooding on the Bedford Highway, however, Item 5.2 will not improve the situation for the properties that are inside the flood plain of the Little Sackville River.

At this time, the Board decided to go back into In Camera as some of the flooding concerns involve private properties. At this time, Jamie Hannam joined the meeting.

5.3 Balsam Road Pumping Station (PS) Elimination

A report dated February 17, 2016, was submitted.

5.4 Waterfront Drive Wastewater System Replacement

A report dated February 11, 2016, was submitted.

5.5 Sullivan's Pond Storm Sewer System Replacement - Design

A report dated February 18, 2016, was submitted.

A discussion was held regarding the aesthetic design of the system.

5.6 Northwest Arm Sewer Rehabilitation – Detailed Design

A report dated February 11, 2016, was submitted.

5.7 Bedford Highway at Shaunslieve Drive Culvert Upgrade

A report dated February 18, 2016, was submitted.

MOVED BY Commissioner Savage, seconded by Commissioner Hendsbee that the Halifax Regional Water Commission Board approve the above-noted Capital Project Items 5.1 – 5.7.

MOTION PUT AND PASSED.

6. 2016 SPRING DEBENTURE

A report dated February 18, 2016, was submitted.

MOVED BY Commissioner Hendsbee, seconded by Commissioner Mason that the Halifax Regional Water Commission Board approve the refinancing of a \$2,000,000 balloon payment for the remaining 10 year term with an all-inclusive rate not to exceed 5.5%.

MOTION PUT AND PASSED.

7. APPROVAL AUTHORITY LIST FOR PURCHASES

A report dated February 17, 2016, was submitted.

MOVED BY Commissioner Hendsbee, seconded by Commissioner Mason that the Halifax Regional Water Commission Board approve the revised list as presented, with the additions of new positions, as well as other staff transitions.

MOTION PUT AND PASSED.

8. DATE OF NEXT MEETING

The next meeting is scheduled for March 31, 2016.

The meeting was adjourned at 10:20 a.m.

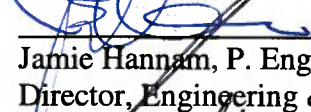
James G. Spurr
Secretary

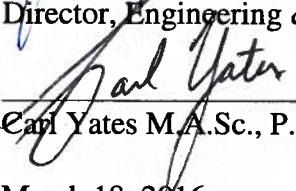
Commissioner Russell Walker
Vice- Chair

The following Information Items were submitted:

- 1-I Operations and Financial Monthly Update
- 2-I Capital Budget Approvals to Date – 2015/2016
- 3-I Bank Balance
- 4-I Service Level Agreement with Halifax Regional Municipality
- 5-I Seasonal Disinfection Program - Update

TO: Ray Ritcey, Chair and Members of the Halifax Regional Water Commission Board

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

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

DATE: March 18, 2016

SUBJECT: **Bedford Pumping Station Rehabilitation (at Mill Cove WWTF)**

ORIGIN

2009/10 Capital Budget.

RECOMMENDATION

The HRWC Board approve the funding for the construction phase of the Bedford Pumping Station (PS) Rehabilitation project at an estimated cost of \$3,250,000 for a revised total project estimated cost of \$3,800,000.

BACKGROUND

The Bedford Pump Station at the Mill Cove Wastewater Treatment Facility (WWTF) was constructed in 1970 and currently serves a total area of approximately 500 hectares and a population of approximately 16,000. Including future growth, the pump station will ultimately serve approximately 800 hectares and a population of 24,000. The estimated future design capacity for this pump station is 660 l/s.

Electrical and mechanical systems at the station have reached the end of their useful life and require replacement. This project will extend the useful life of the pump station and make allowance for future growth. Without upgrades, the station will experience increasingly frequent failures, downtime, more intensive maintenance and substantial repairs. This will result in more frequent sanitary sewer overflows, higher O&M costs and increasing health and safety concerns.

ITEM #5.1

HRWC Board

March 31, 2016

Replacement parts for existing equipment are also becoming difficult to obtain and ad-hoc repairs lead to mismatched equipment and deteriorating system integration.

The project includes full electrical and mechanical upgrades and associated works including pumps, electrical entrance, wiring, control and communication systems, dry-well and wet-well gas detection systems, motor control centre, variable frequency drives, piping and valves, new automated bar screen, odor control, ventilation systems, heating system, equipment lifting system, and preparation and painting of inside surfaces.

Three phases of this project have been approved to date for a total of \$550,000.

1. Concept Design - \$50,000 (September 2009)
2. Flow Monitoring Equipment - \$200,000 (September 2013)
3. Preliminary and Detailed Design - \$300,000 (September 2014)

To date the concept design, flow monitoring equipment installation and preliminary design has been completed for a total cost of \$140,000.

DISCUSSION

The preliminary design for the pump station was recently completed by AECOM. The preliminary design report provided a detailed construction cost estimate of \$ 2,578,775. This construction cost results in a revised total project cost estimate of \$3,800,000 (see Attachment 1 – Bedford PS Rehabilitation Detailed Cost Estimate)

The detailed design work for the project began recently with AECOM as the engineering consultant. The design work is expected to be completed by May 2016. The construction phase of the project is scheduled for an estimated six month duration commencing in July 2016.

BUDGET IMPLICATIONS

The total revised project cost is \$3,800,000. With \$550,000 in funding previously approved, \$3,250,000 in additional funding is required for this project. The additional funding is available from the following two sources.

Funding in the amount of \$2.85M including net HST is available within the 2016/17 Capital Budget under “*Bedford PS Rehabilitation (at Mill Cove WWTF)*”.

ITEM #5.1

HRWC Board

March 31, 2016

The budget for the Lakeside Pumping Station Diversion to Halifax Sewershed project was approved for a total estimated cost of \$27,106,000 including net HST. The project is now complete and the financial close out is being finalized with the total cost expected to be in the order of \$23.6M. It is proposed that \$400,000 of capital funding for the Lakeside Pumping Station Diversion to Halifax Sewershed project be re-allocated to the Bedford PS Project for the balance of the required funding.

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

There are no recommended alternatives.

ATTACHMENTS

1. Attachment 1 - Bedford PS Rehabilitation Detailed Cost Estimate
2. Attachment 2 - Sketch of project location.

Report Prepared by:



Greg Rice, P.Eng., Project Engineer, 476-3520

Financial Reviewed By:

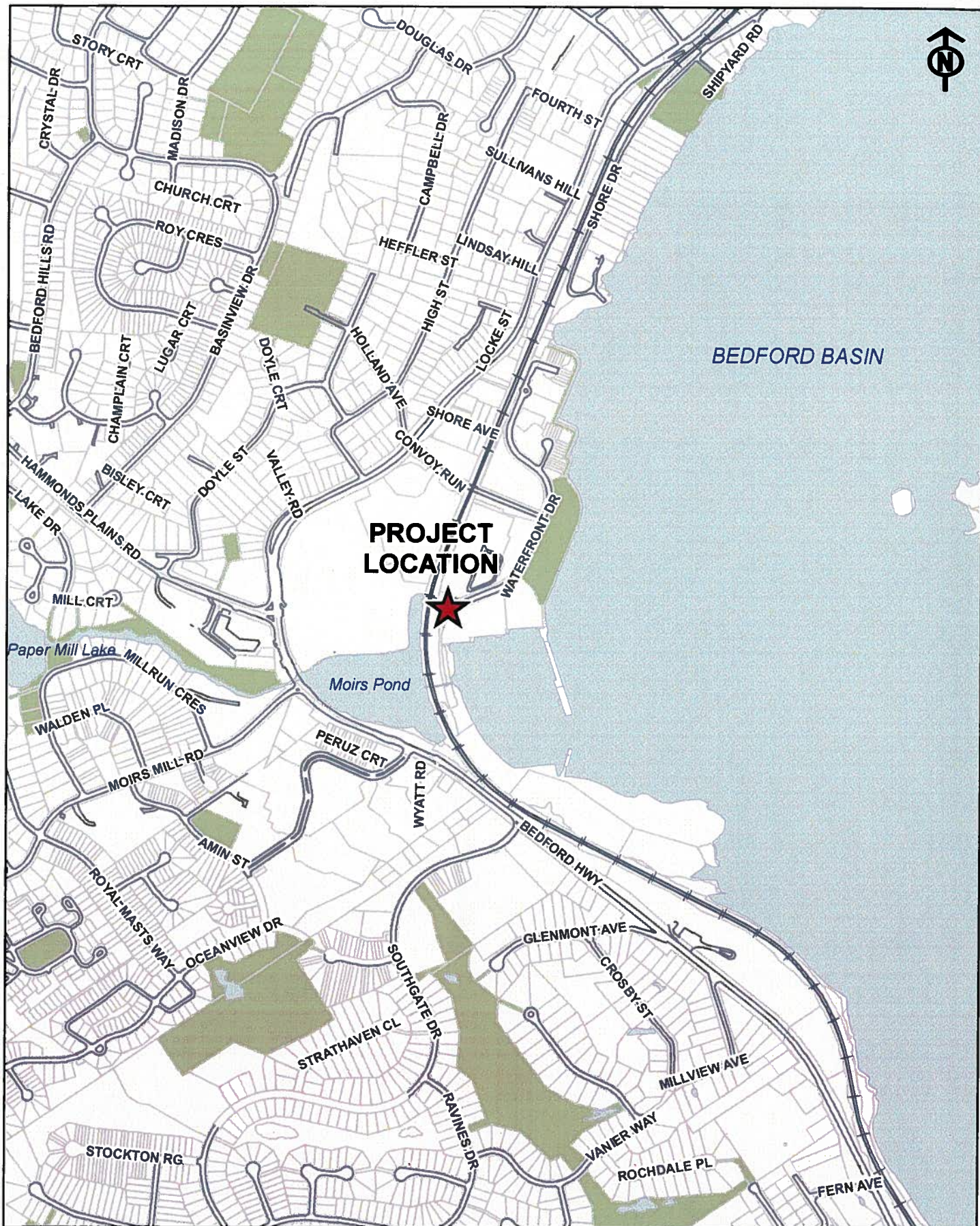


Cathie O'Toole, MBA, CPA, CGA, Director, Corporate Services, 490-3685

Bedford Pump Station Rehabilitation Project Cost Breakdown

Category Description	Cost Estimate
Completed Phases	
Concept Design	\$ 10,000.00
Flow Monitoring	\$ 80,000.00
Preliminary Design	\$ 50,000.00
Total Completed Phases	\$ 140,000.00
Proposed Phases	
Engineering/Design Cost Estimate (Proposal & Current CO's	\$ 165,000.00
Construction Unit Cost Estimate	\$ 2,578,775.00
Professional Fees (1%)	\$ 26,000.00
Construction Management (Proposal)	\$ 130,000.00
Labour/Wages	\$ 50,000.00
Subtotal	\$ 2,949,775.00
Contingency (15% of Subtotal)	\$ 442,466.25
Total Proposed Phases	\$ 3,392,241.25
Subtotal Estimated Project Costs	\$ 3,532,241.25
Net HST (4.286% of Subtotal)	\$ 151,391.86
Interests & Overhead (4% of Subtotal)	\$ 141,289.65
Total Estimated Project Costs	\$ 3,800,000.00

* Includes Automated Screen




Drawn By: G. Mesheau
 Data Source: Halifax Water / HRM
 Date: Wednesday, April 09, 2014

The information contained on this map may not be complete and/or accurate in all areas. Should accurate information or confirmation of completeness be required, please contact the Engineering Department of Halifax Water. Halifax Water will not be held liable for misuse of this information.

"To provide world class services for our customers and our environment"



TO: Ray Ritcey, Chair and Members of the Halifax Regional Water Commission Board

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

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

DATE: March 21, 2016

SUBJECT: **Wastewater Pumping Station Upgrade Program – West Region**

ORIGIN

The 2015/16 Capital Budget.

RECOMMENDATION

The HRWC Board approve the Wastewater Pumping Station Upgrade Program – West Region, at an estimated cost of \$420,000.

BACKGROUND

Halifax Water owns and operates 171 wastewater pumping stations. As part of maintaining the wastewater pumping station infrastructure assets and service level standards, staff conduct assessments to determine locations where upgrades, rehabilitation work, and equipment replacement is required.

DISCUSSION

Wastewater and stormwater supervisory staff in the West Region have reviewed these stations and identified and prioritized the required upgrades. The resulting pumping station upgrades identified for the 2015/16 fiscal year are outlined in the following table:

ITEM #5.2

HRWC Board

March 31, 2016

Pumping Station Upgrade Program – West Region	
<i>Armenia Pump Station - Replace two pumps</i>	\$24,000
<i>Ahmadi Pump Station - Replace two pumps</i>	\$24,000
<i>Herring Cove Pump Station - Replace one pump, rebuild one pump and replace one VFD</i>	\$144,000
<i>Duffus St Pump Station - Replace one VFD</i>	\$25,000
<i>Roaches Pond Pump Station - Replace two pumps</i>	\$135,000
Sub-Total	\$352,000
Contingency (10%)	\$35,200
Sub-Total	\$387,200
Net HST (4.286%)	\$16,595
Sub-Total	\$403,795
Interest & Overhead (4%)	\$16,152
TOTAL	\$419,947
TOTAL ROUNDED TO	\$420,000

The total estimated cost for this project is \$420,000 including net HST.

BUDGET IMPLICATIONS

Funding in the amount of \$420,000 is available from within the 2015/16 Capital Budget under “*Wastewater – Structures, Wastewater Pumping Station Upgrade Program – West Region*”.

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” due to maintaining station capacity as per operating approvals and design intentions. It also meets the “Firm Regulatory Demand” due to reducing the likelihood of experiencing a sanitary sewer overflow event.

ALTERNATIVES

There are no recommended alternatives.

ATTACHMENT

N/A

Report Prepared By: _____

A blue ink signature of Shawn Rowe, consisting of a large, stylized 'S' followed by 'Rowe'.

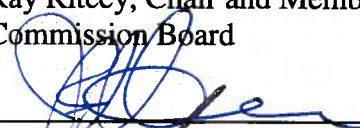
Shawn Rowe, P. Eng., WW/SW Service Operations
Engineer

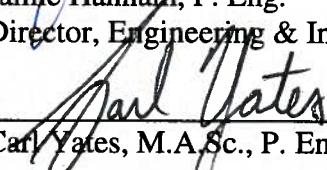
Financial Reviewed By: _____

A blue ink signature of Cathie O'Toole, written in a cursive style.

Cathie O'Toole, MBA, CPA, CGA, Director of Corporate
Services

TO: Ray Ritcey, Chair and Members of the Halifax Regional Water Commission Board

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

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

DATE: March 21, 2016

SUBJECT: JD Kline WSP – Replacement of the Lime Feed and Delivery System

ORIGIN

The 2016/17 Capital Budget.

RECOMMENDATION

The HRWC Board approve the JD Kline WSP – Replacement of the Lime Feed and Delivery System project at an estimated cost of \$300,000.

BACKGROUND

The existing lime system at the JD Kline WSP is original to the plant and is nearing the end of its serviceable life. Maintenance of the system has become more and more time consuming. The parts for the lime machines are hard to find and sometimes need to be custom made. Lime is an essential component of the treatment process and a new reliable feed system needs to be installed.

DISCUSSION

The design work of the new lime feed system was funded through the Chemical Feed System Replacement project (SAP # 3-1609). Stantec Consulting Ltd was awarded the design component of the work, including preparation of tender documents. Stantec carried out an assessment of various lime feed systems available in the market and provided Halifax Water with budgetary pricing and descriptions. Based on the recommendations in Stantec's technical memo, Halifax Water determined that the existing system will be replaced with a "traditional lime slurry with conveyor between lime silo and batch mix tank" system. The project will involve purchasing the new lime feed systems and engaging a contractor to carry out the installation over two phases. Rotary valves that connect the lime machines to the storage silos will also be replaced as part of this project. Various controls will need to be updated as the new machines provide more data back to the programmable logic controller (PLC) for improved operation and monitoring.

The estimated cost of the JD Kline WSP – Replacement of the Lime Feed and Delivery System project is \$600,000 for two machines. This is a phased project where one machine will be replaced in 2016/17 at a cost of \$300,000 including net HST and the other one in 2017/18 budget year at a cost of \$300,000 including net HST.

BUDGET IMPLICATIONS

Funding in the amount of \$300,000 including net HST is available within the 2016/17 Capital Budget under *JD Kline WSP - Replace the Lime Feed and Delivery System*. The second phase of the project will be identified in the future 2017/2018 capital budget.

The proposed expenditure meets the "No Regrets – Unavoidable Needs" approach of the 2012 Integrated Resource Plan. The proposed work meets the NR-UN criteria of Ensures integrity and safety.

ALTERNATIVES

There are no recommended alternatives.

ITEM #5.3

HRWC Board

March 31, 2016

ATTACHMENT

N/A

Report Prepared By:



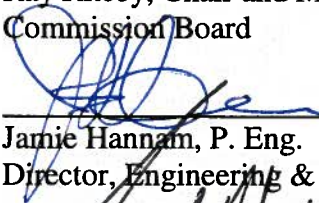
Tom Gorman, Manager Water Infrastructure, 490-4176

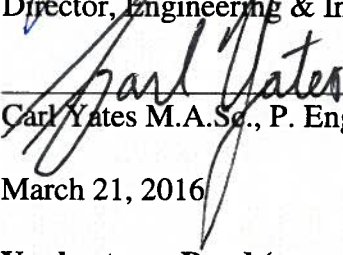
Financial Reviewed By:



Cathie O'Toole, MBA, CPA, CGA, Director, Corporate Services

TO: Ray Ritcey, Chair and Members of the Halifax Regional Water Commission Board

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

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

DATE: March 21, 2016

SUBJECT: Yankeetown Road (near Civic 258) Cross Culvert Replacement

ORIGIN

Operation Staff.

RECOMMENDATION

The HRWC Board approve the Yankeetown Road (near Civic 258) Cross Culvert Replacement project at an estimated cost of \$200,000.

BACKGROUND

There is an existing cross culvert on Yankeetown Road (near Civic 258) which enables a watercourse to drain toward Cox's Lake. The culvert is constructed of a 900mm dia. corrugated steel pipe and is approximately 12m in length. Operations recently noted that the road surface has deformed and that the structure is in a near state of failure.

DISCUSSION

Due to the near failed state of this culvert it is proposed that the replacement proceed as soon as possible in the 2016 construction season. The design will be undertaken by staff. The new structure may need to accommodate fish passage as this is a known watercourse. A specialist will be engaged to confirm the need for fish passage.

ITEM #5.4

HRWC Board

March 31, 2016

The estimated cost of the Yankeetown Road (near Civic 258) Cross Culvert Replacement project is \$200,000 including net HST.

BUDGET IMPLICATIONS


The proposed project was not included within the 2016/17 Capital Budget; however, funding is available from underspending related to the Shore Road Storm Sewer Diversion project. Funding in the amount of \$291,000 was approved for this project and the work has been completed for a cost of \$68,000. Thus \$200,000 is available for the Yankeetown Road (near Civic 258) Cross Culvert Replacement project.

The proposed expenditure meets the “No Regrets – Unavoidable Needs” approach of the 2012 Integrated Resource Plan. The proposed work meets the NR-UN criterion of “required to ensure the system integrity and safety”. The projects meet this criterion based on the following: “Renewal or rehabilitation of system components that by current measures are clearly approaching a condition that could impair normal system operation”.


ALTERNATIVES

There are no recommended alternatives.

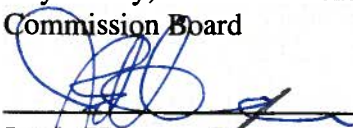
Report Prepared by: _____


Brad Baxter, P. Eng., Engineering Technologist II, 490-6781

Financial Reviewed by: _____


Cathie O'Toole, MBA, CPA, CGA, Director of
Corporate Services, 490-3685

TO: Ray Ritcey, Chair and Members of the Halifax Regional Water Commission Board

SUBMITTED BY: 
Jamie Hannam, P. Eng.,
Director Engineering & IS

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

DATE: March 22, 2016

SUBJECT: **Building Canada Fund Candidate Projects**

ORIGIN

HRM Regional Council – Building Canada Fund Infrastructure Projects – July 29, 2014

RECOMMENDATION

1. Approve the list of additional projects as HRWC priorities for potential federal infrastructure funding under the Building Canada Fund, and
2. Direct staff to submit the list of additional projects to HRM for integration with an HRM Regional Council report recommending the endorsement and submission of the additional candidate projects to the Building Canada Fund.

BACKGROUND

In 2012 the federal government announced plans to develop a new long term infrastructure fund which would bring all its infrastructure funds together under one umbrella program and streamline the application criteria and processes. The new Building Canada Fund was originally announced in Budget 2013, after a year of consultation with provinces, municipalities and other stakeholders.

The current plan proposes to deliver \$53.3 billion over 10 years to public infrastructure that supports the federal priorities of productivity, economic growth and job creation.

The primary application-based funding program for municipalities under the Building Canada Fund is the Provincial/Territorial Infrastructure Component (PTIC). This program provides \$10 billion over 10 years to support projects of national, regional and local significance, which assist the federal goals of job creation and economic growth. The PTIC allocates a base amount of \$250 million to each province and territory, plus a per-capita allocation. Eligible projects include new construction, renewal, and rehabilitation or material enhancement of infrastructure for public use or benefit. In the context of HRWC, the PTIC project categories include drinking water, wastewater and stormwater.

Based on the eligibility and program criteria, HRM and HRWC staff identified a series of projects under each of Council's three priority areas for federal infrastructure funding. On July 29, 2014, HRM Council approved the priority projects for PTIC funding which included the following HRWC projects;

• Lake Major Dam Replacement:	\$ 2,100,000
• Water Transmission Main Renewal/Redundancy:	\$15,200,000
• Aerotech WWTF Upgrade:	\$21,000,000
• Northwest Arm Sewer Rehabilitation:	\$15,400,000
• Bedford Sackville Trunk Sewer Storage Facility:	\$20,000,000
• Sullivan's Pond Storm Sewer Renewal – Phase 1:	\$ 8,000,000
• Deep Storm Sewer Program:	<u>\$ 5,500,000</u>
 TOTAL Value of Candidate Projects	 <u>\$87,200,000</u>

Subsequently, HRM staff submitted applications to NS Municipal Affairs and to date two HRWC projects have been approved for Federal/ Provincial funding under the program (Aerotech WWTF Upgrade and Water Transmission Main Renewal/Redundancy project).

DISCUSSION

With the upcoming Federal budget proposed for March, staff are anticipating an accelerated interest in the Building Canada Fund program. HRM and HRWC are preparing an additional list of projects for HRM Regional Council endorsement for the next submission to the Building Canada funding program. The previously endorsed projects have been submitted for consideration and remain a priority.

The suggested additional Halifax Water projects were selected from the current five year capital budget. These projects are a corporate priority to maintain the integrity of our core service delivery assets and meet the eligibility criteria for the funding program. The proposed additional priority infrastructure projects are as follows (the short form summaries for each project are attached):

WATER:

- Lake Major Water Supply Plant Raw Water Low Lift Station: \$ 8,700,000
- Halifax Peninsula Water Transmission Main Rehabilitation: \$ 7,200,000

WASTEWATER:

- Wastewater Collection System Pump Station Renewal Program: \$20,295,000

STORMWATER:

- Sullivan's Pond Storm Sewer Renewal – Phase2: \$ 8,375,000
- Ellenvale Retaining Wall Replacement: \$ 3,600,000
- Cross Culvert Replacement Program: \$ 7,500,000

TOTAL Value of Additional Candidate Projects **\$55,670,000**

Staff is seeking endorsement of the additional priority projects and direction to advance the full list to HRM for integration with an HRM Regional Council report recommending the endorsement and submission of the additional candidate projects to the Building Canada Fund.

BUDGET IMPLICATIONS

These projects are currently within the Five Year Capital Plan. Successful approval of a project for funding assistance will have a positive impact on the overall capital funding plan for HRWC in future years and will reduce debt requirements and rate impacts.


ALTERNATIVES

N/A

ATTACHMENTS

Lake Major Water Supply Plant Raw Water Low Station
Halifax Peninsula Low Transmission Main Rehabilitation
Wastewater Pumping Station Renewal Program
Sullivan's Pond Storm Sewer Renewal – Phase 2
Ellenvale Retaining Wall Replacement
Cross Culvert Replacement

Report Prepared by: _____


Jamie Hannam, P. Eng. Director of Engineering & IS,
902-490-4804

Financial Reviewed by: _____


Cathie O'Toole, MBA, CPA, CGA, Director, Corporate Services
902-490-3685

Project Proposal for consideration under PTIC-NRP

Project Name: Lake Major Water Supply Plant Raw Water Low Lift Station

Applicant: Halifax Regional Municipality

Eligible Category: Water

Project Description:

This project involves the design and construction of a new raw water low lift station to replace the existing low lift station at Lake Major WSP in Dartmouth, Nova Scotia. The existing raw water lift station was originally constructed in the early 1960s to pump raw water from Lake Major to Lake Lamont for the City of Dartmouth water system. The station has been modified over the years and now supplies raw water to the Lake Major Water Supply Plant, which was commissioned in 1998. The Lake Major System supplies Halifax Regional Water Commission's East Region service area (Dartmouth/Cole Harbour).

The shallow water configuration of the inlet structure is negatively affecting water treatment processes and water quality. The elevation of the existing station leaves the facility susceptible to flooding and limits the storage capacity available in the lake. The station equipment is reaching the end of its serviceable life. Halifax Water has determined that a raw water low lift pumping station is required.

The project includes the design and construction of a new 20MGD-capacity pumping station and intake structure to satisfy the long-term objectives of a safe and secure water supply for residents in this region of HRM.

This project supports the Halifax Regional Water Commission's and Halifax Regional Municipality's long-term planning efforts. There has been significant development activity in the Dartmouth/Cole Harbour areas in recent years, with more planned, consistent with the HRM Regional Plan. Increased water supply is needed for future development and expansion. The new low pumping station will replace the existing facility that has reached the end of its service life. The detailed design work is proposed for 2016/17 to 2017/18 with construction proposed to be undertaken in 2018/19.

For Highways/Major Roads, Date Traffic Count and AADT: NA

Project Information:

Location: Halifax Regional Municipality

Project Timelines:

- Project design – 2016/17 - 2017/18
- Construction begins – 2018
- Construction ends - 2019

Type of Construction: New construction

Financials:

Total Project Cost: \$8.7 million

Projected Cash flow:

2016/17: \$200,000

2017/18: \$300,000

2018/19 \$8,200,000

Total Eligible Cost: \$8,700,000

Requested Federal Contribution: \$2,900,000

Other Federal Funding: NA

Council Resolution (date): Proposed

Project Proposal for consideration under PTIC-NRP

Revision Date: February 23, 2016

Project Name: Halifax Peninsula Low Transmission Main Rehabilitation

Applicant: Halifax Regional Municipality

Eligible Category: Water

Project Description:

The project involves the installation of a structural liner inside an existing old transmission main utilizing innovative 'trenchless technology' to extend the serviceable life of a critical water transmission main in Halifax.

The Peninsula Low South 600 mm dia. transmission main was installed in 1862 and travels through various streets and easements and along Quinpool Road to Robie Street to the downtown Halifax area. There have been a number of leaks along this line over the years. The line passes through heavily traveled, built-up residential and business districts. There is limited space to remove and replace this line. Hydraulic capacity testing in recent years has found that the Peninsula Low Transmission Main is significantly tuberculated and flows are impeded. Installing a structural liner inside the old pipe will maximize the flow capacity and will reduce the liability of operating this very old transmission. It will also minimize the disturbance of other buried utilities. The only alternative would be to undertake a very expensive and disruptive, traditional 'open-cut' replacement project.

This project supports the Halifax Regional Water Commission's and Halifax Regional Municipality's long-term planning efforts. There has been significant development activity in peninsular Halifax in recent years, with more planned, consistent with the HRM Regional Plan. Increased water supply is needed for future development and increased densities. The innovative use of a structural liner using trenchless technologies to rehabilitate one of the original pipes that has served the city for over 150 years will minimize the impact on businesses and residents along the streets.

The detailed design work is proposed for 2016 with construction proposed to be undertaken in 2017 and 2018.

For Highways/Major Roads, Date Traffic Count and AADT: NA

Project Information:

Location: Halifax Regional Municipality

Project Timelines:

- Project design – 2017
- Construction begins – 2018
- Construction ends - 2019

Type of Construction: New construction

Financials:

Total Project Cost: \$7.2 million

Projected Cash flow:

2016/17: \$300,000

2017/18: \$3,600,000

2018/19 \$3,300,000

Total Eligible Cost: \$7,200,000

Requested Federal Contribution: \$2,400,000

Other Federal Funding: NA

Council Resolution (date): Proposed

Project Proposal for consideration under PTIC-NRP**Project Name:** Wastewater Pumping Station Renewal Program**Applicant:** Halifax Regional Municipality**Eligible Category:** Wastewater**Project Description:**

Halifax Water owns and operates 175 wastewater pumping stations within the wastewater collection system. These pumping stations are critical to the effective conveyance of wastewater to the various treatment facilities around the harbour. In addition, their effective operation is critical to the minimization of impacts to the local environment due to overflow or outage. The expected life span of a pumping station is in the order of 50 years and thus, on average, Halifax Water should be replacing three to four pumping stations per year to maintain the system integrity. Leveraging off recent formal asset management condition assessments that is providing guidance on replacement priorities and the required capital expenditures, Halifax Water is proposing a significant investment in the renewal of the wastewater pumping station asset class on a priority basis. The current five capital plan plans identifies \$20,295,000 for this program.

For Highways/Major Roads, Date Traffic Count and AADT: NA**Project Information:****Location:** Halifax Regional Municipality**Project Timelines:**

- Design Phase – 2016 to 2020
- Construction Phase – 2016 to 2020

Type of Construction: Replacement**Financials:****Total Project Cost:** \$20,295,000**Projected Cash flow:**

2016/17:	\$3,540,000
2017/18:	\$2,825,000
2018/19:	\$4,300,000
2019/20:	\$4,600,000
2020/21:	\$5,530,000

Total Eligible Cost: \$20,295,000**Requested Federal Contribution:** \$6,765,000**Other Federal Funding:** NA**Council Resolution (date):** Proposed

Project Proposal for consideration under PTIC-NRP

Project Name: Sullivan's Pond Storm Sewer Renewal – Phase 2

Applicant: Halifax Regional Municipality

Eligible Category: Stormwater

Project Description:

The project includes the design and construction of the replacement of the existing storm sewer between Sullivan's Pond and Halifax Harbour. The current pipe was installed in 1971 and its capacity met the development needs of that time. The area has grown significantly since that time, and now the capacity of the old pipe is no longer sufficient. The plan is to replace it with a much larger concrete pipe.

This project will renew a large and significant storm sewer within the core downtown area of Dartmouth. This sewer handles the flow from a large watershed area, comprising part of the Shubenacadie Lake system. The project would help prevent a catastrophic failure of the system that would lead to significant property damage to a large commercial and residential area. The new storm system will be an approximately 4.0m by 4.5m box culvert 580m in total length. The new system is intended to manage the effects of large (100 year) storms for the downtown Dartmouth area, and it will provide for fish passage (as per direction from the Federal Department of Fisheries), between the Halifax Harbour and the Dartmouth lake system. The system will be designed in 2016 and will be constructed in two phases. Phase 1 construction will be in 2017. Phase 2 is proposed for consideration in 2018 or later.

For Highways/Major Roads, Date Traffic Count and AADT: NA

Project Information:

Location: Halifax Regional Municipality

Project Timelines:

- Project Design - 2016
- Construction Phase – 2018 or later

Type of Construction: Renewal

Financials:

Total Project Cost: \$8.375 million

Projected Cash flow:

2018/19: \$8,375,000

Total Eligible Cost: \$8,375,000

Requested Federal Contribution: \$2,791,667

Other Federal Funding: NA

Council Resolution (date): Proposed

Project Proposal for consideration under PTIC-NRP

Project Name: Ellenvale Retaining Wall Replacement

Applicant: Halifax Regional Municipality

Eligible Category: Stormwater

Project Description:

Ellenvale Run is an urban stormwater drainage system in Dartmouth that Halifax Water is responsible for as specifically identified in the 2007 Transfer Agreement between the Halifax Regional Municipality and Halifax Water. The approximately five (5) kilometer long drainage system serves approximately 900 hectares of land and consists of natural riparian areas, culverts, various types of retaining walls, and buried pipe which eventually discharges into the northwest end of Morris Lake. The system is the route of for the major (1 in 100 year) storm event.

The retaining walls are in poor condition and are in need of replacement in order to ensure the structural integrity and hydraulic capacity of the system.

For Highways/Major Roads, Date Traffic Count and AADT: NA

Project Information:

Location: Halifax Regional Municipality

Project Timelines:

- Design Phase – 2016
- Construction Phase – 2017 to 2019

Type of Construction: Replacement

Financials:

Total Project Cost: \$3.6 million

Projected Cash flow:

2017/18: \$1,200,000
2018/19: \$1,200,000
2019/20: \$1,200,000

Total Eligible Cost: \$3,600,000

Requested Federal Contribution: \$1,200,000

Other Federal Funding: NA

Council Resolution (date): Proposed

Project Proposal for consideration under PTIC-NRP

Project Name: Cross Culvert Replacement

Applicant: Halifax Regional Municipality

Eligible Category: Stormwater

Project Description:

Halifax Water, as part of the Capital Infrastructure Program, maintains an annual stormwater culvert renewal program. This program helps ensure the long term operability of the stormwater system. To support this program a culvert inventory and condition assessment has been undertaken and it has identified an inventory of 1744 cross culverts of which 6% (approximately 100 culverts) have been rated with a condition of "critical".

These roadway cross culverts are located throughout HRM and their structural integrity is required in order to maintain service during storm flow events and ensure the safety of the users of the roadway systems. The project would replace these cross culverts which are rated with a condition of "critical".

For Highways/Major Roads, Date Traffic Count and AADT: NA

Project Information:

Location: Halifax Regional Municipality

Project Timelines:

- Design Phase – 2016
- Construction Phase – 2018 to 2020

Type of Construction: Replacement

Financials:

Total Project Cost: \$7.5 million

Projected Cash flow:

2017/18: \$2,500,000
2018/19: \$2,500,000
2019/20: \$2,500,000

Total Eligible Cost: \$7,500,000


Requested Federal Contribution: \$2,500,000

Other Federal Funding: NA

Council Resolution (date): Proposed

TO: Mr. Ray Ritcey, Chair and Members of the Halifax Regional Water Commission Board

SUBMITTED BY:



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

APPROVED:



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

DATE: March 23, 2016

SUBJECT: Capital Budget Approval

ORIGIN

HRWC Board Approval in Principle of the 2016/17 Capital Budget - January 28, 2016.

RECOMMENDATION

It is recommended that the HRWC Board approve the 2016/17 Capital Budget and direct staff to implement in accordance with the Capital Project Funding Approval Policy.

BACKGROUND

On January 28, 2016 the HRWC Board approved the 2016/17 Capital Budget in principle. The approval was subsequent to a formal review and recommendation from the HRWC Board Environment, Safety and Capital Committee.

In parallel to the budget approval process, the HRWC has been reviewing Board governance issues including participation in a formal Board Governance Workshop on January 8, 2016. The governance discussions included potential enhancements to the capital project funding approval process.

DISCUSSION

The agenda for the March 31, 2016 HRWC Board meeting includes an item for the consideration of a recommendation to approve an enhanced *Capital Project Funding Approval Policy*. Should this policy be reviewed and approved by the HRWC Board, it would be necessary for the Board to formally approve the 2016/17 Capital Budget in the context of the newly approved policy, to initiate the new capital project funding approval process.

Attached, in Schedule 1, is the 2016/17 Capital Budget for HRWC for the fiscal year April 1, 2016 to March 31, 2017 that was approved in principle by the Board on January 28, 2016. This budget document is now being brought forward for Board approval in the context of the new policy process.

Consistent with the approved policy, only projects over \$5,000,000 in value or projects with scopes of work or cost estimates that have changed since the formal budget approval would be brought forward to the Board for approval.


BUDGET IMPLICATIONS

There are no changes to the Budget Implications as presented in the January 28, 2016 report based the approval of the capital budget within this recommendation.

ATTACHMENTS

Schedule 1 - Halifax Water Capital Budget Program 2016/17

Report Prepared by: _____


Jamie Hannam, P. Eng., Director of Engineering & IS Department

Approval: _____


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

Financials Reviewed by: _____


Cathie O'Toole, MBA, CPA, CGA, Director Corporate Services

Schedule 1



Capital Budget Program

2016-2017

January - 2016

OVERVIEW

Halifax Water is the water, wastewater and stormwater utility providing services for residents within the Halifax Regional Municipality.

On the water side, Halifax Water is the largest supplier of domestic potable water in Atlantic Canada. We supply over 122,000 cubic metres of water per day from the Pockwock and Lake Major Watersheds to a population of 355,000. Our water system infrastructure is comprised of three (3) large water supply plants – J.D. Kline WSP at Pockwock Lake (227 ML/day design capacity), Lake Major WSP at Lake Major (94 ML/day design capacity), and Bennery Lake WSP (8 ML/day design capacity); 1567 kms of water mains, 18 storage reservoirs, 156 pumping stations and control chambers, 8,199 fire hydrants, 14,773 main valves, 86,514 services and related appurtenances. In addition, we own and operate five small systems in the suburban/rural areas within HRM.

With respect to wastewater and stormwater infrastructure Halifax Water own and operate seven (7) large wastewater treatment facilities, including the three Halifax Harbour Solutions wastewater treatment facilities located at Halifax, Dartmouth, and Herring Cove. The wastewater and stormwater system is comprised of approximately 2,402 kms of sewer mains, 37,869 manholes, 170 wastewater pumping stations, 29,687 catch basins, 79,466 customer services and other related appurtenances. In addition, we own and operate eight (8) small wastewater treatment facilities systems in the suburban/rural areas within HRM.

Halifax Water's mission is "*To provide world class services for our customers and our environment*". Halifax Water's 2012 *Integrated Resource Plan* identified a 30 year capital investment plan valued at \$2.6 Billion. As part of our overall mission, the capital budget program focuses on providing required infrastructure for asset renewal, regulatory compliance and growth, along with capital facilities, systems and equipment. The capital program helps ensure that we continue to provide world class services in a cost effective and efficient manner with a focus on long term integrity.

BUDGET STRUCTURE

The Halifax Water Capital Budget includes an annual *One Year* and *Five Year* capital plan. Capital projects are defined as newly acquired or constructed item with value greater than \$5000 and a life expectancy beyond one year.

The Capital Budget document includes four general asset categories: Water, Wastewater, Stormwater and Corporate Projects.

BUDGET HIGHLIGHTS

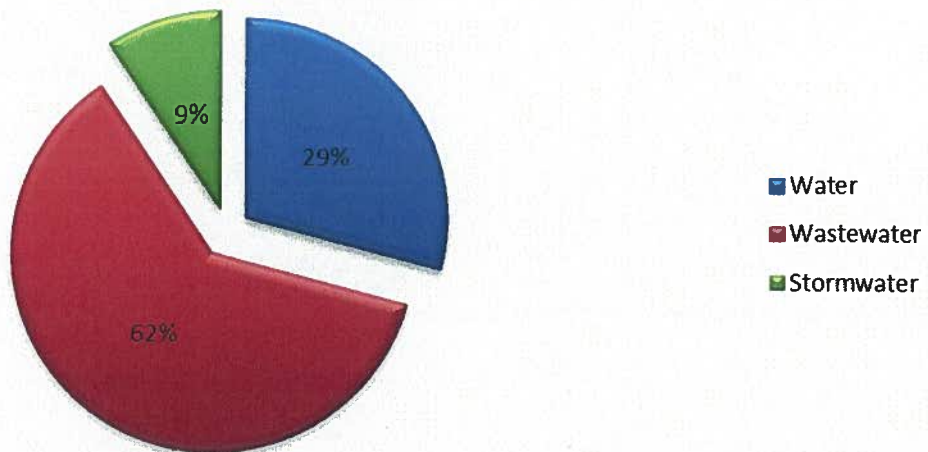
The detailed 1 Year and 5 year Capital Budget document is attached as Appendix A.

The summary totals for the four asset classes for the 1 Year and 5 Year capital budget are as follows:

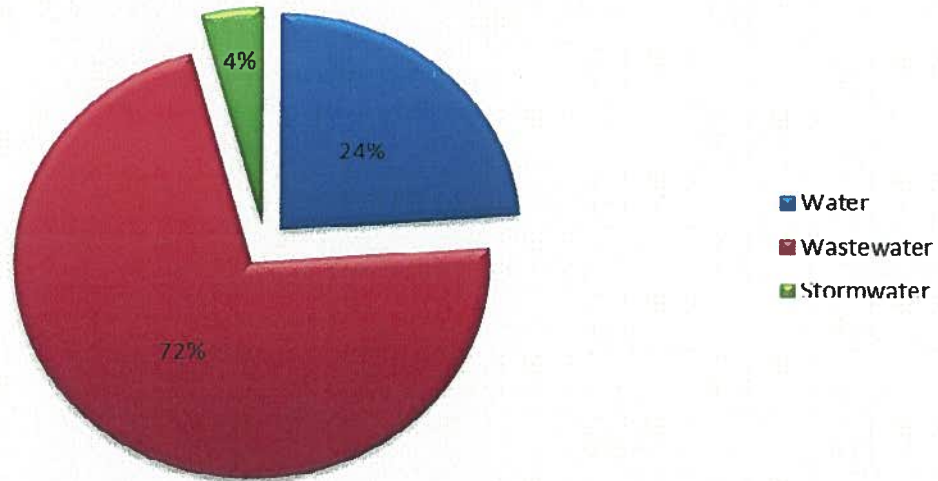
Asset Class	Year 1 2016 / 2017	Years 1 - 5 2016/17 - 2020/21
Water	\$16,453,000	\$101,948,000
Wastewater	\$35,838,000	\$246,164,000
Stormwater	\$3,951,000	\$38,170,000
Corporate Projects	\$10,535,000	\$59,710,000
TOTAL	\$66,777,000	\$445,992,000

The capital program balances near term needs with the need to balance long term investments across all asset classes. For comparative purposes, the proposed 5 Year capital expenditure allocation is compared to the target expenditure allocation identified within the IRP.

2016/17 to 2020/2021 Capital Budget by Asset Category



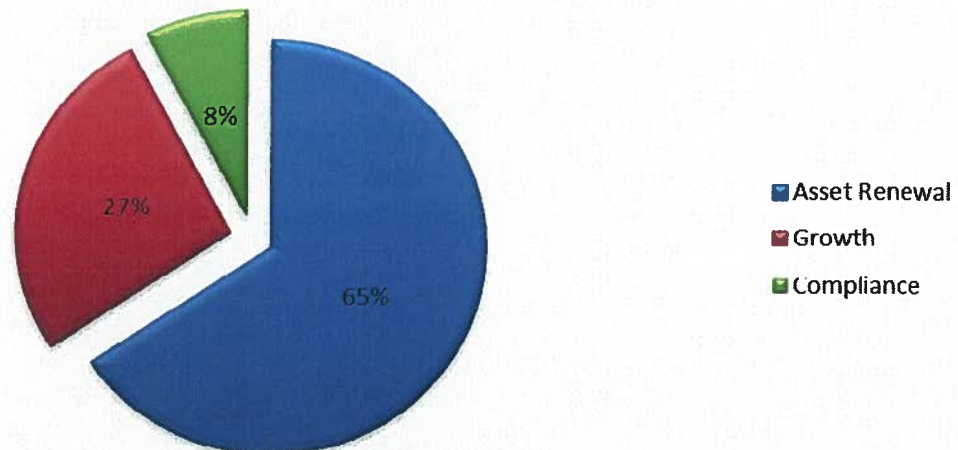
IRP 30 year Asset Category Allocation



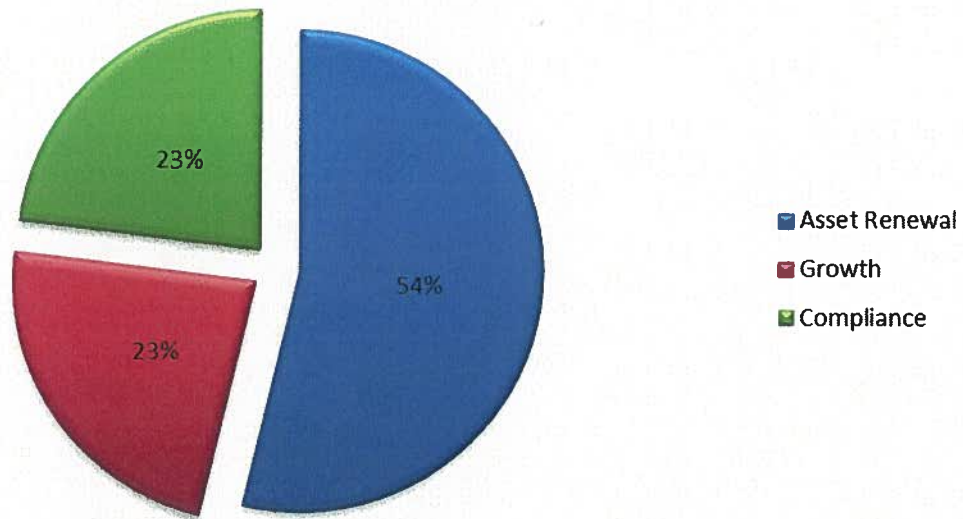
This comparison shows Halifax Water is generally on par with the IRP recommended allocation of funds with a near term expenditure of Sullivan's Pond Storm Sewer System Replacement project, causing the stormwater expenditure to be temporarily double that of the IRP.

In addition to expenditure allocations across asset classes, the budget provides a balanced program for the various programs drivers of Asset Renewal, Regulatory Compliance and Growth. For comparative purposes, the proposed 5 Year capital allocation to program drivers is compared to the target allocation identified within the IRP.

2016/17 to 2020/21 Capital Budget Project Drivers

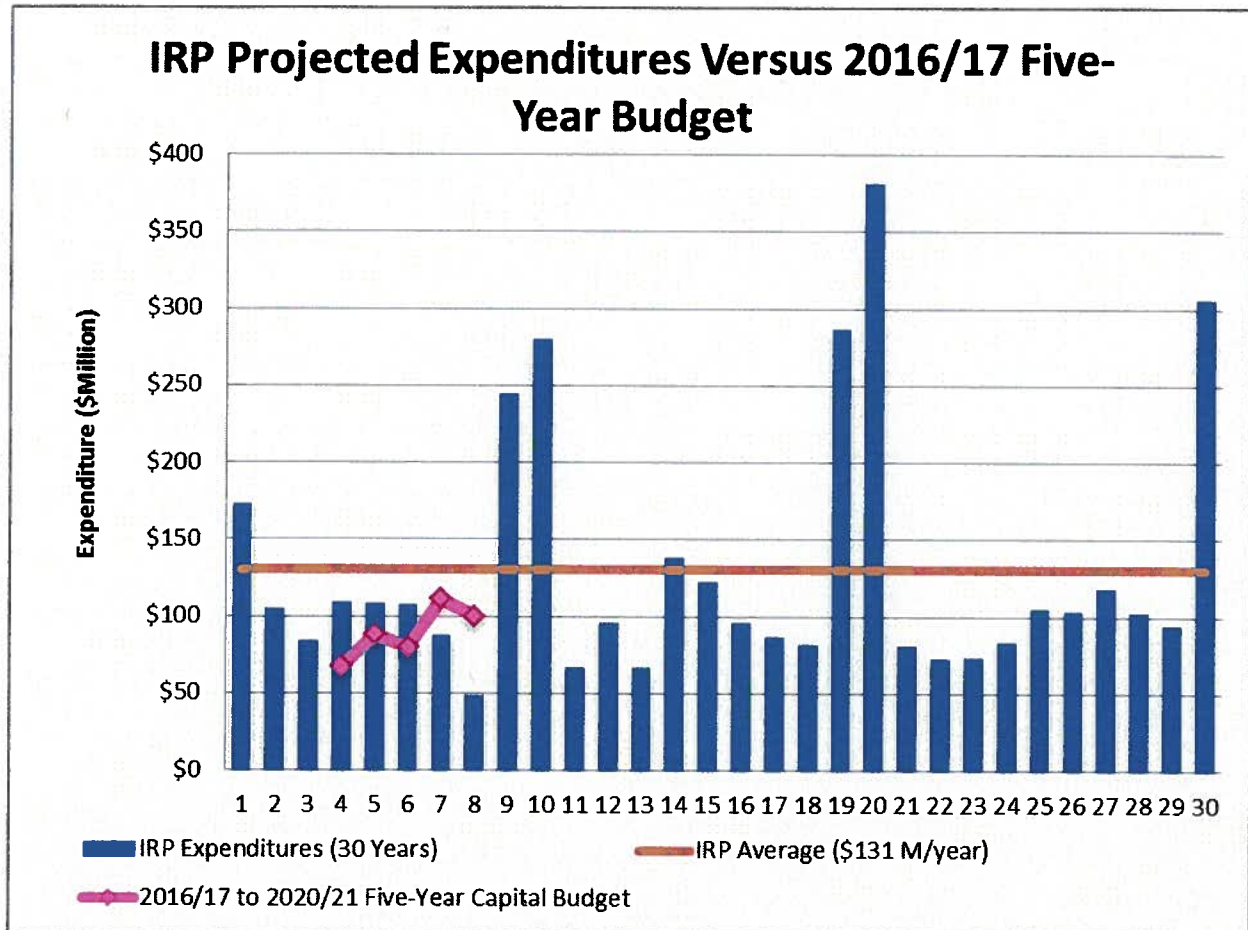


IRP 30 year Project Driver Allocation



The IRP compliance allocation is greater than the 5 Year compliance allocation due to large wastewater treatment facility expenditures that exist after the 10 year period.

The following chart shows the current proposed 5 Year capital expenditure plotted against the IRP based long term capital expenditure recommendation. These plots indicate a continued general increase trend in capital expenditures towards the target level.



The following sections provide some highlighted details of the Capital Budget.

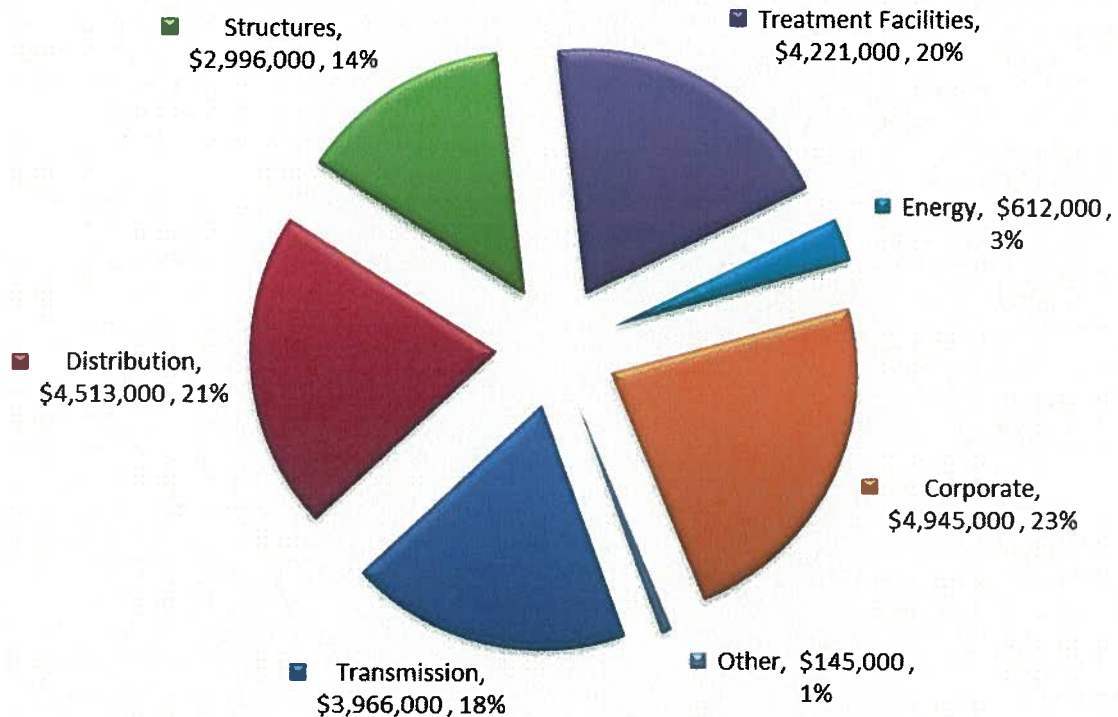
Water Asset Category

The Capital Budget funds the traditional capital requirements for water utility operation, along with a focus on several key capital initiatives. The 2016/17 budget is valued at \$16,453,000.

Major water capital projects include:

- Macdonald Bridge Transmission Main Replacement: \$3,295,000
- Distribution System Main Renewal Program in conjunction with HRM Streets program: \$4,000,000
- Lake Major Water Supply Plant - New Diesel Generator: \$1,900,000
- Asset Renewal and Process Upgrades – Water Supply Plants: \$2,321,000

2016/2017 Capital Budget by Asset Class - Water

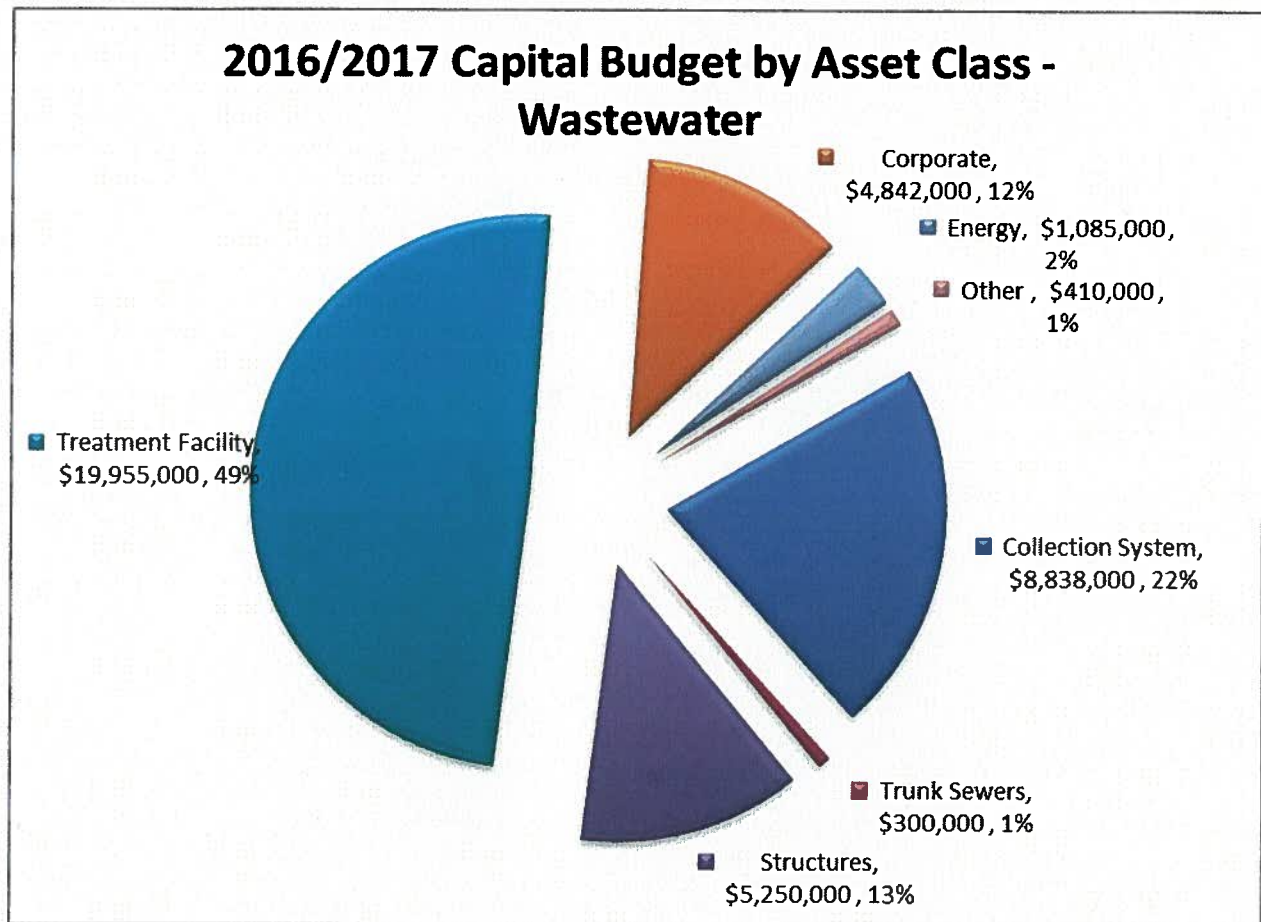


Wastewater Asset Category

This component funds the capital requirements for wastewater utility operation, along with a focus on several key capital initiatives. The 2016/17 budget is valued at \$35,838,000.

Major wastewater capital projects include:

- Collection System Renewal Projects integrated with HRM Streets program: \$1,750,000
- Lateral Replacements: \$2,190,000
- Wastewater System – Trenchless Rehabilitation Program: \$1,500,000
- Belmont WWTF Decommissioning - \$250,000
- Aerotech WWTF Upgrade & Expansion - \$13,930,000
- Corporate Flow Monitoring Program: \$660,000
- Balsam Road Pumping Station Elimination: \$770,000
- Bedford Pumping Station Rehabilitation: \$2,850,000



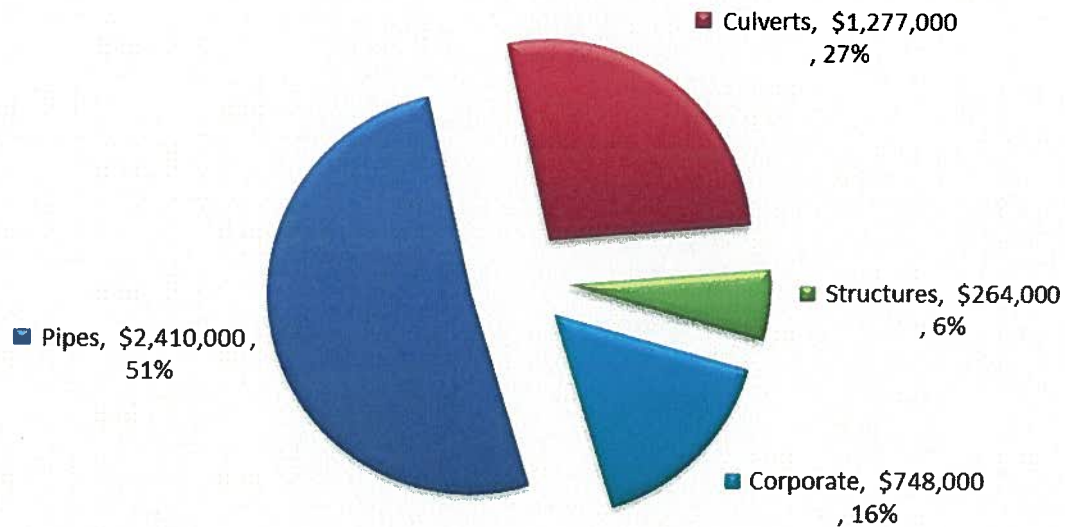
Stormwater Asset Category

This component funds the capital requirements for stormwater utility operation, along with a focus on several key capital initiatives. The 2016/17 budget is valued at \$3,951,000.

Major Stormwater capital projects include:

- Sackville Crossroad Stormwater System Renewal: \$1,200,000
- Stormwater System Renewal Projects Integrated with HRM Streets Program: \$650,000
- Culvert Renewals: \$1,277,000
- Sullivan's Pond Storm Sewer Replacement – Design: \$300,000

2016/2017 Capital Budget by Asset Class - Stormwater



Asset Category – Corporate Projects

Many capital initiatives benefit, and are shared financially, across all asset classes due to their broad benefit and application. The 2016/17 budget is valued at \$10,535,000.

Major corporate capital project include:

- GIS Data Program: \$1,000,000
- Computer Network and Hardware Upgrades: \$380,000
- Computerized Maintenance Management System: \$1,500,000
- Corporate Fleet: \$1,655,000
- AMI/AMR Meter System Upgrade: \$3,300,000
- Asset Management Program: \$600,000

The Capital Budget document provides a listing of all Corporate Projects by total project cost and allocation to asset category.

Capital Funding

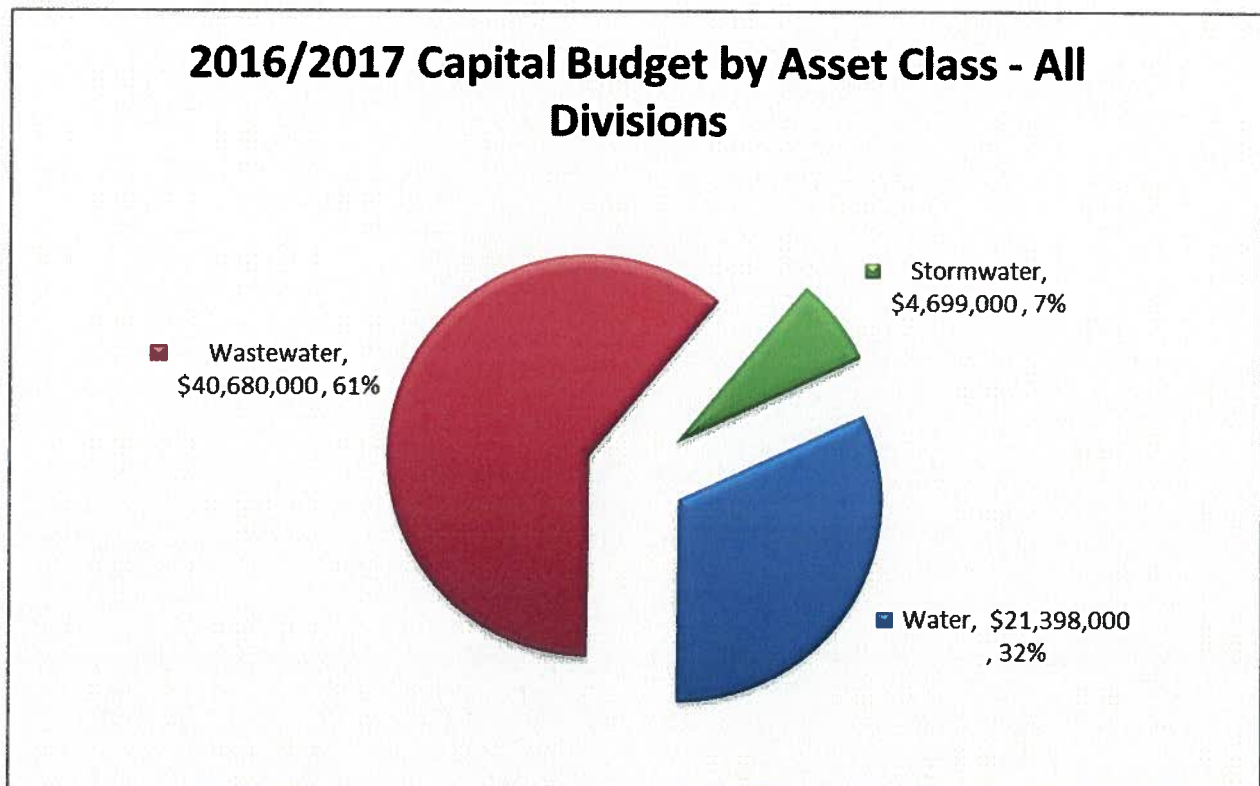
The Capital Budget is funded from a variety of sources including capital asset depreciation accounts, debt, reserves, capital cost contributions and external cost sharing.

Capital funding sources:

- Depreciation (rate based)
- Debt
- Development charge reserves
- External cost sharing

Debt Study as approved by Halifax Water Board, and accepted by the NSUARB, provides a funding strategy that is fair, equitable and cost effective.

Total 2016/17 Capital Budget Value: \$66,777,000.



The funds for the overall Capital Budget will be generated from a combination of sources, as detailed below. The planned utilization of debt is consistent with the Debt Strategy. HRWC will manage risk around projected Regional Development Charges through reprioritization of growth projects or additional utilization of debt if required.

2016/17 Capital Budget Funding Sources

Water:	Depreciation	\$9,631,878
	Debt	11,433,122
	RDC	0
	External Funding Build Canada	59,000
	Capital Cost Contributions	238,000
	Energy Rebates	36,000
	TOTAL	<u>21,398,000</u>
Wastewater:	Depreciation	14,035,907
	Debt	16,798,093
	RDC	300,000
	External Funding Build Canada	9,055,000
	Capital Cost Contributions	0
	Energy Rebates	16,000
	Unregulated Capital Funds	475,000
	TOTAL	<u>40,680,000</u>
Stormwater:	Depreciation	834,000
	Funds available from prior years' capital	150,000
	Debt	3,715,000
	TOTAL	<u>4,699,000</u>
Total Capital Funding:		<u>\$66,777,000</u>

The depreciation amounts shown as a funding source are the depreciation included within revenue requirements upon which the rates are based. Other known sources of funding such as external funding, CCCs, RDCs, or Energy Rebates are reflected, then the new debt requirement is calculated. The new debt projected for 2016/17 is \$1.75 million higher than the initial planned use of debt for 2016/17; however the additional debt servicing can be accommodated within the 2016/17 operating budget; and does not affect Halifax Water's compliance with debt service ratio targets.

The Stormwater funding reflects \$150,000 available from underspending on the Ellenvale Run project that is currently being closed out. The funding will be carried forward to the 2016/17 stormwater capital budget.

The unregulated capital of \$475,000 shown in Wastewater pertains to the Mill Cove Biogas CHP - Installation & Commissioning. The amount shown here is 50% of the total project cost and it is assumed this project will be allocated 50% to regulated and 50% to unregulated.



Halifax Water Capital Budget Program

The cost of the \$475,000 unregulated portion of this capital project may be debt financed, or alternately may be financed directly through the operating budget using unregulated revenues; and there is potentially an additional \$350,000 in unregulated capital projects in 2016/17, as noted below that may proceed subject to necessary approvals and financing. The total projected unregulated capital budget for 2016/17 is \$825,000.

Five Year Capital Budget - Unregulated Activity		
Project ID	Project Name	All \$ in 000's
		Y1
		2016-2017
	Mill Cove Biogas CHP - Installation & Commissioning	\$475
	In-line Turbine - Location TBD (Y1 - Design, Y2 - Install)	\$50
	Cogswell DES - Conceptual Design + Cost Analysis/Consultation	\$300
TOTALS - Wastewater		\$825

TO: Ray Ritcey, Chair and Members of the Halifax Regional Water Commission Board

SUBMITTED BY: 
Jamie Hannam, P. Eng., Director Engineering & IS

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

DATE: March 24, 2016

SUBJECT: Capital Funding Approval Policy

ORIGIN

HRWC Board Governance Workshop – January 8, 2016

RECOMMENDATION

It is recommended that the HRWC Board approve the revised *Capital Project Funding Approval Policy*.

BACKGROUND / DISCUSSION

Currently, the HRWC Board approves the annual capital budget in principle, and subsequently approves all individual projects with an estimated total cost over \$250,000. In addition, the NSUARB approves the annual capital budget in principle and approves all projects over \$250,000 in value.

The value of the annual capital budget continues to increase toward the projected values identified in the 2012 Integrated Resource Plan. As well, the total number of individual capital projects coming to the HRWC Board for approval is increasing. The recent Board Governance initiatives have looked at ways to improve the effectiveness and efficiency of the HRWC Board and optimize focus on priority issues.

In this context, the HRWC Board requested that staff review the capital budget and individual project approval process and recommend an enhanced approach. The recommended process provides for the annual review and approval of the HRWC Capital Budget, inclusive of the individual capital projects, by the HRWC Board, and assigns the authority for the subsequent individual capital project approval to the General Manager.

The recommended process is as follows:

1. Staff preparation of the annual Capital Budget
2. Review and endorsement of the Capital Budget by the HRWC Board Audit and Finance Committee
3. Review and approval of the annual Capital Budget by the HRWC Board
4. Review and approval of the annual Capital Budget in Principle by the NSUARB
5. Approval of individual capital projects from within the approved Capital Budget by the General Manager
6. Approval of individual capital projects by the NSUARB for project with an estimated cost greater than \$250,000 (consistent with the 2010 amendment to the Public utilities Act).

This approach provides for a comprehensive Board level review of all proposed individual capital projects and the total budget package, via the Board Audit and Finance Committee and the HRWC Board, and improves the Board operational efficiency by not returning each individual project for additional Board approval.

Capital projects that are not included within the approved capital budget (i.e. project need arises after budget approval process) and are over \$250,000 in estimated total cost, would be subject to review and approval of the HRWC Board and subsequently by the NSUARB. Projects under \$250,000 in value would be reviewed and approved by the General Manager. This approval limit is coincident with the funding limit that triggers the formal approval from the NSUARB

Consistent with the proposed approval process recommend above, staff have revised the ***Capital Project Funding Approval Policy*** document (attachment 1) to define the business processes and related approval limits.

The revised policy also provides an approach for the approval of funding increases for previously approved capital projects consistent with the above process and the NSUARB requirements.

Any capital projects that are unusual from a procurement prospective or sole source approval above the General Manager's sole source approval authority must go to the HRWC Board for approval.

Section 5.2 of the Procurement Policy states that:

- 5.2 The GM has the authority to award or purchase all goods or services that are within the budgets approved by the Board and compliant with the Procurement Policy approved by the Board.

BUDGET IMPLICATIONS

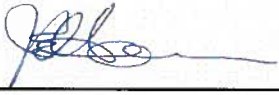
There are no budget implications related to this recommendation as capital funds will be identified within the normal course of the budget approval process.

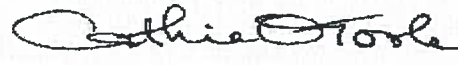
ALTERNATIVES

N/A

ATTACHMENT

Administrative Policy - Capital Project Funding Approval

Report Prepared by: 
Jamie Hannam, P. Eng. Director of Engineering & IS, 902-490-4804

Financial Reviewed by: 
Cathie O'Toole, MBA, CPA, CGA, Director, Corporate
Services 902-490-3685

ADMINISTRATIVE POLICY CAPITAL PROJECT FUNDING APPROVAL

1. PREAMBLE

Funding approval for Halifax Water capital projects require the approval of both the Halifax Water Board (HWB) and the Nova Scotia Utility and Review Board (NSUARB). This policy defines the specific requirements and approval protocols for capital funding approval to ensure accountability, accuracy, and compliance with Halifax Water's accounting standards and NSUARB requirements.

2. ANNUAL CAPITAL BUDGET

In accordance with Halifax Water's policy, expenditures are capitalized when a newly acquired or constructed item has a value greater than \$5,000 and has a life expectancy beyond one year. For greater clarity, the attached document provides the rule set for the separation of capital versus operation expenditures.

Halifax Water develops an annual capital budget document that identifies the proposed capital projects to be funded within the given fiscal year. For each individual item, the capital budget defines the project description, required funding and funding source. Each line item shall also have a detailed supplemental budget sheet that provides a detailed description, project justification and detailed cost estimate. If the project is funded from a restrictive reserve, a brief narrative is provided detailing how the project meets the criteria to qualify for the reserve funding.

The annual capital budget consists of separate categories for water, wastewater, and stormwater assets as well as corporate projects (benefitting multiple asset categories). The budget also includes a summary table of Routine Capital Expenditures.

3. CAPITAL BUDGET APPROVAL

In advance of each fiscal year, the Halifax Water Capital Budget shall be approved by the HWB. Subsequently, the approved Capital Budget shall be submitted to the NSUARB for approval in principle.

In parallel to the submission of the capital budget for approval to both the HWB and the NSUARB, staff may also request a series of routine capital expenditures to be approved at the same time for items that are deemed necessary for the ongoing operation of various departments. These routine capital expenditures cover items such as fleet, tools and equipment, lateral replacement, computers, etc., and are summarized within the capital budget documents.

4. INDIVIDUAL PROJECT APPROVAL

4.1 Projects Identified in the Approved Capital Budget

Subsequent to the HWB and the NSUARB approving the annual capital budget in principle, each individual capital project identified within the approved budget must be formally approved. The individual approval requirement is as follows:

4.1.1 Projects Under \$250,000

Individual capital projects under \$250,000 in value (or projects under \$100,000 with a portion of the funding from a Restrictive Reserve account) shall be approved by the Halifax Water General Manager.

4.1.2 Projects over \$250,000 and up to \$5,000,000

Individual capital projects over \$250,000 in value (or projects over \$100,000 with a portion of the funding from a Restrictive Reserve account), and up to \$5,000,000 in value, shall be approved by the Halifax Water General Manager and subsequently approved by the NSUARB (as per Section 4250 – NSUARB Water Utility Accounting & Reporting Handbook).

4.1.3 Projects over \$5,000,000

Individual capital projects over \$5,000,000 in value shall be approved by the HWB and subsequently approved by the NSUARB.

4.2 Projects NOT identified or Revised from the Approved Capital Budget

For capital projects that were NOT identified within the annual capital budget (i.e. projects identified after the annual budget approval), or for projects with a revised cost that exceeds the amount of the project cost within the approved budget by 5%, the individual project approval requirement is as follows:

4.2.1 Projects under \$250,000

Individual capital projects under \$250,000 in value (or projects under \$100,000 with a portion of the funding from a restrictive reserve account) shall be approved by the Halifax Water General Manager.

4.2.2 Projects over \$250,000

Individual capital projects over \$250,000 in value (or projects over \$100,000 with a portion of the funding from a restrictive reserve account) shall be approved by the Halifax Water Board and subsequently approved by the NSUARB.

5. PROJECT FUNDING INCREASE APPROVAL

For projects that require a funding increase during project implementation, the individual approval requirement is as follows:

5.1 Projects Revised total cost under \$250,000

For individual capital projects with a revised total cost under \$250,000 in value, and a required funding increase that exceeds the previously approved amount by more than 5%, the funding increase shall be approved by the Halifax Water General Manager.

5.2 Projects revised total cost over \$250,000

For individual capital projects with a revised total cost over \$250,000 in value, the funding increase shall be approved by the HWB and NSUARB (as per Section 4251 – NSUARB Water Utility Accounting & Reporting handbook) when:

- the additional funding brings the projects revised total cost in excess of \$250,000 from an amount previously under \$250,000; or
- the additional funding exceeds 5% of the previously approved amount.

As per Section 4251 of the NSUARB Water Utility Accounting & Reporting Handbook, no project may be substituted for another project, nor can the approved funding shift to a different project without prior approval in accordance with the above requirements.

However, any projects that were approved as part of a single capital request (i.e. multiple projects within the watermain renewal program funding); can utilize underspending on one project to cover additional funding required on another project with no application for NSUARB approval.

6 PROJECT ABANDONMENT

Subsequent to the approval in principle of the annual capital budget, any individual project that does not proceed to funding approval, and implementation, shall be formally abandoned from the budget (as per Section 4251 – NSUARB Water Utility Accounting & Reporting Handbook). The application for the abandonment of a capital project shall be submitted to the NSUARB and must have at a minimum:

- a brief narrative describing the reason for the abandonment;
- how Halifax Water plans to address the issue that the project was intending to solve; and
- the date in which Halifax Water expects to undertake the abandonment project in the future, if applicable.

7. CAPITAL FUNDING AND EXPENDITURE TRACKING/REPORTING

All capital funding approval reports (including funding increases) shall be reviewed and approved by the Director, Engineering & IS and the Director of Corporate Services, prior to final approval by the General Manager.

Project approval requests to the NSUARB shall be approved and signed by the General Manager.

Subsequent to the formal approval of funding for a capital project, a Capital Work Order will be opened to capture all costs related to the project. An initial CWO with a spending limit of \$25,000 and with the approval of the Director may be opened for a given project prior to final funding approval to capture initial costs such as surveys and preliminary studies.

Individual capital projects with approved funding are implemented by the assigned project manager with payments tracked and approved by the project manager with additional approvals as required by dollar value and authority limits. The formal approval for capital project invoices and project change orders shall be consistent with authorized approval levels for various staff.

No payments are to be approved if project totals exceed the approved funding. The total approved funding including any additional funding increases, as per this policy, shall be identified with the Capital Work Order.

All capital work orders, where Substantial Completion of the Work has been achieved as of March 31 of the current year, shall be closed out and capitalized. Any anticipated costs or liabilities relating to the project that are anticipated but not yet incurred shall be accrued in the total project cost capitalized.

All costs of studies not leading to a capital project within a reasonable time frame should be recorded as an expense rather than a capital asset.

For all closed capital work orders, two annual Capital Project Spending Summary reports are prepared and submitted to the HWB and NSUARB. The first report details all closed capital work orders and their aggregate surplus or deficit. The second report is a subset of the first and only contains projects over \$250,000. These documents report on total expenditures and seek approval on any minor funding increases that do not have specific HWB and NSUARB approval.

TO: Ray Ritcey, Chair and Members of the Halifax Regional Water Commission Board

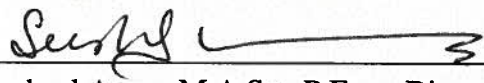
SUBMITTED BY:



Cathie O'Toole, MBA, CPA, CGA, Director, Corporate Services



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

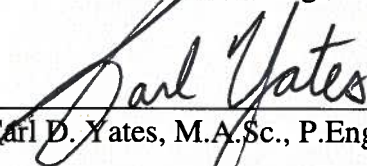


Susheel Arora, M.A.Sc., P.Eng., Director, Wastewater & Stormwater Services



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

APPROVED:



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

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

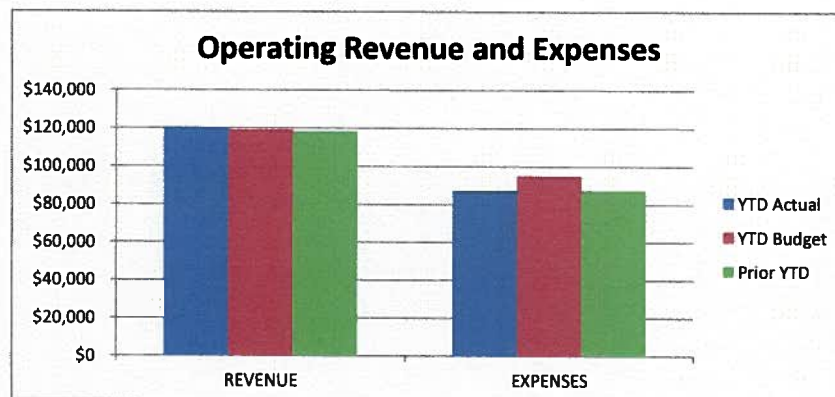
INFORMATION REPORT

ORIGIN:

Regular monthly update.

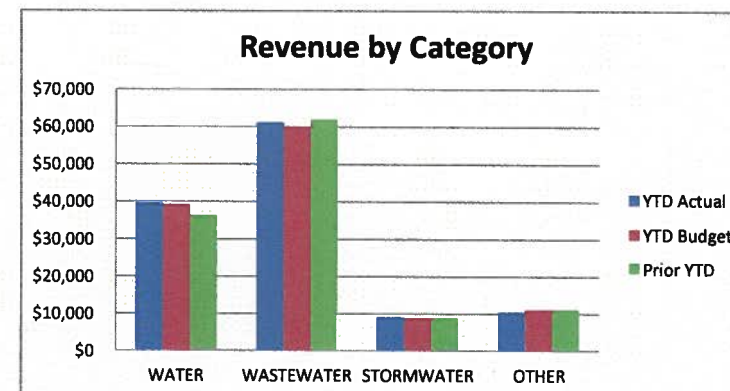
This report provides a high level overview of financial and operational performance for the utility. Financial results are presented first, followed by indicators and statistics for water and wastewater.

HALIFAX WATER
UNAUDITED FINANCIAL INFORMATION
APRIL 1/15 - FEBRUARY 29/16 (11 MONTHS)
'000



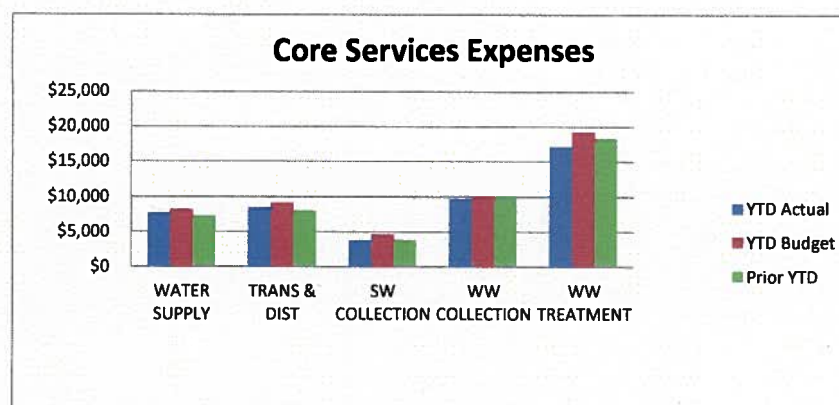
OPERATING REVENUE AND EXPENSES

	YTD Actual	YTD Budget	Prior YTD	% of Budget
REVENUE	\$120,174	\$119,080	\$118,198	92.51%
EXPENSES	\$87,051	\$94,979	\$87,181	84.01%
	\$33,123	\$24,100	\$31,017	125.98%



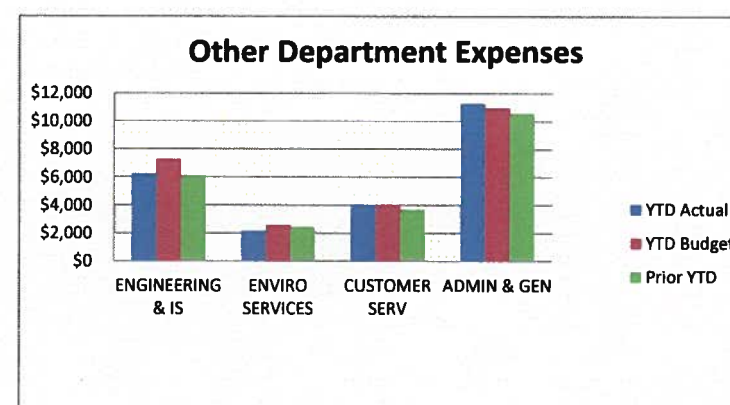
REVENUE BY CATEGORY

	YTD Actual	YTD Budget	Prior YTD
WATER	\$39,593	\$39,181	\$36,262
WASTEWATER	\$61,121	\$60,046	\$62,039
STORMWATER	\$9,046	\$8,796	\$8,858
OTHER	\$10,414	\$11,056	\$11,040
	\$120,174	\$119,080	\$118,198



CORE SERVICES EXPENSES

	YTD Actual	YTD Budget	Prior YTD	% of Budget
WATER SUPPLY	\$7,639	\$8,183	\$7,292	85.58%
TRANS & DIST	\$8,404	\$9,131	\$8,020	84.37%
SW COLLECTION	\$3,741	\$4,624	\$3,809	74.14%
WW COLLECTION	\$9,730	\$9,999	\$9,971	89.21%
WW TREATMENT	\$17,141	\$19,225	\$18,282	81.73%
	\$46,656	\$51,161	\$47,374	83.59%

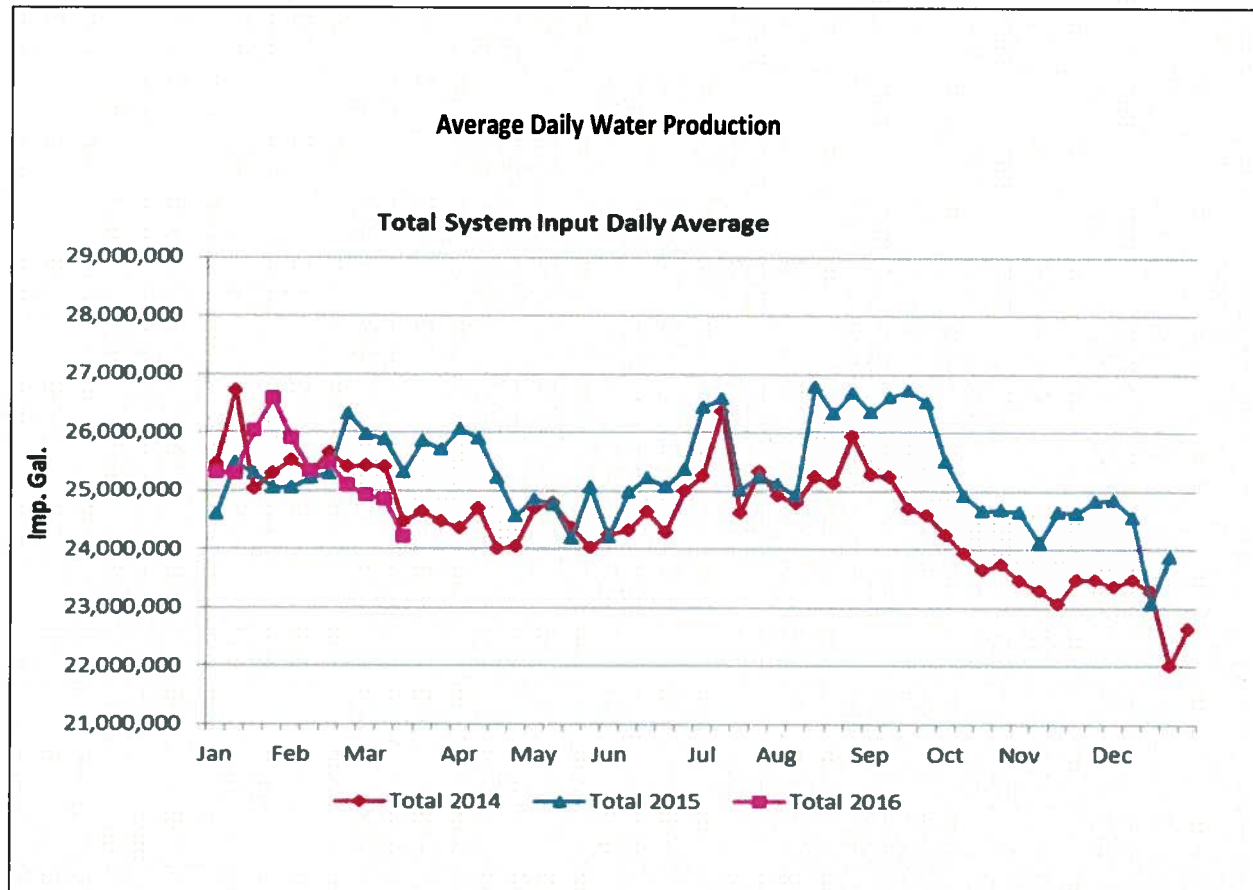


OTHER DEPARTMENT EXPENSES

	YTD Actual	YTD Budget	Prior YTD
ENGINEERING & IS	\$6,217	\$7,215	\$6,095
ENVIRO SERVICES	\$2,164	\$2,563	\$2,433
CUSTOMER SERV	\$3,989	\$4,007	\$3,699
ADMIN & GEN	\$11,264	\$10,955	\$10,534
	\$23,634	\$24,740	\$22,761

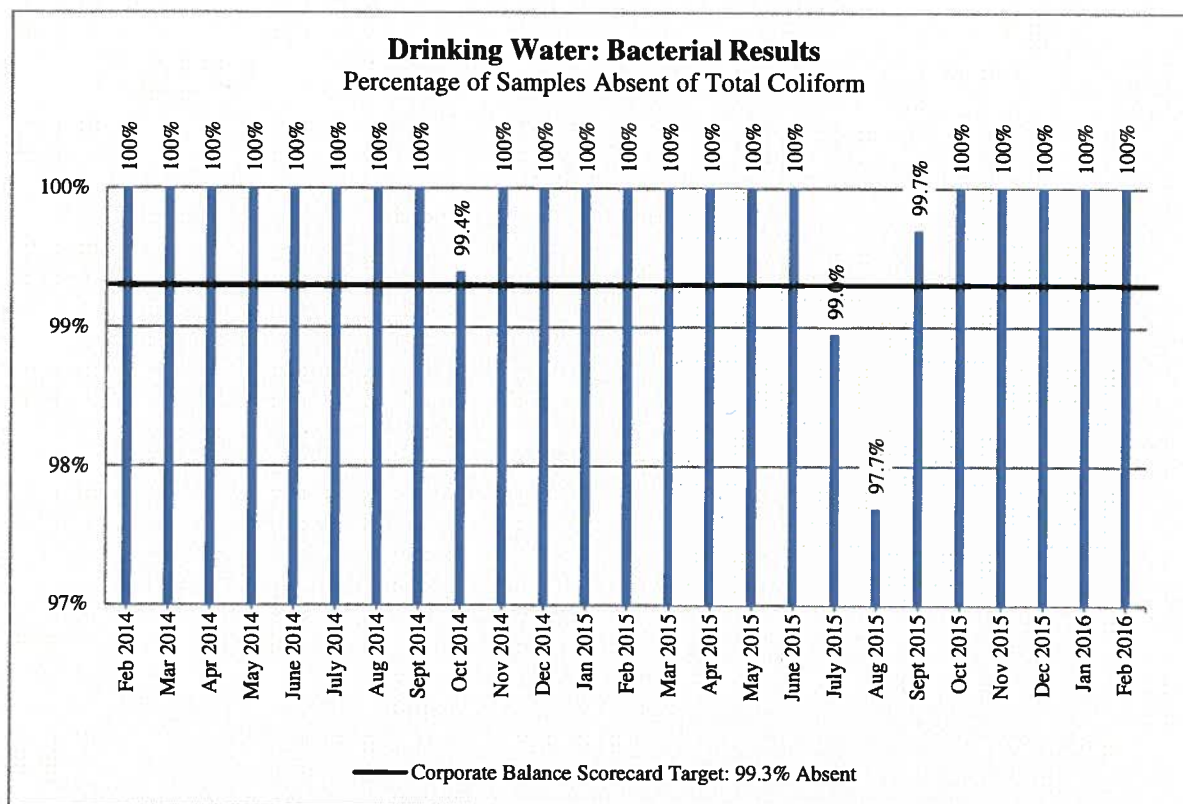
ITEM# 1-I

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HRWC Board
March 31, 2016



Regional Water Main Break/Leak Data		
Year	Total Breaks/Leaks	Current 12 Month Rolling Total (up to February 17/16)
2014/15	210	192
2013/14	213	
2012/13	262	
2011/12	205	
2010/11	198	
Total	1088	
Yr. Avg.	217.6	

Water Accountability
Losses per Service Connection/Day (International Water Association Standard)
<i>Period Ending December 31, 2015</i>
Real Losses: 266 litres
CBS Target: 180



Water Quality Master Plan Objectives 2015-2016 Q3				
Objective	Total Sites	% of Sites Achieving Target	All Sites: 90th Percentile < 15 µg/L	CBSC Awarded Points
Disinfection	64	95%	---	15
Total Trihalomethanes	24	92%	---	13
Haloacetic Acids	21	100%	---	20
Particle Removal	5	98%	---	18
Corrosion Control*	69	---	8.88	20
TOTAL				86

Score: 86/100

ITEM# 1-I

Page 5 of 5
HRWC Board
March 31, 2016

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

Wastewater Treatment Facility	Wastewater Treatment Facility Compliance Summary																	
	Rolling Averages - December 2015, January and February 2016																	
	CBOD ₅ (mg/L)		TSS (mg/L)		E. coli (counts/100mL)		pH		Ammonia (mg/L)		Phosphorous (mg/L)		TRC (mg/L)		Dissolved Oxygen (mg/L)		Q4 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	35	40	24	5000	11141	6-9	6.8	-	-	-	-	-	-	-	-	-	Continued
Dartmouth	50	29	40	42	5000	4748	6-9	7.0	-	-	-	-	-	-	-	-	-	Declined
Herring Cove	50	17	40	17	5000	739	6-9	6.9	-	-	-	-	-	-	-	-	-	Continued
Eastern Passage	50	8	40	9	5000	19	6.5-9	7.2	-	-	-	-	-	-	-	-	-	Continued
Mill Cove	25	14	25	16	200	1039	6.5-9	6.9	-	-	-	-	-	-	-	-	Not acutely lethal	Continued
Springfield	20	5	20	4	200	2500	6-9	8.2	-	-	-	-	0.02	0.10	-	-	Not acutely lethal	Continued
Belmont	25	23	25	49	200	444	6-9	7.4	-	-	-	-	0.02	0.45	-	-	-	Improved
Frame	20	14	20	42	200	32	6.5-9	7.0	-	-	-	-	0.02	0.39	-	-	-	Continued
Middle Musq.	20	6	20	14	200	711	6-9	7.7	-	-	-	-	-	-	-	-	-	Continued
Uplands	20	9	20	8	200	56	6-9	6.7	-	-	-	-	-	-	-	-	-	Continued
Aerotech	5	5	5	11	200	15	6-9	7.0	5.7 W 12 S	2.4	0.5	0.3	-	-	-	-	Not acutely lethal	Continued
North Preston	10	5	10	7	200	10	6.5-9	7.6	3	0.6	1.5	0.1	-	-	-	-	-	Continued
Lockview	20	5	20	5	200	19	6.5-9	7.4	8.0 S	0.8	1.2 S	0.2	-	-	-	-	-	Continued
Steeves (Wellington)	15	5	15	1	200	10	6.5-9	8.0	14.4 S	8.0	1.0 S	0.1	-	-	-	-	-	Improved
BLT	15	7	20	13	200	18	6.5-9	7.2	5 W 3 S	12.5	3 W 1 S	1.8	0.02	0.10	5	10.1	Not acutely lethal	Continued
Avg. of all Facilities	12		17		441.4		7.3		4.9		0.5		0.3		10.1			

NOTES & ACRONYMS:

CBOD₅ - Carbonaceous 5-Day Biochemical Oxygen Demand

TSS - Total Suspended Solids

TRC - Total Residual Chlorine

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., Belmont, Frame, BLT, Uplands,

North Preston, Steeves, Springfield)

Continued - All parameters remain essentially unchanged since the last report

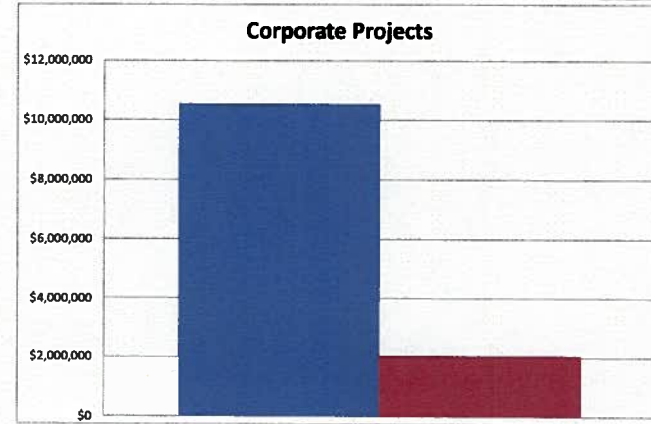
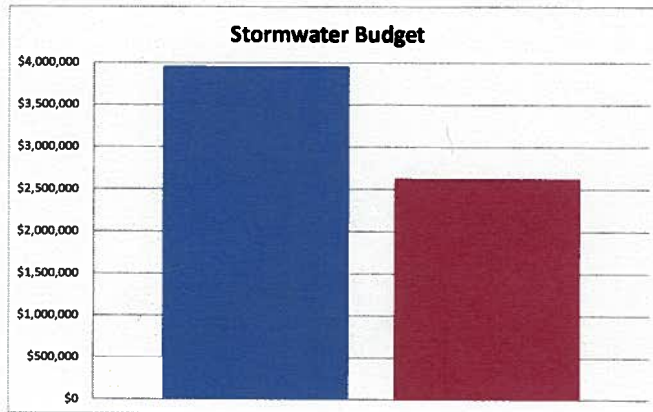
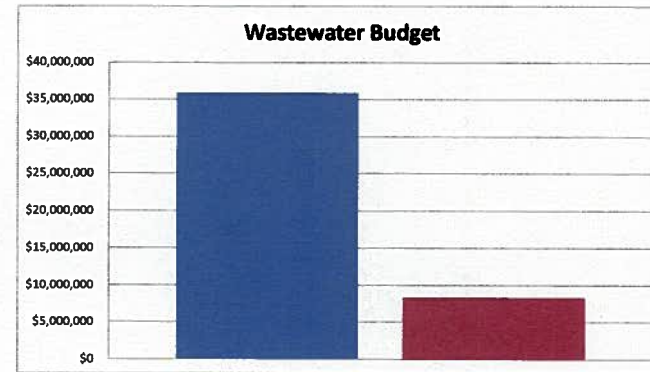
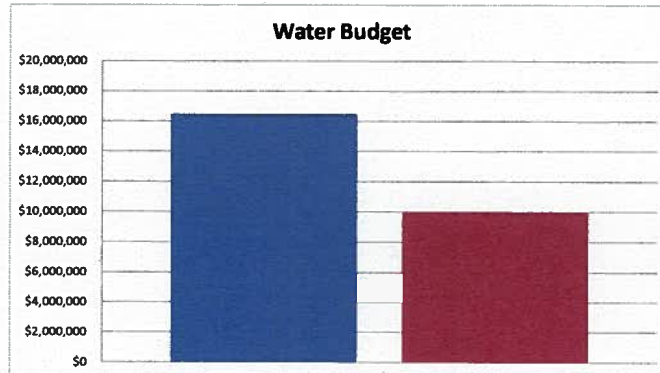
Improved - One or more parameter(s) became compliant since the last report

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

LEGEND



CAPITAL BUDGET APPROVALS TO DATE - 2016/17




WATER	
TOTAL APPROVED BUDGET	\$16,453,000
APPROVALS TO DATE	\$9,948,000

STORMWATER	
TOTAL APPROVED BUDGET	\$3,951,000
APPROVALS TO DATE	\$2,623,000

WASTEWATER	
TOTAL APPROVED BUDGET	\$35,838,000
APPROVALS TO DATE	\$8,305,000

CORPORATE PROJECTS	
TOTAL APPROVED BUDGET	\$10,535,000
APPROVALS TO DATE	\$2,065,000

Report Prepared by:


Jamie Hannam, P. Eng.
Director of Engineering & IS

WATER
CAPITAL BUDGET APPROVALS TO DATE - 2016/17
TOTAL CAPITAL BUDGET FOR WATER \$16,453,000

Date of Approval								
HW	NSUARB GM	Description	Approved Amount	Net Additions to Budget	Consultant/ Contractor	Construction Tender Price	Construction Budget Estimate	
2016/17 Capital Budget								
28-Jan-16		Advanced Funding Integrated Projects						
		East						
		Murray Hill Drive W/M Renewal	\$455,000	\$455,000				
		Farquharson Street Water Main Renewal	\$500,000	\$500,000				
		Brompton Road	\$215,000	\$215,000				
		Everette Street Water Main Renewal	\$410,000	\$410,000				
		West						
		Scarlet Rd	\$335,000	\$335,000				
		Foxglove Lane	\$150,000	\$150,000				
		Parmbelle Lane	\$250,000	\$250,000				
		George Dauphinee Drive	\$620,000	\$620,000				
		Layton Road	\$325,000	\$325,000				
		Inverness Avenue	\$260,000	\$260,000				
		Central						
		Tillock Drive	\$380,000	\$380,000				
		Tillock Court	\$100,000	\$100,000				
Total Integrated Project			\$4,000,000	\$4,000,000				
28-Jan-16		Valve Renewals	\$125,000	\$125,000				
28-Jan-16		Hydrant Renewals	\$75,000	\$75,000				
28-Jan-16		Service Line Renewals	\$190,000	\$190,000				
28-Jan-16		Large Tapping Machine c/w electric operator and 4" to 12" cutters	\$34,000	\$34,000				
28-Jan-16		Small Hydro Vac for valve box maintenance	\$25,000	\$25,000				

WATER
CAPITAL BUDGET APPROVALS TO DATE - 2016/17
TOTAL CAPITAL BUDGET FOR WATER \$16,453,000

Date of Approval							
HW	NSUARB GM	Description	Approved Amount	Net Additions to Budget	Consultant/ Contractor	Construction Tender Price	Construction Budget Estimate
28-Jan-16		Plastic Shell Cutters for Tapping Marching	\$12,000	\$12,000			
28-Jan-16		Portable valve Exerciser	\$10,000	\$10,000			
28-Jan-16		Confined Space Entry System for Bennery Lake Water Supply Plant	\$14,000	\$14,000			
28-Jan-16		Temporary Water Line - Pipe materials purchase - East Region	\$18,000	\$18,000			
28-Jan-16		Water Distribution Pressure Monitoring Equipment	\$10,000	\$10,000			
28-Jan-16	19-Feb-16	Geizer 158 Reservoir Rehabilitation	\$2,170,000	\$2,170,000			
Accumulative Total - January, 2016				\$2,683,000			
22-Feb-16	23-Feb-16	JD Kline Replace Power Pole at Low Lift Station	\$40,000	\$40,000			
22-Feb-16	23-Feb-16	Bedford Connector Transmission Main Phase 3 - Design	\$90,000	\$90,000			
22-Feb-16	23-Feb-16	Lyle Street Control Chamber Access Improvement	\$30,000	\$30,000			
22-Feb-16	23-Feb-16	Wilson Drive & Highway #2 - Culvert Replacements	\$223,000	\$223,000			
22-Feb-16	23-Feb-16	Topsail Control Chamber - Confined Space Entry Retrofit - funding available from underspending in 2015/16 CP under "Geizer 158 Retrofit Chamber Retrofit which did not proceed last year	\$43,000	\$0			
22-Feb-16	23-Feb-16	Confined Space Entry Retrofit - Bridgview PRV Chamber	\$79,000	\$79,000			
19-Feb-16	23-Feb-16	Robie 2 Chamber Upgrades	\$160,000	\$160,000			
19-Feb-16	23-Feb-16	Automated Flushing Program	\$20,000	\$20,000			
22-Feb-16	23-Feb-16	Water Sampling Station Relocation Program	\$29,000	\$29,000			

WATER
CAPITAL BUDGET APPROVALS TO DATE - 2016/17
TOTAL CAPITAL BUDGET FOR WATER \$16,453,000

Date of Approval							
HW	NSUARB GM	Description	Approved Amount	Net Additions to Budget	Consultant/ Contractor	Construction Tender Price	Construction Budget Estimate
22-Feb-16	24-Feb-16	Relocated CT Calculation Equipment Lucasville Meter Chamber	\$31,000	\$31,000			
23-Feb-16	23-Feb-16	Critical Valves Bedford Hwy - funding in the amount of \$57,000 is available from underspending in SAP #3-1921 2015/16 Capital Budget	\$57,000	\$0			
25-Feb-16		Lake Major Water Supply Plant - New Diesel Generator	\$1,900,000	\$1,900,000			
Accumulative Total - February, 2016				\$2,602,000			
7-Mar-16		Bennery Lake WSP Surge Protection	\$17,000	\$17,000			
8-Mar-16		Lake Major WSP Purchase Fluorescence Meter	\$90,000	\$90,000			
8-Mar-16		Lake Major WSP - Replace Contactors in the MCC	\$34,000	\$34,000			
8-Mar-16		Lake Major WSP - Integrate Chlorine Alarms	\$50,000	\$50,000			
8-Mar-16		Lake Major WSP Chemical Feed Pump Replacements	\$85,000	\$85,000			
8-Mar-16		JD Kline WSP New Laptop system to Backwash Filters	\$12,000	\$12,000			
8-Mar-16		JD Kline WSP - Ampgard III to Vacuum Contactor Conversion Program	\$40,000	\$40,000			
8-Mar-16		Purchase Inline Zeta Potential Meters for Water Plants	\$100,000	\$100,000			
8-Mar-16		Purchase Particle Counters for Water Plants	\$235,000	\$235,000			
Accumulative Total - March, 2016				\$663,000			
Total To Date				\$9,948,000			

WASTEWATER
CAPITAL BUDGET APPROVALS TO DATE - 2016/17
TOTAL CAPITAL BUDGET FOR WASTEWATER \$35,838,000

Date of Approval							
HW	NSUARB GM	Description	Approved Amount	Net Additions to Budget	Consultant/ Contractor	Construction Tender Price	Construction Budget Estimate
2016/17 Capital Budget							
28-Jan-16		Advanced Funding Integrated Projects					
		East					
		Murray Hill Drive W/M Renewal	\$38,000	\$38,000			
		Farquharson Street Water Main Renewal	\$109,000	\$109,000			
		Brompton Road	\$278,000	\$278,000			
		Everette Street Water Main Renewal	\$97,000	\$97,000			
		Alfred Street	\$199,000	\$199,000			
		Beckfoot Drive	\$9,000	\$9,000			
		Strath Lane	\$226,000	\$226,000			
		Westwood Drive	\$121,000	\$121,000			
		West					
		Scarlet Rd	\$206,000	\$206,000			
		Foxglove Lane	\$13,000	\$13,000			
		Parmbelle Lane	\$79,000	\$79,000			
		George Dauphinee Drive	\$54,000	\$54,000			
		Layton Road	\$13,000	\$13,000			
		Inverness Avenue	\$22,000	\$22,000			
		Central					
		Tillock Drive	\$13,000	\$13,000			
		Tillock Court	\$9,000	\$9,000			
		Doyle Street	\$19,000	\$19,000			
		McQuarrie Bridge (Fall River)	\$150,000	\$150,000			
		Lydgate Drive	\$9,000	\$9,000			
		Total Integrated Projects	\$1,664,000	\$1,664,000			
28-Jan-16		Manhole Renewals	\$32,000	\$32,000			
28-Jan-16		Lateral Replacements	\$2,190,000	\$2,190,000			
28-Jan-16		SIR Program Flow Meters and Related Equipment	\$40,000	\$40,000			

WASTEWATER
CAPITAL BUDGET APPROVALS TO DATE - 2016/17
TOTAL CAPITAL BUDGET FOR WASTEWATER \$35,838,000

Date of Approval							
HW	NSUARB GM	Description	Approved Amount	Net Additions to Budget	Consultant/ Contractor	Construction Tender Price	Construction Budget Estimate
28-Jan-16		Miscellaneous Equipment Replacement	\$70,000	\$70,000			
28-Jan-16	10-Mar-16	Wastewater System - Trenchless Rehabilitation Program: Funding in the amount of \$300,000 from underspending in the 2015/16 Sewer Lining Program: and \$1,500,000 is available from the 2016/17 Capital Budget	\$1,800,000	\$1,500,000			
Accumulative Total - January, 2016				\$5,496,000			
01-Feb-16	29-Jan-16	Leiblin Pumping Station Elimination Preliminary Design Halifax	\$75,000	\$75,000			
03-Feb-16	03-Feb-16	The \$42,500 in regulated activity funding is available from two sources. \$20,000 is available from underspending on the <i>Mill Cove CHP Fatal Flaw/Due Diligence Analysis, and the Preliminary Design and Cost Analysis</i> , with the remaining \$22,500 available from projected under spending within the 2015/16 <i>Wastewater – Energy – Energy Management Capital Program</i> . The \$42,500 in unregulated activity funding is available from within the 2016/17 Unregulated Capital Budget - Mill Cove Biogas CHP.	\$85,000	\$0			
25-Feb-16		Balsam Road Pumping Station (PS) Elimination	\$770,000	\$770,000			
25-Feb-16		Northwest Arm Sewer Rehabilitation - Detailed Design	\$300,000	\$300,000			
Accumulative Total - February 2016				\$1,145,000			
09-Mar-16		Wastewater Pump Station Upgrade Program - East Region 2015/16 Capital Budget	\$110,000	\$0			
10-Mar-16		HRM Land Transfer - Subdivision Costs Project was not included in the 2016/17 Budget. Funding in the amount of \$75,000 is available from underspending in the Lakeside Pumping Station Diversion Project in the 2015/16 CB	\$75,000	\$0			
Accumulative Total - March 2016				\$0			
Total To Date				\$8,305,000			

STORMWATER
CAPITAL BUDGET APPROVALS TO DATE - 2016/17
TOTAL CAPITAL BUDGET FOR STORMWATER \$3,951,000

Date of Approval								
HW	NSUARB GM	Description	Approved Amount	Net Additions to Budget	Consultant/ Contractor	Construction Tender Price	Construction Budget Estimate	
2016/17 Stormwater								
Advanced Funding Integrated Projects								
East								
28-Jan-16		Murray Hill Drive W/M Renewal	\$28,000	\$28,000				
		Farquharson Street Water Main Renewal	\$19,000	\$19,000				
		Brompton Road	\$151,000	\$151,000				
		Everette Street Water Main Renewal	\$28,000	\$28,000				
		Alfred Street	\$11,000	\$11,000				
		Beckfoot Drive	\$9,000	\$9,000				
		Strath Lane	\$122,000	\$122,000				
West								
		George Dauphinee Drive	\$34,000	\$34,000				
Central								
		Tillock Court	\$19,000	\$19,000				
		Doyle Street	\$75,000	\$75,000				
		Baker Drive	\$52,000	\$52,000				
		Second Avenue	\$70,000	\$70,000				
Total Integrated Projects			\$618,000	\$618,000				

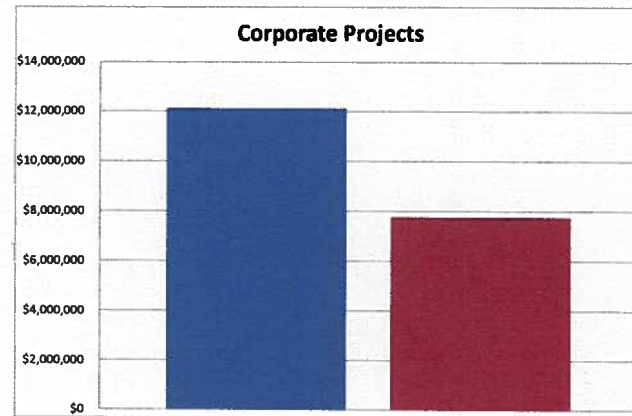
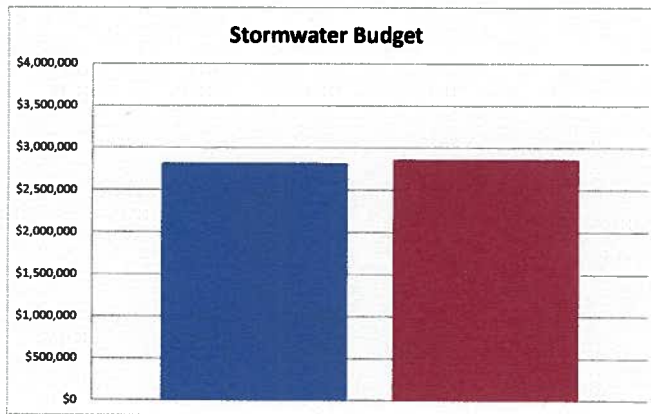
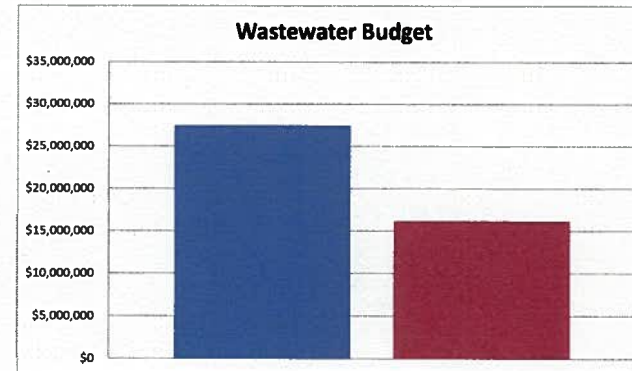
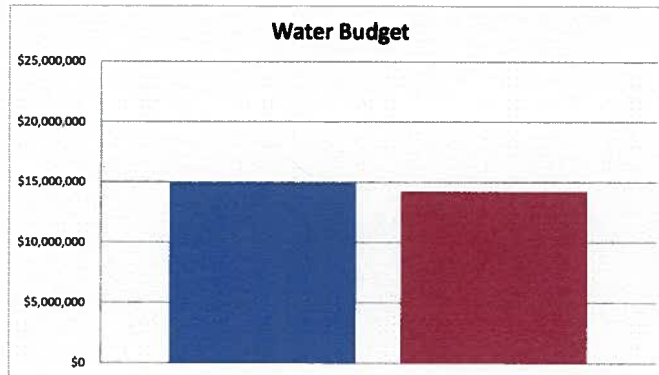
STORMWATER
CAPITAL BUDGET APPROVALS TO DATE - 2016/17
TOTAL CAPITAL BUDGET FOR STORMWATER \$3,951,000

Date of Approval							
HW	NSUARB GM	Description	Approved Amount	Net Additions to Budget	Consultant/ Contractor	Construction Tender Price	Construction Budget Estimate
28-Jan-16		Manhole Renewals	\$29,000	\$29,000			
28-Jan-16		Catchbasin Renewals	\$29,000	\$29,000			
28-Jan-16		Lateral Replacements	\$87,000	\$87,000			
Accumulative Total January, 2016				\$145,000			
22-Feb-16		Wilson Drive & Highway 2 - Culvert Replacment	\$223,000	\$223,000			
25-Feb-16		Sackville Cross Road Stormwater System Renewal	\$1,090,000	\$1,090,000			
25-Feb-16		Bedford Highway at Shaunslieve Drive Culvert Upgrade	\$407,000	\$247,000			
25-Feb-16	21-Mar-16	Sullivan's Pond Storm Sewer System Replacement - Design Funding in the amount of \$100,000 is available from 2015/16 CB under "Stormwater Pipes - Sullivan's Pond Storm Sewer Replacement - Phase 1 and \$300,000 is available from the 2016/17 CB Under "Stormwater Pipes Sullivan's Pond Storm Sewer Replacement Phase 1. The total approved to date is \$950,000	\$400,000	\$300,000	CBCL		
Accumulative Total February, 2016				\$1,860,000			
Total to Date				\$2,623,000			

**CORPORATE PROJECTS
CAPITAL BUDGET APPROVALS TO DATE - 2016/17
TOTAL CAPITAL BUDGET FOR CORPORATE PROJECTS \$10,535,000**

Date of Approval							
HW	NSUARB GM	Description	Approved Amount	Net Additions to Budget	Consultant/ Contractor	Construction Tender Price	Construction Budget Estimate
28-Jan-16		Desktop Computer Replacement Program	\$180,000	\$180,000			
28-Jan-16		Network Infrastructure Upgrades	\$200,000	\$200,000			
28-Jan-16		Survey Equipment - GPS Total Station	\$30,000	\$30,000			
28-Jan-16		Fleet Upgrade Program Water	\$505,000	\$505,000			
28-Jan-16		Fleet Upgrade Program Wastewater	\$920,000	\$920,000			
28-Jan-16		Fleet Upgrade Program Stormwater	\$230,000	\$230,000			
Accumulative Total January, 2016				\$2,065,000			
Total To Date				\$2,065,000			

CAPITAL BUDGET APPROVALS TO DATE - 2015/16




WATER	
TOTAL APPROVED BUDGET	\$14,880,000
APPROVALS TO DATE	\$14,183,000

STORMWATER	
TOTAL APPROVED BUDGET	\$2,815,000
APPROVALS TO DATE	\$2,855,000

WASTEWATER	
TOTAL APPROVED BUDGET	\$27,425,000
APPROVALS TO DATE	\$16,151,862

CORPORATE PROJECTS	
TOTAL APPROVED BUDGET	\$12,094,000
APPROVALS TO DATE	\$7,728,000

Report Prepared by:


Jamie Hannam, P. Eng.
Director of Engineering & IS

WATER
CAPITAL BUDGET APPROVALS TO DATE - 2015/16
TOTAL CAPITAL BUDGET FOR WATER \$14,888,000

Date of Approval		Description	Approved Amount	Net Additions to Budget	Contractor/ Consultant	Construction Tender Price	Construction Budget Estimate
HW	NSUARB GM						
2015/16 Water							
29-Jan-15	15-Apr-15	Advanced Funding Integrated Projects					
		East					
		Penhorn Drive	\$484,200	\$484,200	Dexter	\$327,628	\$431,089
		Sarnia Avenue	\$172,800	\$172,800	Dexter	\$136,216	\$153,846
		Main Road/Pleasant Street (Watermain Forcemain portion of Belmont WWTF Decommissioning plus watermain renewal)	\$1,650,000	\$1,650,000	Dexter	\$1,506,949	\$1,469,000
		West					
		Kempt Road	\$110,000	\$110,000	Dexter	\$352,022	\$397,934
		Pepperell St	\$371,000	\$371,000	Dexter	\$291,908	\$330,306
		Richmond Ave	\$152,000	\$152,000	Cumberland	\$228,515	\$135,327
		MacAlpine Ave	\$232,000	\$232,000	Dexter Construction	\$186,065	\$206,552
		Drysdale Road	\$208,000	\$208,000	Dexter Construction	\$220,670	\$185,185,00
		Brunswick St	\$200,000	\$200,000			
		Central					
		First Avenue	\$370,000	\$370,000	ARCP	\$285,378	\$329,416
		Sackville Cross Road Bridge		\$100,000	B. Spicer	\$99,406	\$89,031
		Alder Crescent - Wastewater Collection System Replacement	\$150,000	\$150,000	J.R. Eisenor Contracting	\$130,607	\$133,547
		Total of Integrated Projects	\$4,100,000	\$4,200,000			
		Lake Major WSP - Chlorinator Replacement					
		Project was not identified in 2014/15 - funding in the amount of \$200,000 is available from underspending on the JD Kline Chlorinator System Replacement (SAP #3-1824)	\$200,000	\$0			
29-Jan-15							
29-Jan-15	29-Apr-15	Distribution System Valve Replacement Program	\$125,000	\$125,000			
29-Jan-15	29-Apr-15	Hydrant Replacement Program	\$75,000	\$75,000			

WATER
CAPITAL BUDGET APPROVALS TO DATE - 2015/16
TOTAL CAPITAL BUDGET FOR WATER \$14,888,000

Date of Approval		Description	Approved Amount	Net Additions to Budget	Contractor/Consultant	Construction Tender Price	Construction Budget Estimate
HW	NSUARB GM						
29-Jan-15	29-Apr-15	Service Line Renewal Program	\$190,000	\$190,000			
29-Jan-15	29-Apr-15	Truck Mounted Valve Exercising Machine	\$30,000	\$30,000			
29-Jan-15	29-Apr-15	Leak Detection Equipment	\$16,000	\$16,000			
29-Jan-15	29-Apr-15	Upgrade to Correlator	\$22,000	\$22,000			
29-Jan-15	29-Apr-15	GPS/Total Station for Water Services	\$28,000	\$28,000			
29-Jan-15	29-Apr-15	Diesel Plate Compactor	\$16,000	\$16,000			
Accumulative Total - January 2015				\$4,702,000			
Macdonald Bridge Transmission Main Replacement project \$7,700,000: funding in the amount of \$354,000 is available from underspending on the Kearney Lake Road Water Transmission Main Phase 2: funding in the amount of \$3,750,000 is available from the 2015/16 Capital Budget under "Macdonald Bridge Transmission Main Replacement" and funding in the amount of \$3,295,000 will be included in the 2016/17 Capital Budget							
5-Mar-15	13-Apr-15		\$3,750,000	\$3,750,000	CBCL		
27-Mar-15		Lake Major WSP - Butterfly Valve Replacement Program	\$40,000	\$40,000			
27-Mar-15		JD Kline WSP Ampgard III to Vacuum Contactor Conversion Program	\$40,000	\$40,000			
27-Mar-15		Confined Space Entry Retrofit - Titus and Evans Chamber	\$65,000	\$65,000	Lindsay Const.	\$46,511	\$57,870
27-Mar-15		Bennery Lake WSP - Zeta Potential Meter	\$72,000	\$72,000			
27-Mar-15		Lake Major Entrance Road Culvert Replacement	\$76,000	\$76,000			
27-Mar-15		Gaston Road - Circumferential Transmission Main Tie In	\$120,000	\$120,000	Harbour Construction	\$71,983	\$106,837

WATER
CAPITAL BUDGET APPROVALS TO DATE - 2015/16
TOTAL CAPITAL BUDGET FOR WATER \$14,888,000

Date of Approval		Description	Approved Amount	Net Additions to Budget	Contractor/ Consultant	Construction Tender Price	Construction Budget Estimate
HW	NSUARB GM						
26-Mar-15		Critical Valve Replacement Program - Gottingen Street	\$250,000	\$250,000			
31-Mar-15		JD Kline WSP Chemical Feed Pump Replacement Program	\$120,000	\$120,000			
Accumulative Total - March 2015				\$4,533,000			
22-Apr-15		Total Station Survey Unit - project was not budgeted for in 2015/16. Funding in the amount of \$26,000 is available from the 2014/15 CB from underspending in the Kearney Lake Road Transmission Main Replacement Project	\$26,000	\$0			
23-Apr-15		Regional Development Charge Application & Hearing Funding in the amount of \$9,804 is available from the 2014/15 CB under the Kearney Lake Road Transmission Main Phase 2 and \$223,617 is available from underspending in the 2014/15 Lakeside Diversion Linear Project	\$9,804	\$0			
30-Apr-15		Collins Park Wastewater Tank Retrofit	\$11,000	\$11,000			
30-Apr-15	5-May-15	Critical Valve Replacement Program	\$250,000	\$250,000			
30-Apr-15		JD Kline Watershed Access Road Bridge Replacements	\$71,000	\$71,000			
30-Apr-15		Lake Major WSP Chlorine Analyzer and Sample Pump	\$12,000	\$12,000			
30-Apr-15		Lake Major WSP Chlorine Vacuum Regulator	\$21,000	\$21,000			
30-Apr-15		Renfrew Street PRV Decommissioning	\$17,000	\$17,000			

WATER
CAPITAL BUDGET APPROVALS TO DATE - 2015/16
TOTAL CAPITAL BUDGET FOR WATER \$14,888,000

Date of Approval		Description	Approved Amount	Net Additions to Budget	Contractor/ Consultant	Construction Tender Price	Construction Budget Estimate
HW	NSUARB GM						
30-Apr-15		Lake Major WSP Replace Contactors in the MCC	\$26,000	\$26,000			
30-Apr-15		Lake Major WSP Storage Containers	\$16,000	\$16,000			
30-Apr-15	12-Jun-15	Lake Major Dam Emergency Repairs - Fish Pump & Siphon System Funding Increase - this was not budgeted for in 2015/16. Funding in the amount of \$400,000 is available from underspending on the Kearney Lake Road Transmission Main Phase 2 Project	\$400,000	\$0	MECO		
Accumulative Total - April 2015				\$424,000			
5-May-15		JD Kline WSP - Backwash Butterfly Valve Actuators	\$30,000	\$30,000			
5-May-15		Lake Major WSP - Chemical Feed Pumps - Sodium Hydroxide	\$20,000	\$20,000			
5-May-15		Lake Major - Replace recirculating pumps for the Heating System	\$8,000	\$8,000			
5-May-15		Lake Major WSP - Upgrade the PLC	\$30,000	\$30,000			
22-May-15	23-Jul-15	JD Kline Water Supply Plant - Heating System & HVAC Upgrades	\$700,000	\$700,000			
22-May-15	27-Jul-15	Lake Major Dam Replacement - Design Phase	\$400,000	\$400,000			
28-May-15		Watershed Land Acquisition	\$650,000	\$650,000			
Accumulative Total - May 2015				\$1,838,000			
5-Jun-15		Lime Dosing System Upgrade - Lake Major WSP	\$10,000	\$10,000			
10-Jun-15		Chain Control Transmission Main Realignment - Engineering Design	\$45,000	\$45,000			
Accumulative Total - June 2015				\$55,000			
17-Aug-15		Lake Major WSP - Catwalk in the filter gallery	\$15,000	\$15,000			
17-Aug-15		Lake Major - Lighting in the Filter Gallery	\$5,000	\$5,000			

WATER
CAPITAL BUDGET APPROVALS TO DATE - 2015/16
TOTAL CAPITAL BUDGET FOR WATER \$14,888,000

Date of Approval		Description	Approved Amount	Net Additions to Budget	Contractor/Consultant	Construction Tender Price	Construction Budget Estimate
HW	NSUARB GM						
18-Aug-15		M2 Hydrant Replacement Program	\$50,000	\$50,000			
Accumulative Total - August 2015				\$70,000			
11-Sep-15		Lake Major WSP Chlorine Vacuum Regulator funding of \$21,000 Additional funding of \$39,000 is available from underspending in the "Lake Major WSP HVAC at Low Lift Pumping Station" (SAP #3-1934)	\$60,000	\$21,000			
24-Sep-15	Oct-29-15	JD Kline WSP - Filter Media and Underdrain Replacement Project Funding in the amount of \$300,000 was taken from "Water, JD Kline Filter Media Replacement in the amount of \$300,000, and the remaining \$700,000 is available under "Lake Major WSP New Diesel Generator"	\$1,000,000	\$1,000,000			
Accumulative Total - September 2015				\$1,021,000			
1-Oct-15		JD Kline Entrance Road Paving Renewal	\$85,000	\$85,000			
1-Oct-15		JD Kline Parking Lot Resurfacing	\$170,000	\$170,000			
Accumulative Total - October 2015				\$255,000			
10-Nov-15		Budget Adjustments - Lake Major WSP - Various Projects Lake Major WSP Chlorine Vacuum Regulator - \$63K and Lake Major Diesel Generator Replacement Design Phase - \$17K	\$80,000	\$80,000			
30-Nov-15		Bedford West CCC - Various Phases	\$20,000	\$20,000			
Accumulative Total - November 2015				\$100,000			
3-Dec-15	3-Dec-15	Lake Major WSP - Replace the Lime Feed and Delivery System	\$90,000	\$90,000			
Accumulative Total - December 2015				\$90,000			

WATER
CAPITAL BUDGET APPROVALS TO DATE - 2015/16
TOTAL CAPITAL BUDGET FOR WATER \$14,888,000

Date of Approval		Description	Approved Amount	Net Additions to Budget	Contractor/Consultant	Construction Tender Price	Construction Budget Estimate
HW	NSUARB GM						
7-Jan-16		Water Treatment Facility Security Upgrades	\$50,000	\$50,000			
7-Jan-16		JD Kline WSP - Replacement Program for Filter Valve Actuators	\$45,000	\$45,000			
21-Jan-16		Purchase New Trench Box - East Region Water Ops was not budgeted for in 2015/16 CB. Funding in the amount of \$22,000 is available from underspending on the "Water - Upgrade to the Correlator for the Central Region"	\$22,000	\$0			
26-Jan-16		Lakeside Control Chamber - CSE was not included in the 15/16 Capital Budget. Funding in the amount of \$39,000 is available from underspending in the Hare Lane Watermain Replacement Project (SAP 3-2063)	\$39,000	\$0			
28-Jan-16		2015/16 CB Chain Control Transmission Main Realignment Project: Funding is available from the following sources: Chain Control Transmission Main Realignment: \$455,000 Cathodic Protection Program: \$300,000 Critical Valve Replacement Program: \$250,000	\$1,000,000	\$1,000,000			
Accumulative Total - January 2016				\$1,095,000			
19-Feb-16	23-Feb-16	Bedford Highway Critical Valve funding increase (SAP 3-1923) \$57,000 in funding is available from underspending in SAP 3-1921	\$57,000	\$0			
22-Feb-16	23-Feb-16	Funding Increase JD Kline WSP Paving Improvements - \$70K is available from underspending in 2015/16 CB under SAP #3-2128	\$70,000	\$0			
Accumulative Total - February, 2016				\$0			
Total to Date				\$14,183,000			

WASTEWATER
CAPITAL BUDGET APPROVALS TO DATE - 2015/16
TOTAL CAPITAL BUDGET FOR WASTEWATER \$27,425,000

Date of Approval		Description	Approved Amount	Net Additions to Budget	Contractor/ Consultant	Construction Tender Price	Construction Budget Estimate
HW	NSUARB GM						
2015/16 Wastewater Advanced Funding Integrated Projects							
29-Jan-15	15-Apr-15	<u>East</u>					
		Penhorn Drive	\$99,000	\$99,000	Dexter	\$33,013	\$85,097
		Sarnia Avenue	\$47,000	\$47,000	Dexter	\$13,896	\$46,046
		Main Road/Pleasant Street (Wastewater Forcemain portion of Belmont WWTF Decommissioning plus watermain renewal)	\$3,000,000	\$3,000,000	Dexter	\$1,313,461	\$2,765,665
		Whynette Place	\$52,000	\$52,000	Cumberland	\$35,760	\$45,051
		Cross Road	\$99,000	\$99,000	Cumberland	\$67,372	\$85,097
		Dewhurst Drive	\$47,000	\$47,000	Cumberland	\$31,747	\$40,046
		Home Road Bridge	\$71,000	\$71,000			\$71,000
		Lahey Road	\$137,000	\$137,000			\$120,137
		Skyvue Terrace	\$99,000	\$99,000	Cumberland	\$67,372	\$85,097
		<u>West</u>					
		Pepperell Street	\$62,000	\$62,000	Dexter	\$41,708	\$51,183
		Richmond Avenue		\$119,000	Cumberland	\$75,184	\$105,433
		<u>Central</u>					
		First Avenue	\$52,000	\$52,000	ARCP	\$7,821	\$45,052
		Sackville Cross Road Bridge	\$71,000	\$71,000	B. Spicer Construction	\$156,022	\$71,000
		Adler Crescent - Wastewater Collection System Replacement	\$635,000	\$635,000	J.R. Eisener	\$461,868	\$599,644
		Cunningham	\$18,000	\$18,000			\$15,017
Total Integrated Projects				\$4,608,000			

WASTEWATER
CAPITAL BUDGET APPROVALS TO DATE - 2015/16
TOTAL CAPITAL BUDGET FOR WASTEWATER \$27,425,000

Date of Approval							
HW	NSUARB GM	Description	Approved Amount	Net Additions to Budget	Contractor/ Consultant	Construction Tender Price	Construction Budget Estimate
29-Jan-15	02-Jun-15	West Region Infrastructure Plan	\$450,000	\$450,000	GM BluePlan		
29-Jan-15	29-Apr-15	Manhole Renewals - Wastewater	\$29,000	\$29,000			
29-Jan-15	29-Apr-15	Lateral Replacements - Wastewater	\$1,490,000	\$1,490,000			
29-Jan-15	29-Apr-15	SIR Program Flow meters and Related Equipment	\$55,000	\$55,000			
29-Jan-15	29-Apr-15	Wastewater Operations Equipment	\$120,000	\$120,000			
21-Jan-15		Regional Centre Local Wastewater Servicing Capacity Analysis	\$25,000	\$25,000			
Accumulative Total January, 2015				\$6,777,000			
<p>Aerotech WWTF Expansion and Upgrade Project - Design Phase Funding: Funding in the amount of \$1,305,000 was allocated as follows: Carry Over from Preliminary Design: \$75,000 Internal Funding 2014/15 Capital Budget: \$500,000 <u>Internal Funding: 2015/16 Capital Budget \$730,000</u> TOTAL AMOUNT: 1,305,000</p>							
30-Oct-14	11-Feb-15		\$1,305,000	\$730,000	exp (design work only)		
12-Feb-15		HHSP - OCS Blower Variable Frequency Drive Updates					
		Halifax WWTF	\$150,397	\$150,397			
		Dartmouth WWTF	\$144,381	\$144,381			
		Herring Cove WWTF	\$126,334	\$126,334			
25-Feb-15	21-Apr-15	Jamieson Street Sewer Outfall Replacement Phase 2	\$1,100,000	\$1,100,000	Harbour Construction		\$930,700
Accumulative Total February, 2015				\$2,251,112			
10-Mar-15		Energy Management Retrofit Program Dartmouth WWTF - MCC 190 Ventilation Upgrades	\$110,000	\$50,000			
Accumulative Total March, 2015				\$50,000			

WASTEWATER
CAPITAL BUDGET APPROVALS TO DATE - 2015/16
TOTAL CAPITAL BUDGET FOR WASTEWATER \$27,425,000

Date of Approval							
HW	NSUARB GM	Description	Approved Amount	Net Additions to Budget	Contractor/ Consultant	Construction Tender Price	Construction Budget Estimate
02-Apr-15		Compressed Air System - Biosolids Processing Facility: Funding available from underspending in the 2014/15 CB under "Biosolids Processing Facility Upgrade Program Project"	\$34,500	\$0			
09-Apr-15		UV Ballasts Replacement - Mill Cove WWTF: Funding available from the 2014/15 CB under "Wastewater Treatment Facilities Upgrades (various locations)"	\$40,000	\$0			
23-Apr-15		Regional Development Charge Application & Hearing Funding in the amount of \$9,804 is available from the 2014/15 CB from under spending in the Kearney Lake Road Transmission Main Phase 2 and \$223,617 is available from underspending in the Lakeside Diversion Linear Project	\$223,617	\$0			
30-Apr-15	26-Jun-15	Wastewater - Collection System - Sewer Lining Program	\$1,000,000	\$1,000,000	Insituform Technologies Ltd.	\$442,048	\$845,000
Accumulative Total April, 2015				\$1,000,000			
4-May-15		Treatment Facilities - UV System Local Isolators - DWWTF 2014/15 Capital Budget	\$22,500	\$0			
15-May-15		Combined Sewer at the North Park Cogswell Roundabout: Funding in the amount of \$70,000 is available from underspending on the "2015/16 Wastewater - Structures "new Pump Station and Forcemain plus Belmont WWTF Decommissioning"	\$70,000	\$0			
22-May-15	15-Jul-15	Wastewater Pumping Stations Condition and Performance Assessments	\$125,000	\$125,000			
Accumulative Total May, 2015				\$125,000			

WASTEWATER
CAPITAL BUDGET APPROVALS TO DATE - 2015/16
TOTAL CAPITAL BUDGET FOR WASTEWATER \$27,425,000

Date of Approval							
HW	NSUARB GM	Description	Approved Amount	Net Additions to Budget	Contractor/ Consultant	Construction Tender Price	Construction Budget Estimate
24-Jul-15		Aerotech Biosolids Processing Facility - Warehouse Ventilation System & Controls Upgrades - Detailed Design Phase	\$100,000	\$100,000			
24-Jul-15		DWWTF - Replacement & Upgrade Of UV System Control Panels	\$135,000	\$0			
30-Jul-15		2014/15 WW - Treatment facility - Basement Emergency Sump Pump and pipework - DWWTF	\$30,000	\$0			
30-Jul-15	17-Sep-15	Aerotech WWTF Expansion and Upgrade Project - MBR Component Procurement	\$4,285,000	\$4,285,000	GE	\$2,300,000	\$3,500,000
Accumulative Total July, 2015				\$4,385,000			
17-Aug-15		Aerotech Biosolids Processing Facility - New Screening and Loading Addition Project	\$65,000	\$65,000			
Accumulative Total August, 2015				\$65,000			
Oct-22-15		Main Street Wastewater Sewer Main Replacement original amount was \$120,000 - Additional Funding for this project in the amount of \$66,000 is available from the "Main Street Sewer Renewal" project which will not proceed this year	\$66,000	\$66,000			
Oct-22-15		Inglis Street Sewer - Hydraulic Issues	\$33,000	\$33,000			
Accumulative Total October, 2015				\$99,000			
09-Nov-15		Centrifuge Winterization Upgrades Project Mill Cove - funding available from 2015/16 CB under "Plant Optimization Audit Program:	\$125,000	\$75,000			
17-Nov-15		Sackville Cross Road Bridge/Wastewater funding increase: Funding in the amount of \$64,000 is available from underspending in the "Hornes Road/ Bridge Wastewater Project which will not be proceeding this year	\$64,000	\$0			

WASTEWATER
CAPITAL BUDGET APPROVALS TO DATE - 2015/16
TOTAL CAPITAL BUDGET FOR WASTEWATER \$27,425,000

Date of Approval							
HW	NSUARB GM	Description	Approved Amount	Net Additions to Budget	Contractor/ Consultant	Construction Tender Price	Construction Budget Estimate
17-Nov-15		Wastewater Security Upgrade Program: WWTF CCTV Upgrades	\$50,000	\$50,000			
26-Nov-15	11-Jan-16	HW Corporate Flow Monitoring Program: funding in the amount of \$710,000 is available from "Wastewater - Corporate Flow Monitoring Program: Revised funding for Year 1 reduced to \$420,000. Year 2 funding in the amount of \$950,000 (from 2016/17 Capital Budget)	\$1,370,000	\$710,000	AMG Environmental	1,332,500	
26-Nov-15	22-Dec-15	West Regional Wastewater Infrastructure Plan - Funding Increase: Funding in the amount of \$344,000 is available from "Central Region - Wastewater Infrastructure Plan"	\$350,000	\$0			
30-Nov-15		Bedford West CCC - Various Phases	\$30,000	\$30,000			
Accumulative Total November, 2015				\$865,000			
04-Dec-15		Market Street Combined Sewer Replacement - project was not budgeted for in 2015/16: Funding in the amount of \$60,000 is available from underspending in the Lakeside Pumping Station Diversion to Halifax	\$60,000	\$0			
Accumulative Total December, 2015				\$0			
06-Jan-16		Gas Monitoring Program was not budgeted for in 2015: Funding in the amount of \$40,000 is available from underspending in the 2014/15 CP under "Lakeside Pumping Station Diversion To Halifax Sewershed" which came in under budget	\$40,000	\$0			
07-Jan-16		Wastewater Treatment Facility Security Upgrades	\$50,000	\$50,000			
07-Jan-16		Compressed air system - biosolids processing facility funding in the amount of \$14,750 is available under "Wastewater, Energy, Energy Management Retrofit Program	\$14,750	\$14,750			
07-Jan-16		Biosolids Processing Facility Upgrade Program	\$120,000	\$120,000			

WASTEWATER
CAPITAL BUDGET APPROVALS TO DATE - 2015/16
TOTAL CAPITAL BUDGET FOR WASTEWATER \$27,425,000

Date of Approval							
HW	NSUARB GM	Description	Approved Amount	Net Additions to Budget	Contractor/ Consultant	Construction Tender Price	Construction Budget Estimate
28-Jan-16		Manhole Lining - Crescent Avenue and Stuart Harris Sewershed funding in the amount of \$195,000 is available from underspending in the 2015/16 CB under "Sewer Lining Program"	\$195,000	\$0			
Accumulative Total January, 2016				\$184,750			
19-Feb-16	23-Feb-16	Bissett Pumping Station Forcemain Replacement	\$240,000	\$240,000			
Accumulative Total February 2016				\$240,000			
09-Mar-16		Wastewater Pump Station Upgrade Program - East Region (2015/16 CB)	\$110,000	\$110,000			
10-Mar-16		HRM Land Transfer - Sub Division Costs Funding in the amount of \$75,000 is available from underspending in the Lakeside Pumping Station Diversion Project which came in under budget	\$75,000	\$0			
Accumulative Total March 2016				\$110,000			
Total To Date				\$16,151,862			

STORMWATER
CAPITAL BUDGET APPROVALS TO DATE - 2015/16
TOTAL CAPITAL BUDGET FOR STORMWATER \$2,815,000

Date of Approval		Description	Approved Amount	Net Additions to Budget	Contractor/ Consultant	Construction Tender Price	Construction Budget Estimate
HW	NSUARB GM						
2015/16 Stormwater Advanced Funding Integrated Projects							
29-Jan-15	29-Apr-15	East					
		Penhorn Drive	\$16,000	\$16,000	Dexter	\$7,603	\$13,140
		Merimac Drive	\$21,000	\$21,000			\$17,520
		Whynette Place	\$73,000	\$73,000	Cumberland	\$58,129	\$60,069
		Cross Road	\$99,000	\$99,000	Cumberland	\$67,372	\$85,097
		Dewhurst Drive	\$47,000	\$47,000	Cumberland	\$54,134	\$40,045
		Skyvue Terrace	\$99,000	\$99,000	Cumberland	\$67,372	\$85,097
		West					
		Richmond Avenue	\$54,000	\$54,000	Cumberland	\$36,090	\$44,426
		Thornhill Drive	\$16,000	\$16,000			\$13,035
		Central					
		First Avenue	\$52,000	\$52,000	ARCP	\$7,821	\$45,052
		Cunningham	\$18,000	\$18,000			\$15,017
		Jubilee Lane		\$13,000			\$7,734
		Total Integrated Projects		\$508,000			
29-Jan-15	29-Apr-15	Manhole Renewals - Stormwater	\$26,000	\$26,000			
29-Jan-15	29-Apr-15	Catchbasin Renewals	\$26,000	\$26,000			
29-Jan-15	29-Apr-15	Lateral Replacements - Stormwater	\$80,000	\$80,000			
29-Jan-15	29-Apr-15	Driveway Culvert Replacement	\$427,000	\$427,000			
		Accumulative Total - January 2015		\$1,067,000			

STORMWATER
CAPITAL BUDGET APPROVALS TO DATE - 2015/16
TOTAL CAPITAL BUDGET FOR STORMWATER \$2,815,000

Date of Approval							
HW	NSUARB GM	Description	Approved Amount	Net Additions to Budget	Contractor/ Consultant	Construction Tender Price	Construction Budget Estimate
18-Feb-15		Civic #183 Lakeview Avenue and Holly Court Culvert Replacement Projects					
		#183 Lakeview Avenue	\$229,000	\$229,000			\$190,843
		Holly Court - Culvert Replacement	\$200,000	\$200,000			\$165,815
18-Feb-15		Rolling Hills Drive Stormwater Rehabilitation	\$157,000	\$157,000			\$137,658
		Stormwater Culvert Renewal Program					
23-Feb-15	27-Apr-15	North Preston Road	\$347,000				\$258,421
		Bedford Highway @Shaunslieve Drive Culvert Upgrade	\$407,000	\$754,000			\$333,767
24-Feb-15	8-Apr-15	Stormwater - Pipes Shore Road (Eastern Passage) Storm Sewer Diversion	\$291,000	\$291,000			\$259,297
Accumulative Total - February 2015				\$1,631,000			
23-Jun-15		Armanada Crescent Stormwater Manhole Replacement: not budgeted for in 2015/16: Funding in the amount of \$13,500 is available from Underspending in the "Cross Road Stormwater" integrated project	\$13,500	\$0			
24-Jul-15		Little Sackville River Flood Plain Mapping	\$57,000	\$57,000			
24-Jul-15		Keating Road Stormwater Inlet Structure - was not budgeted for in the 2015/16 CB. Funding is available from underspending in the "Yankeetown Road near Civic #206 Replacement Project" in the amount of \$75,000	\$75,000	\$0			
30-Jul-15		Bluewater Road Replacement of Stormwater Infrastructure project was not budgeted for in 2015/16: funding in the amount of \$247K is available from the "Bedford Highway at Shaunslieve Drive Culvert Upgrade" project which is not proceeding this year.	\$407,000	\$0	Harbour Construction	\$132,993	\$218,000
Accumulative Total - July 2015				\$57,000			

STORMWATER
CAPITAL BUDGET APPROVALS TO DATE - 2015/16
TOTAL CAPITAL BUDGET FOR STORMWATER \$2,815,000

Date of Approval							
HW	NSUARB GM	Description	Approved Amount	Net Additions to Budget	Contractor/ Consultant	Construction Tender Price	Construction Budget Estimate
16-Nov-15		Dewhurst Drive Stormwater Integrated Project funding increase: Funding in the amount of \$25K is available from underspending in the 2015/16 CB under "Integrated Stormwater Projects - Program"	\$25,000	\$0			
17-Nov-15		Sackville Drive Cross Culvert Replacement: Funding available from underspending in "2015/16 CB under "Integrated Stormwater Projects - Program:	\$30,000	\$0			
24-Nov-15		Old Sackville Road Integrated Project Funding increase: funding is available from underspending under the "Integrated Stormwater Projects - Program" in the amount of \$14,000	\$14,000	\$0			
26-Nov-15		Grade Adjustments Above 1200 mm Forcemain (Near Old Ferry Road) funding in the amount of \$25,000 is available from underspending in "Integrated Stormwater Projects - Program"	\$25,000	\$0			
Accumulative Total - November 2015				\$0			
7-Jan-16		Culvert Replacement Program - Surveying Services project was not budgeted for in 2015/16; Funding in the amount of \$50,000 is available from underspending in the 2014/15 CB under "Ellenvale Run Retaining Wall Replacement project which came in under budget	\$50,000	\$0			
7-Jan-16		Hammonds Plains Road Flooding Investigation was not budgeted for in 2015/16 funding in the amount of \$50,000 was taken from Bluewater Road Stormwater Infrastructure Replacement Project which was under budget	\$50,000	\$0			

STORMWATER
CAPITAL BUDGET APPROVALS TO DATE - 2015/16
TOTAL CAPITAL BUDGET FOR STORMWATER \$2,815,000

Date of Approval			Approved Amount	Net Additions to Budget	Contractor/Consultant	Construction Tender Price	Construction Budget Estimate
HW	NSUARB GM	Description					
21-Jan-16		St. Margaret's Bay Road - Stormwater IP was not budgeted for in 2015/16 CB. Funding in the amount of \$6,000 is available from underspending on the "Little Sackville River Flood Plain Map	\$6,000	\$0			
Accumulative Total - January 2016				\$0			
25-Feb-16	21-Mar-16	Sullivan's Pond Storm Sewer System Replacement - Design Funding in the amount of \$100,000 is available from 2015/16 CB under "Stormwater Pipes - Sullivan's Pond Storm Sewer Replacement - Phase 1 and \$300,000 is available from the 2016/17 CB Under "Stormwater Pipes Sullivan's Pond Storm Sewer Replacement Phase 1. The total approved to date is \$950,000	\$400,000	\$100,000	CBCL		
Accumulative Total - February, 2016				\$100,000			
Total To Date				\$2,855,000			

CORPORATE PROJECTS
CAPITAL BUDGET APPROVALS TO DATE - 2015/16
TOTAL CAPITAL BUDGET FOR CORPORATE PROJECTS \$12,094,000

Date of Approval		Description	Approved Amount	Net Additions to Budget	Contractor/ Consultant	Construction Tender Price	Construction Budget Estimate
HW	NSUARB GM						
29-Jan-15	29-Apr-15	Fleet Upgrade - Water	\$16,000	\$16,000			
29-Jan-15	29-Apr-15	Fleet Upgrade - Wastewater	\$988,000	\$988,000			
29-Jan-15	29-Apr-15	Fleet Upgrade - Stormwater	\$247,000	\$247,000			
Accumulative Total - January 2015				\$1,251,000			
8-Apr-15		Interim CRM - Call Centre Business Process Evaluation "Corporate Projects - Customer Relationship Management - Selection and Implementation"	\$50,000	\$50,000	Adam Hall	\$50,000	
30-Apr-15	Jul-30-15	Corporate Projects - GIS Data Program	\$1,500,000	\$1,500,000	AECOM/OPUS/HW	\$992,342	
Accumulative Total - April 2015				\$1,550,000			
6-May-15		Hydrant and Catchbasin Public Information Mapping: Funding is available from the 2014/15 CB under the "GIS Data Program"	\$120,000	\$0	WSP/HW	\$120,000	
28-May-15		Computer Maintenance Management System - Phase 2A Business Process		\$215,000	ESRI	\$215,000	
24-Jul-15		SCADA Control System Enhancements 2015/16 (split 50W/50WW)	\$200,000	\$200,000			
30-Jul-15	15-Oct-15	Computer Maintenance Management System - Phase 2 Implementation	\$4,971,000	\$2,195,000	ESRI	\$1,000,000	
Accumulative Total - May 2015				\$2,610,000			

CORPORATE PROJECTS
CAPITAL BUDGET APPROVALS TO DATE - 2015/16
TOTAL CAPITAL BUDGET FOR CORPORATE PROJECTS \$12,094,000

Date of Approval		Description	Approved Amount	Net Additions to Budget	Contractor/ Consultant	Construction Tender Price	Construction Budget Estimate
HW	NSUARB GM						
30-Aug-15	Oct-14-15	Customer Relationship Management (CRM)	\$550,000	\$550,000	Cayenta	\$550,000	
Accumulative Total - August 2015				\$550,000			
24-Sep-15	9-Oct-15	Meter Renewal and Installation Program - AMI/AMR Meter System Upgrades	\$1,000,000	\$1,000,000			
Accumulative Total - September 2015				\$1,000,000			
Oct-29-15	21-Dec-15	2015/16 SCADA Master Plan Implementation Program	\$500,000	\$500,000			
Accumulative Total - October 2015				\$500,000			
7-Jan-16		Cowie Hill 2nd Floor Renovations Human Resources	\$75,000	\$75,000			
22-Jan-16	Jan-22-16	Asset Management Program	\$100,000	\$100,000			
26-Jan-16	26-Jan-16	Asset Management Software Assessment	\$50,000	\$50,000			
26-Jan-16	26-Jan-16	Modelling Tools Assessment	\$40,000	\$40,000			
Accumulative Total - January 2016				\$265,000			
Total To Date				\$7,726,000			

CORPORATE PROJECTS
CAPITAL BUDGET APPROVALS TO DATE - 2016/17
TOTAL CAPITAL BUDGET FOR CORPORATE PROJECTS \$10,535,000

Date of Approval							
HW	NSUARB GM	Description	Approved Amount	Net Additions to Budget	Consultant/ Contractor	Construction Tender Price	Construction Budget Estimate
28-Jan-16		Desktop Computer Replacement Program	\$180,000	\$180,000			
28-Jan-16		Network Infrastructure Upgrades	\$200,000	\$200,000			
28-Jan-16		Survey Equipment - GPS Total Station	\$30,000	\$30,000			
28-Jan-16		Fleet Upgrade Program Water	\$505,000	\$505,000			
28-Jan-16		Fleet Upgrade Program Wastewater	\$920,000	\$920,000			
28-Jan-16		Fleet Upgrade Program Stormwater	\$230,000	\$230,000			
Accumulative Total January, 2016				\$2,065,000			
Total To Date				\$2,065,000			

Item 3-I

23-Mar-16

FINANCIAL REPORT

Consolidated balance of the four operating accounts
maintained by the Commission as of:

23-Mar-16

\$54,500,832

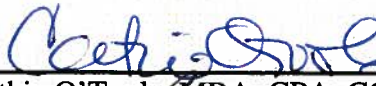
Rate of interest on the above balance -
Investment Rate of Return

0.069%

\$54,500,832.03

TO: Ray Ritcey, Chair, and Members of the Halifax Regional Water Commission Board

SUBMITTED BY:


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

APPROVED:


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

DATE:

March 18, 2016

SUBJECT:

Pension Plan Investment Performance 4th Quarter, 2015

INFORMATION REPORT

ORIGIN

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

BACKGROUND

None

DISCUSSION

The tables below and the attached Investment Report outlines the performance update for the fourth quarter of 2015 (October to December) for the Halifax Regional Municipality (HRM) Pension Plan Master Trust, of which Halifax Regional Water Commission (HRWC) is a part. The fair value of the investment in the Master Trust is determined and updated at year-end, and HRWC's share of the total HRM Master Trust at December 31, 2015 was 5.87%, and totaled \$100.4 million.

Returns:

	4th Quarter Oct. to Dec.	1-Year	5-Year Annualized	Since October 1999
Fund Return	4.05%	10.59%	8.92%	7.09%
Policy Benchmark	2.49%	5.27%	5.91%	5.54%
Excess Return	1.56%	5.32%	3.01%	1.55%

ITEM 4-I
HRWC Board
March 31, 2016

Asset Mix December 31, 2015:

Asset:	Actual	Policy
Cash & Equivalents	0.41%	
Canadian Equity	8.08%	9.70%
Global Equity	29.58%	24.40%
Bonds	24.17%	33.30%
Minimum Target Return	37.76%	32.60%

The total fund returned 4.05% in the 4th Quarter, which outperformed the policy benchmark of 2.49% by 1.56%. Year-to-date performance earned 10.6%, outperforming the policy benchmark by 5.3%. The return for a one-year period ending December 31, 2015, was 10.59% which exceeded the policy benchmark of 5.27% by 5.32%. Effective December 31, 2015, the policy benchmark is 6.7% (no change from the prior benchmark).

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

As at December 31, 2015, the Master Trust was in compliance with the Statement of Investment Policies and Procedures (SIP&P).

ATTACHMENT

Halifax Regional Municipality Pension Plan Investment Report 4th Quarter, 2015



Investment Report

Q4 2015



Executive Summary

Compliance

As at December 31, 2015, the Master Trust (MT) was in compliance with the SIP&P.

Funded Status*

As at December 31, 2014, the accounting funded position was 100%, the going concern funded status was 87.7%, and the solvency funded ratio was 64.2%.

Master Trust Performance

In Q4, the MT earned 4.1%, outperforming the policy benchmark return by 1.6%.

For the one-year period ending December 31, 2015, the MT earned 10.6%, outperforming the policy benchmark by 5.3%.

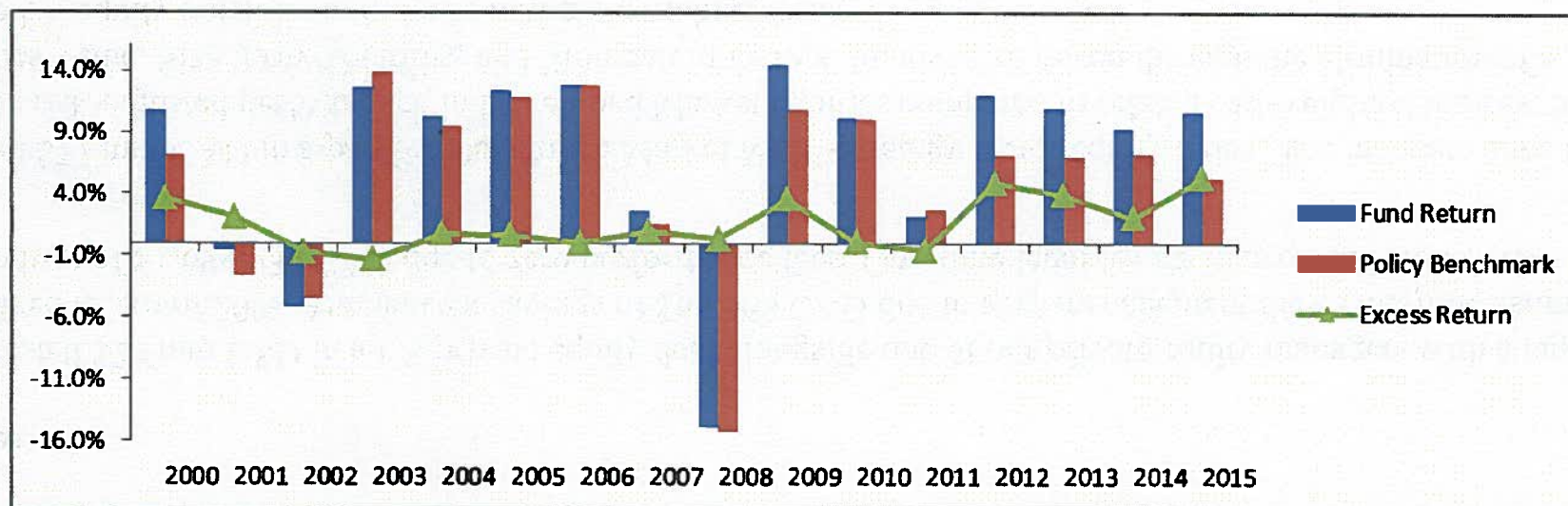
The MT earned an annualized return of 10.7% over the 4-year ending December 31, 2015 outperforming the policy benchmark by 4.0% annualized.

Since inception (October 1999), the MT earned 7.1% annualized outperforming the Plan's long-term rate objective of 6.55%. The table on the next slide summarizes the calendar year returns for the MT.

*Source: AON

Executive Summary – Cont.

Calendar Returns



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
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%
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%
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%



Executive Summary – Cont.

Added Value

In Q4 of 2015, the MT outperformed its benchmark by 1.56%. Attribution: Minimum Target Return +0.65%, MSCI EAFE Equity +0.19%, Emerging Market Equity +0.14%, US Equity +0.14%, CAD Equity +0.13%, Global Credit +0.12%, Universe Bonds +0.11% and World Equity +0.08%.

Q4 Updates

- Co-invested \$2.5mm USD in a US private equity deal alongside one of our private equity managers with a target annualized return of 20%. Annual cost savings of \$68,368 CAD due to zero management fees. One-time estimated cost savings of \$1,694,930 CAD due to zero performance fees. One-time legal fee savings of \$21,482 CAD.
- Invested \$77 mm CAD in a passive Developed Market Multi-Strategy factor equity index. The mandate aims to improve risk-adjusted performance in Developed Market equities compared to related cap-weighted indices. It combines Value, Size, Low Volatility, and Momentum factors. Funds were raised through the elimination of a passive US equity portfolio in order to minimize trading costs.

** Converted to CAD as of December 31, 2015.*



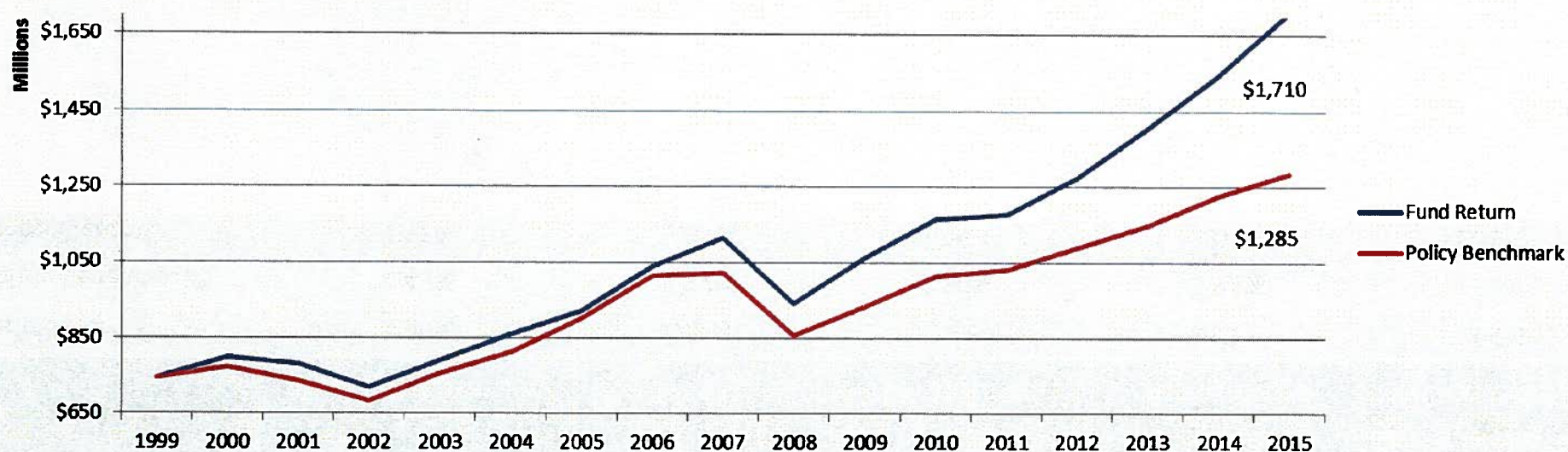
Total Fund Returns – December 31, 2015

	Current Quarter	1-Year	3-Year Annualized	5-Year Annualized	Since Inception (Oct 1999)
Fund Return	4.05%	10.59%	10.26%	8.92%	7.09%
Policy Benchmark*	2.49%	5.27%	6.50%	5.91%	5.54%
Excess Return	1.56%	5.32%	3.76%	3.01%	1.55%

*Effective December 31, 2015, the Policy Benchmark is 6.7% S&P/TSX Index + 3.0% S&P/TSX 60 + 2.6% S&P 500 Index (\$CAN) + 4.2% S&P 500 Index(\$USD) + 7.1% MSCI EAFE Index (\$CAN) + 3.9% MSCI Emerging Markets (CAN\$) + 6.6% MSCI World (CAN\$) +18.7% FTSE TMX Canada Universe + 14.6% 3 Month Bankers Acceptance + 32.6% Minimum Target Return.



Since Inception Performance

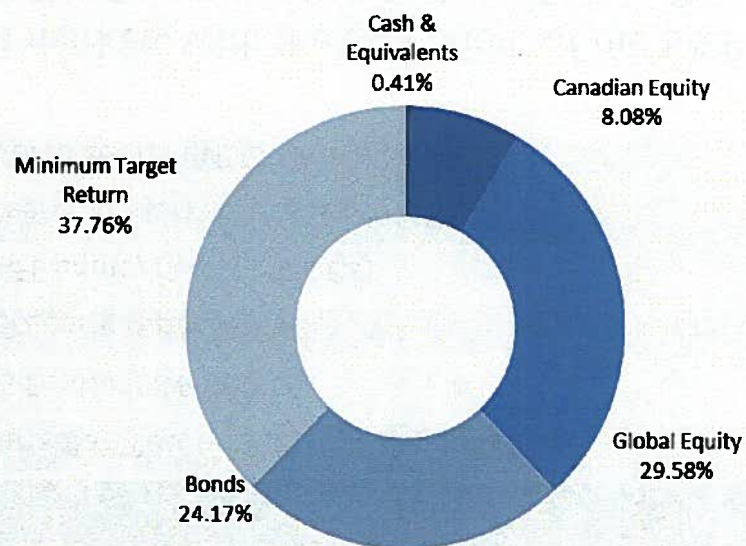


In dollar terms, the fund has grown \$425.0 million in excess of the policy benchmark since inception.

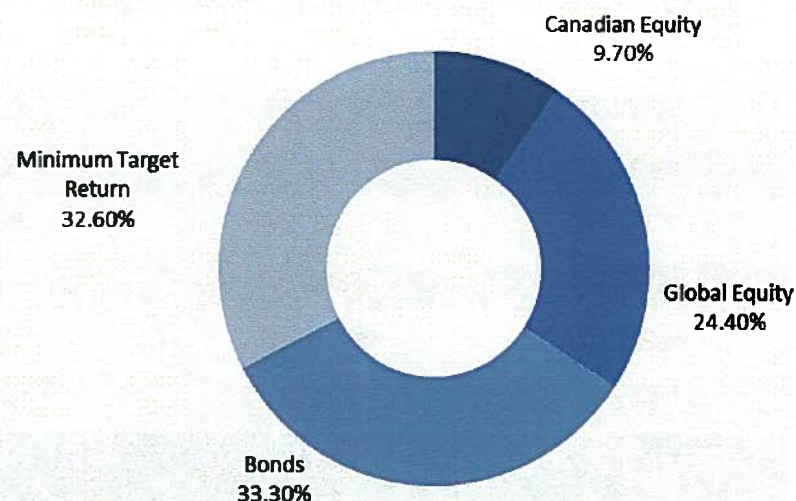


Asset Mix – December 31, 2015

Actual Asset Mix
As of December 31, 2015



Asset Mix Policy
As of December 31, 2015



*Effective December 31, 2015, the Policy Benchmark is 6.7% S&P/TSX Index + 3.0% S&P/TSX 60 + 2.6% S&P 500 Index (\$CAN) + 4.2% S&P 500 Index(\$USD) + 7.1% MSCI EAFE Index (\$CAN) + 3.9% MSCI Emerging Markets (CAN\$) + 6.6% MSCI World (CAN\$) + 18.7% FTSE TMX Canada Universe + 14.6% 3 Month Bankers Acceptance + 32.6% Minimum Target Return.

Equity Market Index Returns

Indexes	Current Quarter	1-Year Ending Dec 31, 2015	4-Year Ending Dec 31, 2015
Canadian Equity (S&P/TSX Capped Index)	-1.40%	-8.32%	5.26%
US Equity (S&P 500 C\$)	10.61%	20.95%	24.58%
US Equity (S&P 500 U\$)	7.04%	1.38%	15.35%
EAFE Equity (MSCI EAFE C\$)	8.20%	18.33%	16.61%
Emerging Markets (MSCI EM C\$)	4.01%	1.50%	6.86%
World Equity (MSCI World C\$)	9.01%	18.26%	20.05%

All markets with the exception of the S&P/TSX Capped Index earned positive returns in Q4 2015 and over the 1-year time period. Stock market returns have been robust over the 4-year time period.

Bond Market Index Returns

Bond Indexes	Current Quarter	1-Year Ending Dec 31, 2015	4-Year Ending Dec 31, 2015
Canadian Long Duration Bonds (FTSE TMX Canada Long Government)	1.94%	4.48%	4.48%
Canadian Universe Bonds (FTSE TMX Canada Universe)	0.98%	3.52%	3.62%
Canadian Corporate Bonds (FTSE TMX Canada All Corporate)	0.63%	2.71%	4.31%

Universe bonds have outperformed Corporate bonds over the Q4 and 1 year periods but underperformed for the 4 year period.

Long bonds have outperformed Universe and Corporate bonds over the Q4, 1 and 4 year periods.



Fixed Income – Q4 Summary

- The MT's Fixed Income portfolio returned 1.09%, which outperformed its benchmark return of 0.64% by +0.45%.
- The MT's corporate bond component of the FTSE TMX Canada Universe mandate returned 2.60% outperforming the FTSE TMX Canada All Corporate Bond Index return of 0.63% by +1.97%.
- The MT's Universe Bond mandate returned 1.51%, outperforming the FTSE TMX Canada Universe Bond Index by +0.53%.
- The MT's combined short duration portfolio returned 0.38% in Q4, outperforming the 3 Month BA returned of 0.21% by +0.17%.

Equity – Q4 Summary

- In absolute terms, the MT's Equity portfolio returned 7.05% during the quarter, outperforming the equity policy benchmark by +1.89%.
- Within the Equity portfolio, the Canadian, US, Emerging Markets, EAFE equity and World equity allocations outperformed their benchmarks.

Equity Indexes	Excess Return Over Benchmark Q4 2015
Canadian Equity	0.93%
US Equity	0.68%
EAFE Equity	0.94%
EME Equity	5.11%
World Equity	0.15%