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Item No. 13.3.1
Halifax Regional Council
March 7, 2023

TO: Mayor Savage and Members of Halifax Regional Council

SUBMITTED BY: Original Signed
Louis de Montbrun, CPA, Acting General Manager and CEO, Halifax Water

DATE: February 24, 2023

SUBJECT: Halifax Water 2023/24 Business Plan

ORIGIN

Halifax Water Board Meeting of January 26, 2023.

LEGISLATIVE AUTHORITY

Annual operational requirement in accordance with Halifax Regional Water Commission Act, clause 20A(2)(b), and Halifax Regional Municipality Administrative Order 2018-001-ADM.

RECOMMENDATION

It is recommended that Regional Council approve the 2023/24 Annual Business Plan of Halifax Water as described in the attached document as Appendix A.

BACKGROUND

Halifax Water develops both long-term and short-term business plans. The 2023/24 Annual Business Plan reflects the strategic direction of the Five-Year Business Plan (2020/21 – 2024/25). The Halifax Water Board approved the 2023/24 Annual Business Plan on January 26, 2023. The business plans are consistent with the updated Integrated Resource Plan (IRP) approved by the Halifax Water Board in November 2019. Clause 20A(2)(b) of the Halifax Regional Water Commission Act requires that Halifax Water submits its Annual Business Plan for approval by Regional Council.

DISCUSSION

Halifax Water is an integrated water, wastewater, and stormwater utility in its 78th year of operation, serving 106,000 customers and an estimated population of 381,000.

Halifax Water's business plan for 2023/24 is developed with the recognition that challenges from the preceding fiscal year will continue to impact Halifax Water's customers, employees, and business partners, and Halifax Water must continue to focus on continuous improvement of our service delivery and service offerings.

Last year, Halifax Water continued enhancing the Customer Connect portal and improved customer notifications around potential leaks and high consumption. We also worked to improve our financial position by seeking approval for a General Rate Application. The Nova Scotia Utility and Review Board (NSUARB) approved increases to Halifax Water's rates for all three services to reflect the current costs of providing service.

In 2022/23, we expanded our stormwater service area and advanced the Cogswell District Energy System through agreements with HALIFAX and an application seeking approval for the next phases of the project through the NSUARB.

Last year, Halifax Water also initiated or completed several significant water asset renewal projects. This included the Lake Major Clarifier project, the rehabilitation of the Akerley Reservoir, and the construction of the Cowie Hill Reservoir replacement.

Halifax Water continues to succeed through cooperation and collaboration across multiple business units and workgroups. To reflect this, and like last year, the business plan is focusing on corporate goals and the need to work together to move the utility forward in four areas:

- People
- Health, Safety and Environment
- Financial and Regulatory Accountability
- Operational Excellence

In 2023/24, Halifax Water will continue to focus on increasing our capacity to deliver services.

This annual business plan recognizes the need for further capital investment as contemplated in the updated IRP. Halifax Water's proposed capital budget is \$146.7 million, with 74% of the projects arising due to the need to renew existing assets. This year the capital budget has been increased compared to last year as we grow our capacity to deliver the IRP. Several significant projects in the planning stages have come to fruition. The capital budget for the next five years reflects total spending of \$1,266.8 M, with \$557.5 M for water, \$628.1 M for wastewater, and \$81.2 M for stormwater.

Halifax Water continues to advance its Water Supply Enhancement Program. This is a 10-year program to upgrade the utility's two major water supply plants. Detailed design is currently underway for significant upgrade projects. Construction of new clarifiers at the JD Kline Water Supply plant is planned to begin with site preparation in late 2023/24. Construction of new clarifiers, a new pumping station, and intake at Lake Major will start in 2024/25.

In 2023/24, Churchill Drive transmission main project will renew infrastructure initially installed in the 1850s and continues to be one of the primary feeds that supply water to the Halifax Peninsula.

Halifax Water will replace aging equipment and, in some cases, provide additional capacity at four separate wastewater pumping stations. We will also start the design work needed to significantly upgrade the Mill Cove Wastewater Treatment Facility. Subject to funding approvals, Halifax Water will begin constructing the Fairview Cove sewer twinning project, addressing capacity constraints in the current system.

Halifax Water continues to work with the Cogswell District Redevelopment Team to renew and relocate water, wastewater, and stormwater infrastructure.

In early 2023, Halifax Water will start the procurement process to upgrade its Biosolid Process Facility.

This year will also include Phase 2 of the Sawmill Creek daylighting project. This is part of several integrated projects in this area with the municipality. Detailed design is underway, and it is slated for construction in 2024.

We continue to prioritize environmental sustainability and are expanding our Environmental Management System (EMS) across the organization, continuing to progress the development of a Climate Action Plan, and ensuring major initiatives such as the Water Supply Enhancement Program, Water Safety Plan, Wastewater Treatment Facility Planning Study, and biosolids facility project are forward-looking and considering the environmental requirements of tomorrow. Halifax Water is taking positive actions toward

climate adaptation and mitigation, and the current IRP considers climate vulnerabilities to reduce infrastructure and service delivery risk.

Climate change mitigation is a core driver for implementing the Cogswell District Energy System as part of the Cogswell redevelopment. This exciting initiative will significantly reduce Greenhouse Gas (GHG) emissions for the new development.

We will add new positions across the utility to support capital project delivery, climate change, safety, and stormwater service delivery. In addition to increasing our staffing complement, we will continue to focus on Halifax Water employees' physical and psychological health.

Halifax Water has started the design validation phase for its new Burnside Operations Centre to enhance our operational efficiency. This new facility will combine four depots into one, creating more opportunities to streamline operations through our One Team, Once Water initiative and will position us well for future growth areas, such as the Dartmouth to Bedford corridor along Magazine Hill and the Dartmouth to Fall River corridor. The new facility will also reduce life cycle costs compared to owning and operating the four existing facilities. It will also be designed for a diverse workforce and will meet today's standards for accessibility and environmental sustainability.

Technology continues to transform our business and change how employees and customers interact. We continued to enhance the Customer Connect portal. In 2023/24, we will implement a new corporate Enterprise Resource Planning (ERP) system and have an increased focus on creating a "smart utility" through data management and analytics to improve decision-making and customer service.

The 2023/24 fiscal year will see the continued evolution of existing programs and services, such as the lead service line (LSL) replacement program designed to remove all LSLs by 2038. Also, staff will engage with stakeholders to review a proposed program to promote compliance of existing service connections with Halifax Water Regulations. This program will provide additional insights into the LSL program and assist the Wet Weather Management Program (WWMP) to mitigate inflow and infiltration issues into the sanitary sewer system. Overall, the program will encourage disclosure and resolution of issues regarding connections to the system when customers change.

Halifax Water is committed to continually innovating, improving, and remaining cost-effective, with the need to keep rates affordable. The 2023/24 Business Plan provides an overview of the services provided by Halifax Water, strategic objectives for next year, and the operating and capital budgets to maintain the delivery of these services. The Business Plan projects an operating deficit of \$2.3 M, based on the rates approved by the NSUARB. This represents an improvement over the \$10.9 M deficit budgeted last year. Halifax Water received approval from the NSUARB during the general rate application to utilize up to \$2.4 M of accumulated operating surpluses to offset the shortfall in water operations. Wastewater operations are budgeted to break even, and there are no accumulated operating surpluses for stormwater.

The Nova Scotia Utility and Review Board (NSUARB) approved new water, wastewater, and stormwater rates effective April 1, 2023. Base charges for water and wastewater were kept the same and have been effective since April 1, 2016. The main cost drivers of Halifax Water's operating budget are salaries and wages, energy, chemicals, depreciation, and debt servicing. Operating and non-operating expenditures are proposed to increase by \$7.7 M or 4.7% compared to the budget for last year. Full details of the operating budget are provided in Appendix B.

In comparison to the 2022/23 budgeted deficit, Halifax Water is projecting a deficit of \$7.1 M. The primary driver for the change was the rate increases approved by the NSUARB effective December 1, 2022.

With respect to the Multi-year Council Priority Outcomes established by the municipality, Halifax Water's Five-Year Business Plan and ongoing activities are aligned with the municipality.

A full copy of Halifax Water's Five-Year Business Plan 2020/21 – 2024/25 is available at:
<https://halifaxwater.ca/publications-reports>.

The following section highlights the activities where Halifax Water is aligned with the municipality's corporate priorities for the betterment of the communities and residents we collectively serve.

ALIGNMENT WITH HALIFAX REGIONAL MUNICIPALITY STRATEGIC PRIORITIES:

ECONOMIC DEVELOPMENT

Halifax Water employs more than 550 employees and is a significant purchaser of goods and services, doing business with over 1,000 vendors. Our projects help create and support thousands of local jobs. The current five-year capital budget reflects \$1,266.8M in capital spending. The capital budget for 2023/24 is \$146.7M, and the total operating cost to provide water, wastewater and stormwater service will be \$135.9 M.

ATTRACT & RETAIN TALENT

Halifax Water believes in and fully supports experiential learning for students studying at Nova Scotia Community College (NSCC) and Dalhousie University. The utility facilitates professional work terms for students and offers various scholarships to assist students with their learning journey. In addition to attracting a solid student contingent from NSCC to work at Halifax Water, the utility has an Alliance Grant through the Natural Sciences and Engineering Research Council of Canada (NSERC) and Dalhousie University. Many students participating in the research program have secured employment with local consultants, regulatory agencies, and Halifax Water.

PROMOTE & MAXIMIZE GROWTH

Facilitation of Growth: Halifax Water facilitates growth and creates economic efficiencies by optimizing its systems to add customers when required. Aligning with HALIFAX on its growth projections and planning helps inform Halifax Water's Infrastructure Master Plan (IMP). The utility then uses the IMP to calculate the capital cost requirements, which are then used to establish the Regional Development Charge (RDC). These instruments are foundational to facilitate growth fairly and equitably and support HALIFAX's Regional Plan.

Halifax Water also provides technical support to address water and wastewater service deficiencies identified through HALIFAX's Local Improvement Charge Bylaw programming.

RURAL ECONOMIC DEVELOPMENT

Service Extensions: Many rural communities of the municipality do not have centralized water and wastewater services. As a result, the wastewater systems need to be pumped and the effluent disposed of in an environmentally safe manner. Halifax Water provides septage treatment for septage haulers that serve such communities.

Halifax Water also considers requests for service extensions to private communities in accordance with the NSUARB-approved Procedure for Acceptance of Private Community Water, Wastewater and Stormwater Systems.

Small Systems: In addition to operating large systems in the urban and suburban areas of the municipality, Halifax Water operates smaller systems serving customers in rural areas. This includes 5 small water systems (Middle Musquodoboit, Silver Sands, Bomont subdivision, Collins Park, and Five Island Lake) and 7 small wastewater systems (North Preston, Frame subdivision, Wellington, Lockview Road, Springfield Lake, Uplands Park and Middle Musquodoboit).

FOCUS ON THE REGIONAL CENTRE

Centre Plan & Regional Plan Growth: Providing adequate and reliable regional infrastructure as efficiently as possible is critical to support the municipality's growth initiatives. Halifax Water incorporated the municipality's Local Wastewater Servicing Capacity Analysis, which reviewed the detailed wastewater servicing requirements for the six opportunity areas within the City Centre with the IMP. Staff in Halifax Water are working with HALIFAX's planning staff to update growth projections and are participating in the Regional Plan update.

To facilitate the delivery of the IMP, the Regional Development Charge (RDC) was established in 2014 to ensure growth paid for growth. The RDC is updated on a five-year cycle with annual adjustments to reflect changes in the Consumer Price Index.

Halifax Water staff also provides support on the servicing issues related to current and future master-planned communities and utilizes the Capital Cost Contribution (CCC) policy to facilitate.

Cogswell Redevelopment Project Including the Cogswell District Energy System: Halifax Water has significant existing infrastructure within the redevelopment area. As a result, the utility works closely with the municipal project team to optimize infrastructure relocations to minimize costs, improve construction efficiency and ensure long-term service delivery.

Halifax Water is pursuing an opportunity for an ambient temperature district energy system (DES) within the Cogswell area. The municipality amended its Charter and, in 2020, approved a DES by-law mandating connection within the Cogswell Redevelopment Area.

In June 2021, Halifax Water secured project funding of \$10.1 M (\$5.5 M Federal and \$4.6 M provincial) for the DES through the Green Infrastructure Stream of the Investing in Canada Infrastructure Plan.

For the existing infrastructure, in 2022/23, Halifax Water agreed on a cost-sharing framework with HALIFAX and filed for regulatory approval with the NSUARB. For the DES, we filed for regulatory approval with the NSUARB to further develop the new utility and are awaiting their decision.

Solar Projects to Reduce GHG Emissions: In July 2021, Halifax Water secured approximately \$1.23 M dollars in funding (\$677 thousand Federal and \$558 thousand Provincial) to install 425 kW of solar photovoltaic (PV) panels over four projects through the Federal Government's Community Solar Project initiative.

Using solar panels at our facilities can reduce our net GHG emissions by approximately 7000 tonnes over their lifetime. This has environmental benefits for Nova Scotia and helps decrease operating expenses for Halifax Water's rate base.

The first of four projects will be completed and operational by the end of March 2023. The remaining three projects are expected to be completed in early 2024 at our 450 and 455 Cowie Hill Road facilities and in 2026 at our new Burnside Operations Facility.

SUPPLY OF INDUSTRIAL, COMMERCIAL, AND INSTITUTIONAL LANDS

Halifax Water ensures that water, wastewater, and stormwater service are available to support industrial, commercial, and institutional lands and offers stormwater credit and wastewater rebate programs that assist qualifying customers.

GOVERNANCE & ENGAGEMENT

MUNICIPAL OVERSIGHT

Halifax Regional Municipality Administrative Order (2018-001-ADM) ensures the efficient operation of Halifax Water by providing an accountability framework for the conduct of its business.

COMMUNICATIONS

With a resident/customer-focused approach to communications, Halifax Water's Communications team works closely with HALIFAX Corporate Communications staff on multiple projects and initiatives each year. These efforts can run from joint messaging regarding service matters that may impact residents and customers to more in-depth cooperation on integrated HALIFAX/Halifax Water capital projects that can extend over months. The common goal of any joint messaging is to provide residents/customers with what they need to know and how a particular project or program will affect and benefit them and the wider community.

Keeping area Councillors informed about Halifax Water projects in their districts is a high priority for Halifax Water's Communications team. For large-scale projects, Halifax Water often involves the area Councillor(s) in the pre-public outreach phase to get advice on how best to interact with the residents. Councillor involvement helps Halifax Water staff focus their messaging on what is most important to the community and will ensure the Councillor is well-versed on the pending work. Area Councillors are invited to attend Halifax Water community information sessions in their districts. These sessions are especially important when aspects of the work directly impact residents, such as traffic or service disruptions.

This information flow to Councillors occurs more frequently for routine activities such as water main repairs, traffic disruptions or other Halifax Water-related matters that can have a short-term impact on residents.

The municipality also has a high-quality print, sign and graphic design services, and Halifax Water utilizes these cost-effective services whenever possible.

PUBLIC ENGAGEMENT

Source Water Committees: Halifax Water maintains source water protection plans for twelve separate water supplies across the municipality. As part of the plan, every source water area has a Watershed Advisory Board to liaise with Halifax Water on issues related to the water supply. Each committee has members representing the utility, HALIFAX, the Province of Nova Scotia, and private landowners. Watershed Advisory Boards are an opportunity for engagement with residents and a mechanism for keeping the community apprised of Halifax Water's activity and help keep the utility in touch with the community.

Stakeholder Engagement: Halifax Water engages with stakeholders in many formal and informal ways. Formal stakeholder engagement includes NSUARB public hearings either in person or through paper processes regarding any changes in rates, development charges, regulations, and capital expenditures greater than \$1.0 M. Some groups that participate in these formal public hearing processes include the Consumer Advocate, Urban Development Institute, Investment Property Owners Association of Nova Scotia (IPOANS), Building Operators and Maintainers Association (BOMA), Nova Scotia Homebuilders Association, Construction

Association of Nova Scotia, Ecology Action Centre, Conserve Nova Scotia, Sierra Club and Retail Association of Canada.

Halifax Water also conducts stakeholder consultation processes as part of major capital projects and strategic initiatives, such as updating the IRP or RDC and developing new programs and services. In 2022/23, Halifax Water conducted stakeholder engagement regarding stormwater, the RDC and Source Water Protection Regulations.

There are many committees where Halifax Water participates in regular stakeholder consultation, such as the Halifax Utility Coordination Committee and the Development Liaison Group.

FISCAL RESPONSIBILITY

Cost Containment Program: Cost containment is an ongoing focus for the utility to help maintain and stabilize rates. A formal cost containment program has been in place since 2013/14. Cost containment results for the previous fiscal year are reported to the NSUARB by June 30th. Cost containment initiatives totalled \$6.8 M at the end of December 31, 2022. This included the development of new initiatives implemented during 2022 and ongoing amounts from decisions made from 2013/14 to 2022/23. The inclusion of initiatives and amounts from prior years reflects an intentional focus on sustainable results over the long term.

Water Loss Control: Reducing non-revenue water (leakage) is crucial to water distribution system management. Halifax Water has been recognized as one of the leading utilities in this field in the world.

The methodology is designed to allow Halifax Water staff to quickly detect and repair leaks that run underground and may not surface for days, weeks or months. By doing this, Halifax Water has reduced its water system inputs, saving direct water production costs for chemicals and electricity.

Detecting leaks early means they do not become significant events that impact our reputation by disrupting transportation, causing street closures, impacting roadway quality, and leading to property damage and service interruptions.

Inflow and Infiltration (I&I) Reduction: I&I reduction is one of several tools in the overall Wet Weather Management Plan (WWMP). With guidance from the Regional Infrastructure Plan, the WWMP conducts several Sewer System Evaluation studies to achieve long-term goals and extraneous flow reductions.

Halifax Water also completes private side inspections to determine if extraneous water enters the wastewater system. This extraneous water may impact the wastewater treatment facilities (WWTFs) ability to meet their regulatory compliance. Also, staff will engage with stakeholders to review a proposed program to promote the reduction of extraneous stormwater from entering the wastewater system. This program will encourage disclosure and resolution of issues regarding connections to the system when the customer changes.

Enterprise Asset Management: Halifax Water and the municipality embrace Enterprise Asset Management as a core corporate activity to ensure the efficient and effective management of the collective suite of infrastructure that serves the municipality's residents.

Halifax Water produces an annual Asset Management Plan (AMP) covering the 14 core asset classes across the water, wastewater, and stormwater services. The AMP documents the current inventory, replacement value, condition, and recapitalization plan for each asset class, promoting a comprehensive and cross-corporate management approach to assets.

SERVICE DELIVERY

SERVICE TO OUR BUSINESS COMMUNITY

Halifax Water collaborates with the business community as partners and strives to find ways to enhance service delivery. Halifax Water has processes to enter into direct servicing agreements and contracts with businesses to support their operations.

Utility Locates: Locating buried infrastructure is necessary for any construction project requiring excavation. Locates are needed to protect workers and infrastructure and minimize the opportunity for interruptions in service caused by contractors striking buried infrastructure. As awareness of the necessity for locates has increased, utilities have seen rapidly escalating demands for infrastructure locations, placing a strain on resources and business processes. Timely and accurate locates allow construction projects to proceed on time and within budget.

Halifax Water has taken several steps in recent years to meet the demand for locates and respond to the concerns of the municipality and the contractor community. Halifax Water is now part of a one-locate-requesting process. This step reduces the barriers to contractors and developers seeking excavation work in the municipality. Considering the significant construction activity in the city, the demand for this service continues to grow. In response, Halifax Water continues to expand its staff resources to meet the demand.

Permitting: In late 2019, Halifax Water participated in implementing a new permitting system led by the municipality that significantly streamlines and improves the permit process and timely sharing of information between the municipality and Halifax Water. In January of 2023, staff expanded the module to include subdivision applications to streamline the application process further.

SERVICE TO OUR PEOPLE

Customer Care Strategy: Halifax Water has a long tradition of high customer satisfaction, as confirmed through annual surveys. In 2022, customers' overall satisfaction with service quality was 96%. Although it is gratifying to receive this feedback, Halifax Water continues to look for opportunities to improve service delivery. Halifax Water implemented the Customer Connect portal in November 2020. In 2022/23, further enhancements were implemented to improve business processes and inform customers of high consumption or possible leaks.

Halifax Water works closely with municipal staff in areas with a shared responsibility to ensure that business processes are clear. This includes responding to customers on various water and roadway-related topics.

Bulk Fill Stations and Portable Water Stations: Halifax Water has seven bulk fill stations throughout the service area to support water haulers who deliver potable water to rural residents or for construction-related purposes. Halifax Water has supported significant public events throughout the summer with portable water stations for many years.

Integrated Stormwater Policy: The municipality and Halifax Water continue working together to assess and respond to service requests from residents relating to stormwater management. Staff within both agencies at the customer service and operational levels have developed protocols to manage issues behind the scenes to optimize service to residents, minimizing “transfers” of calls.

With increased awareness of climate change and stormwater's impact on public and private infrastructure and the environment, Regional Council and the Halifax Water Board approved the framework for an Integrated Stormwater Policy in 2018. Staff continue to finalize the components of this Policy, which is structured around seven main themes, establishing roles and responsibilities for our respective organizations, the province, and the private property owner.

Integrated Capital Program for Halifax Water Infrastructure and Municipal Streets: A significant portion of Halifax Water's annual capital program involves the renewal of water distribution, and wastewater and stormwater collection infrastructure in an integrated approach with the municipality's annual Roads and Active Transportation Capital Program. Water, wastewater, stormwater pipes, and appurtenances are replaced or rehabilitated when approaching or exceeding their useful life. The most cost-effective way to do this is while the municipal street is being renewed. The integration reduces the total project cost and minimizes the overall disturbance of neighbourhoods. The various project designs and specifications are coordinated into a single construction tender administered by HALIFAX or Halifax Water.

In 2020/21, Halifax Water launched an enhanced Lead Service Line Replacement Program, resulting in a more effective approach to ensure the private lead service laterals are replaced in conjunction with the municipal Roads and Active Transportation Capital Programs.

In 2022/23, we will integrate with municipal projects on eight streets in Halifax and Dartmouth to remove LSLs. These include:

- Thistle St.
- Victoria Rd.
- LeMarchant St.
- Isleville St.
- Vienna St.
- Flinn St.
- Roosevelt Dr.
- Churchill Dr.

An additional six projects were investigated and either found no lead or were pushed from the paving program for the year:

- Birchwood and Loraine (no lead)
- Blenheim and South St. (no lead)
- Sebastian St. (no lead)
- St. Albans St. (no lead)
- Dublin St.
- Bayers Rd. (pushed by HRM)
- Victoria Rd. (Dartmouth) (pushed by HRM)

INNOVATION

Advanced Meter Infrastructure (AMI): In 2016, Halifax Water launched a program to convert 85,000 water meters to AMI. AMI is a system where water meters are equipped with an electronic communication device to capture real-time data. Rather than reading meters quarterly by walking or driving routes, meters are read hourly through a fixed radio network installed throughout the service area.

Over 98.9% of meters were converted, and the Customer Connect portal lets customers view and manage their water consumption information through a web-based customer portal. It also enables Halifax Water to provide better information to customers to manage their accounts and water consumption. There will be continued enhancements to realize the benefits of improved business processes and enhanced data. The system also provides Halifax Water with better information about water use patterns, which will aid in system design and operation.

Artificial Intelligence and Machine Learning: Halifax Water is exploring new technology that will improve our level of service by using artificial intelligence to provide early notice of flow and pressure anomalies before they turn into events which could disrupt service. Halifax Water is also

conducting a pilot using machine learning to help analyze data and relationships between variables to help predict the likelihood of lead service lines. The proliferation of new innovative technology in the water sector has prompted Halifax Water to develop a roadmap for “intelligent water” in 2021/22 that has been used to refine the current IT Strategic Plan and develop a digital water strategy in 2022/23.

Active Research Program: Halifax Water pursues innovation through practice and research. Halifax Water pursues industry-leading research in collaboration with Dalhousie University through an NSERC Alliance grant, “Partnership for Innovation in Climate Change Adaptation in Water & Wastewater Treatment.” Building on the research successes of the last 15 years in drinking water, this 5-year grant awarded in 2022 now includes water and wastewater treatment. Drinking water research through this grant is focused on informing the implementation of the Water Supply Enhancement Program to address current and future needs based on source water quality changes occurring due to both climate change and lake recovery processes. Through innovation and optimization practices, Halifax Water continues to improve environmental compliance with the federal Wastewater System Effluent Regulations at every wastewater treatment facility. Halifax Water employs innovative practices in the delivery of operational and capital projects; this facilitates efficient execution of the projects in terms of cost reduction and schedule control.

Halifax Water is also a member of the Water Research Foundation and, through this relationship, has pursued innovation by active engagement in research projects. Halifax Water staff also take advantage of opportunities to participate as project advisory committee members for relevant Water Research Foundation projects. This way, Halifax Water staff can learn best practices from some of the most innovative utilities.

HEALTHY, LIVEABLE COMMUNITIES

PUBLIC SAFETY

Lead Service Line (LSL) Replacement Program: Lead in drinking water concerns water utilities and their customers. Water leaving the treatment plants of Halifax Water is lead-free, but lead, used for service piping up to the mid-1950s, can be a source of lead in drinking water. While the water utilities serving Halifax and Dartmouth have been working since the 1970s to remove lead services, many remain and lead in drinking water continues to be a concern for customers in peninsular Halifax and central Dartmouth.

One of the complications in removing LSLs is that Halifax Water and the customer jointly own the water service. Halifax Water owns the portion in the street right-of-way, while the customer owns the portion on private property. Further complicating the matter, research has shown that partial replacements (replacing only the customer or utility portion, but not the other portion) do not assist in solving the problem and can even worsen the situation.

In 2020, Halifax Water received approval from the NSUARB to replace the entire LSL at utility expense. This is consistent with an emerging best practice across North America, which removes the cost to the customer – the most significant barrier to LSL replacement. The program became effective on October 1, 2020. Since the start of the program, Halifax Water has increased the rate of LSL replacement each year and is on track to reach the program goal of removing all lead service lines by 2038. Lead service lines are renewed based on one of four programs:

1. Renewals are done in conjunction with the Roads and Active Transportation Capital Program. This reduces the replacement cost, limits community impact and preserves municipal pavement quality.
2. Halifax Water will replace a number of lead service lines each year at the utility’s cost for residents who are considered to be at-risk populations, namely homes with pregnant mothers or young children.

3. Customers who do not qualify for one of the above programs are eligible to replace their LSL and receive a 25% rebate from the utility.
4. In future years, Halifax Water will develop programs to target other priority groups or communities for LSL replacement.

Wastewater Lateral Replacement Program: To facilitate the provision of wastewater service to our customers, Halifax Water owns and maintains the individual wastewater laterals between the mainline and the property line. These laterals are often compromised by tree roots and a once popular lateral pipe material (no-corrode), which has a shorter-than-expected life span.

Halifax Water provides an immediate replacement response from our operations group when a lateral fails. When the cause of the failure is within the municipality's streets, Halifax Water completes the repair/replacement with the program's cost offset by the municipality mutually agreeing to adjust water and wastewater appurtenances to grade during street rehabilitation programs. This approach is efficient as the work stays within the organization best able to respond and provide the service and avoids a complex cost recovery exercise.

Halifax Water also identifies laterals approaching the end of their useful life and will replace them in conjunction with other capital projects such as a main renewal or a municipal street rehabilitation.

ENERGY & ENVIRONMENT

Halifax Water's goal is to minimize wastewater overflows to the environment through system optimization and its WWMP. This reduces wastewater pumping and treatment, which reduces energy, chemical consumption, and carbon emissions.

Energy Management Program: Halifax Water has a mature Energy Management Program committed to creating and ensuring an ongoing focus on sustainability and energy efficiency throughout all operational areas. This program is carried out in relation to Halifax Water's Energy Management Action Plan and delivers energy efficiency initiatives that have resulted in annual energy reductions of 2% to 4% per year since inception. The Plan defines the goals, objectives, accountabilities, and structure for activities related to energy efficiency, energy recovery, GHG reductions, and environmentally responsible energy use.

Climate Change: Halifax Water worked with municipality staff to develop HalifACT 2050 and uses its guidance when delivering capital projects such as the Burnside Operations Centre.

Staff from Halifax Water work jointly with the municipality to understand the underlying details of climate change and the physical, planning, financial and legal implications on our collective infrastructure classes.

Halifax Water developed a Vulnerability to Climate Change rating system to rank the sensitivity and severity of climate change impacts relative to the individual asset. Halifax Water also addresses climate change in design standards and long-term planning. Both initiatives will inform the overall understanding of climate change in the municipal context and inform the municipality's next version of the Regional Plan.

In recognition that climate change adaptation and mitigation activities cross many projects, programs, and services at Halifax Water, Halifax Water's Climate Resiliency Committee is leading the development of a Climate Action Plan. The first phase is expected to be completed in the spring of 2023.

Water Quality Monitoring: Building on its historical Water Quality Master Plan, Halifax Water is developing a Water Safety Plan (WSP). The WSP is a comprehensive and adaptive risk assessment and risk management approach to water quality from source to tap to consistently

ensure the safety of the drinking water supply. This approach is one of continuous improvement and ensures that the highest risks to water quality are addressed first while constantly assessing new risks and learning from incidents and emergencies. Where the municipality launched its new water quality monitoring program for lakes, Halifax Water will provide technical support and advice to the municipality as required.

Environmental Management System: Halifax Water has an ISO 14001-2015 certified Environmental Management System (EMS) of procedures, records, and processes to manage environmental issues. Through the EMS program, Halifax Water has developed an increased awareness of compliance obligations, managed waste and energy more efficiently, reduced the risk of disaster, improved emergency management and created a culture of continuous improvement.

All Halifax Water's water and wastewater treatment plants, satellite systems, and our 450 and 455 Cowie Hill Road facilities are ISO 14001-2015 certified.

Our remaining facilities, including depots, will be certified by the end of 2023.

RECREATION & LEISURE

Wastewater Treatment: The treated wastewater from Halifax Water facilities must meet strict environmental criteria so that it is fit for contact recreation. Halifax Water strives to meet all effluent permit requirements so that water bodies are protected and available for recreational purposes.

Wet Weather Management: Halifax Water's WWMP strives to minimize the impacts of wet weather flows on the system and the environment. This is a long-term commitment with significant positive impacts on the environment and the quality of life for residents who frequent waterfronts and beaches. The management of wet weather flows results in reduced overflows and increased effluent compliance. Communication of these initiatives promotes public awareness of water quality and supports water-based recreational activities.

Active Transportation and Recreation Initiatives: Halifax Water has significant land holdings in communities across the municipality. Most of this land is for water supply protection. From time to time, Halifax Water has been able to work with municipal staff to make Halifax Water land available to facilitate community projects. Examples of this include:

- The development of the Chain of Lakes trail through the Chain Lake watershed.
- Provided access to land along North Preston Road to establish the Preston Area community trail.
- Provided reservoir site land to establish a community field in North Preston.
- Provided land to establish trailhead parking for Long Lake Provincial Park.
- Provided access across its transmission main corridors through Mainland Common, Wedgewood Park and Bedford to support active transportation.

Halifax Water has also worked directly with other community recreation groups with low-impact uses compatible with source water protection, including the Atlantic Geocaching Society, Bicycle Nova Scotia, and the Nova Scotia Federation of Anglers.

COMMUNITY WELL BEING

High-Quality Drinking Water: A safe, reliable supply of drinking water, along with adequate fire protection, is fundamental to the health and economic prosperity of any community.

Halifax Water uses the multiple barrier approach to ensure the continued safety and reliability of the water system. Our approach includes the following:

Source Water Protection: Ensuring our water sources remain healthy and not degraded by manmade impacts.

Optimized Treatment: We ensure that our water treatment plants produce high-quality water sustainably and at a reasonable cost.

Sound Distribution System Management: This involves ensuring that once the water leaves the treatment plant, its quality is protected all the way to the water tap. A robust maintenance system accomplishes this with standard operating procedures for the water distribution system.

Continuous Monitoring and Testing: Halifax Water takes thousands of tests yearly to ensure that drinking water quality is maintained.

Cross Connection Control: Halifax Water maintains a system for ensuring that high-risk Industrial, Commercial, and Institutional customers install, maintain and test backflow prevention devices on their services, which prevent contaminants within a building from getting back into the water system.

Emergency Management Plans: Halifax Water maintains and exercises emergency management plans to help ensure continuity of service even when things do not go as planned. Water Safety Plans consist of a risk-based, continuous improvement framework to identify operational, regulatory, and environmental risks to water quality and to identify and implement mitigative actions to address them before they impact water quality.

High-Quality Wastewater: Halifax Water takes a risk-based approach to manage its wastewater infrastructure, protecting the receiving environments and public health where contact recreation occurs. The wastewater systems are maintained to industry standards to minimize overflows from the collection and treatment facilities. Every effort is made to treat the wastewater to comply with permits issued by Nova Scotia Environment and Climate Change (NSECC). The WWMP also integrates efforts with small systems that have historically faced compliance challenges.

Halifax Water continuously looks for opportunities to maximize its installed infrastructure capacity. This may be achieved by shifting wastewater loads across sewersheds, treatment plants and pump stations. Halifax Water is also taking proactive steps to research and treat emerging contaminants at its facilities. Although not required by regulations at this time, the membrane technology utilized for the Aerotech facility can treat several emerging contaminants, such as microplastics and microfibers. This technology was also installed at the Frame WWTF, where the outfall discharges to a lake used for recreation. Halifax Water will continue to be compliant through continued research, infrastructure investments and industry best practices.

Halifax Water is working with Dalhousie University on wastewater research with an initial focus on improving wastewater quality at the Halifax and Dartmouth WWTFs. The research will help inform plans for how the Harbour Solutions treatment plants will meet Wastewater System Effluent Regulations by 2040, which require the equivalent of secondary treatment.

Halifax Water works collaboratively with municipal staff to ensure that the stormwater systems operate to their highest potential and minimizes impacts on lakes and streams due to pollution prevention activities by both organizations. Halifax Water takes a lead role in emergency spill response. Halifax Water's pollution prevention team conducts hundreds of inspections annually to ensure compliance with Halifax Water Regulations.

SOCIAL DEVELOPMENT

SOCIAL INFRASTRUCTURE

Water Rate Affordability: Halifax Water has programs that support customers:

Since 2010, Halifax Water has contracted with the Salvation Army to provide emergency assistance to low-income customers through the H2O (Help to Others) Program. This program is available once every 24 months for a maximum grant of \$250 with funds from unregulated activities.

Halifax Water has a Lateral Loan Program that helps those who need to replace their private lateral. The maximum value of the lateral loan is \$10,000 (less any rebates received for a lead lateral replacement). All Halifax Water customers are eligible for these loans if they are the registered property owner and are willing to accept a lien on the property as security. Halifax Water supports customers replacing LSL and has a program to provide favourable financing options to customers doing complete replacement of the private portion of water or wastewater laterals or private laterals connected to new deep stormwater installations in areas where none previously existed.

Halifax Water has enhanced the deferral program for the Regional Development Charge (RDC) to assist with developing Affordable Housing.

Halifax Water compares rates against 14 comparator Canadian cities. It monitors the total annual residential bill as a percentage of median household income for Halifax. The current combined rates are equivalent to 1.1% of the median household income and are well below industry benchmarks for affordability.

The General Rate Application approved by the NSUARB will see the average residential Halifax Water bill increase by 3.6% in 2023/24. Halifax Water has maintained its base charges and applied rate increases to the water and wastewater consumption charges. This allows customers the opportunity to adjust their consumption as a means of reducing their water and wastewater bills.

TRANSPORTATION

INTERCONNECTED AND STRATEGIC GROWTH

Right-of-Way Liaison with Halifax Regional Municipality: Halifax Water owns over 3,000 km of buried infrastructure along with thousands of valves, manholes, chambers, fire hydrants and pumping stations, mainly in the municipally-owned street right-of-way.

Halifax Water and municipal staff coordinate work in municipal roadways to minimize disruption to the public.

Halifax Water and municipal staff are members of the Halifax Utility Coordinating Committee (HUCC), which coordinates the planning of infrastructure projects.

Halifax Water and municipal engineering staff meet as part of a well-established process to coordinate and deliver integrated capital projects reducing overall project costs and inconvenience to residents.

Halifax Water operations staff and municipal right-of-way staff meet regularly to ensure that Halifax Water maintenance work in the right-of-way meets municipal requirements.

FINANCIAL IMPLICATIONS

The \$172.2 M in operating and non-operating expenditures required to fund Halifax Water's 2023/24 Business Plan is \$7.7 M or 4.68% more than the \$164.4 M required last year. The operating and non-operating expenditures are primarily funded through rates approved by the NSUARB.

The municipality provides a blanket guarantee for Halifax Water's debentures through the Provincial government, and the utility must maintain a debt service ratio of less than 35%. Halifax Water's capital financing strategy uses a mixture of financial instruments for infrastructure funding, including development-related charges, funding from other levels of government, depreciation, and debt. The debt service ratio based on the approved 2023/24 Operating Budget is 17%.

Halifax Water provides a grant in lieu of taxes in the form of an annual dividend to the municipality. The current agreement expires on March 31, 2023, and was previously based on the utility's rate base. The proposed agreement for April 1, 2023, through March 31, 2028, is subject to approval by the NSUARB and calculates the annual payment based on the assessed value of Halifax Water properties as assessed by the Property Valuation Service Corporation (PVSC) for that fiscal year and the yearly tax rate set by HRM. For the 2023/24 fiscal year, the agreement calls for a total dividend of \$6.6 M to be paid to the municipality.

RISK CONSIDERATION

In 2019, Halifax Water completed an Enterprise Risk Management (ERM) Framework, and the Halifax Water Board approved an ERM Policy and a risk appetite and tolerance matrix.

COMMUNITY ENGAGEMENT

Halifax Water regularly engages with the community. As facilitated through Halifax Water and NSUARB regulatory processes in conformance with the *Public Utilities Act* and through direct stakeholder and customer engagement.

ENVIRONMENTAL IMPLICATIONS

Halifax Water is committed to environmental stewardship, and environmental implications are described in the annual Business Plan, the Five-Year Business Plan, and the Annual Report.

ALTERNATIVES

N/A

ATTACHMENTS

Appendix A - Halifax Water 2023/24 Business Plan

Appendix B – Halifax Water Operating Projects for 2022/23

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Annual Business Plan



Approved by the Halifax Water
Board on January 26, 2023

2023/24

Table of Contents

GLOSSARY	2
INTRODUCTION	3
PURPOSE.....	3
VISION.....	3
VALUES	3
EXECUTIVE SUMMARY.....	4
STRATEGIC INITIATIVES AND PROGRAMS 2023/24.....	6
People.....	6
Health, Safety & Environment.....	9
Financial & Regulatory Accountability.....	13
Operational Excellence	16
BUDGET SUMMARY.....	19
Capital Budget	19
PERFORMANCE MEASUREMENT	22
Appendix A: Organizational Structure and Service Overview	24
ORGANIZATIONAL STRUCTURE	24
SERVICE OVERVIEW	25
Operations.....	25
Water Services.....	25
Wastewater Services	25
Stormwater Services.....	26
Engineering and Technology Services	27
Regulatory Services	28
Corporate Services.....	29
Administration.....	29
Unregulated Business	30
Appendix B: 2023/24 Capital Budget	31
Appendix C: 2023/24 Operating Budget.....	42
Appendix D: 2023/24 Business Plan on a Page	48

GLOSSARY

AM	Asset Management	RF	Radio Frequency
AMI	Advanced Meter Infrastructure	RFP	Request for Proposal
AMP	Asset Management Plan	RFQ	Request for Quote
BCP	Business Continuity Plan	SCADA	Supervisory Control and Data Acquisition
BPF	Biosolids Processing Facility	SMS	Safety Management System
CAD	Computer Aided Drafting	SSES	Sanitary Sewer Evaluation Survey
CAP	Climate Action Plan	SSO	Sanitary Sewer Overflow
CBS	Corporate Balanced Scorecard	UV	Ultraviolet
CCC	Capital Cost Contribution	WRWIP	West Region Wastewater Infrastructure Plan
CCME	Canadian Council Minister of the Environment	WSEP	Water Supply Enhancement Program
CEMP	Comprehensive Emergency Management Program	WSER	Wastewater System Effluent Regulations
CPI	Consumer Price Index	WSP	Water Supply Plant
CSF	Critical Success Factor	WWMP	Wet Weather Management Program
CSO	Combined Sewer Overflow	WWTF	Wastewater Treatment Facility
CUPE	Canadian Union of Public Employees		
DEI	Diversity, Equity, and Inclusion		
DES	District Energy System		
DFO	Department of Fisheries and Oceans		
DLS&I	Department of Labour, Skills and Immigration		
DMS	Document Management System		
DOM&E	Nova Scotia Department of Mines and Energy		
EMAP	Energy Management Action Plan		
EMP	Emergency Management Plan		
EMS	Environmental Management System		
ERM	Enterprise Risk Management		
ERP	Enterprise Resource Planning		
ETS	Engineering and Technology Services		
GHG	Green House Gas		
GIS	Geographic Information System		
H2O	Help to Others Program		
HHSP	Halifax Harbour Solutions Plant		
HR	Human Resources		
HRWC	Halifax Regional Water Commission		
I&I	Inflow and Infiltration		
IC&I	Industrial, Commercial and Institutional		
ICIP	Investing in Canada Infrastructure Program		
IFRS	International Financial Reporting Standards		
IMP	Integrated Master Plan		
INFC	Infrastructure Canada Fund Programs		
IRP	Integrated Resource Plan		
IS	Information Services		
ISO	International Organization for Standardization		
IT	Information Technology		
LCC	Life Cycle Cost		
LED	Light-emitting Diode		
LOS	Level of Service		
NOM	Natural Organic Matter		
NSECC	Nova Scotia Environment and Climate Change		
NSERC	Natural Sciences and Engineering Research Council		
NSPI	Nova Scotia Power Incorporated		
NSPW	Nova Scotia Department of Public Works		
NSUARB	Nova Scotia Utility and Review Board		
OI	Organizational Indicator		
RDA	Regional Development Area		
RDC	Regional Development Charge		
RDII	Rain Derived Inflow and Infiltration		
RDP	Regional Development Plan		

INTRODUCTION

Halifax Water is an integrated water, wastewater, and stormwater utility that serves more than 106,000 customers and an estimated population of 381,000.

This document outlines the utility's business plan for fiscal 2023/24, which officially begins on April 1 of 2023.

For 2023/24, Halifax Water has developed a plan that addresses the challenges of growth, aging infrastructure, and the increasing demands of customers. In addition to addressing these challenges, this plan focuses on ensuring Halifax Water customers continue receiving quality service and that the utility's employees are supported and empowered with the required resources.

PURPOSE

Our purpose is to supply and safeguard sustainable, high-quality water services.

VISION

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

VALUES

Relationships - We nurture relationships with our customers, our team members, and the environment. We are engaged in the neighbourhoods we serve, and we support continual learning across our team.

Innovation - We are among the top utilities across the continent, and we are known on the global stage. We always ask, "how can we improve efficiency, sustainability, creativity and the customer experience?"

Accountability - We refuse to cut corners. We check in with our excellence standards regularly and look to one another for support. Safety steers our decision-making. We are driven to make our policies, decisions, and projects as clear as our drinking water.

Protection - Halifax Water protects the health and well-being of our population. We exist to guard natural resources, finding ways to sustain our communities and environment.

EXECUTIVE SUMMARY

For 2023/24, Halifax Water continues to focus on improving our overall financial position as we address the organizational capacity required to meet the service demands of our current and future customers. To do this, we will continue to meet the challenges caused by growth, aging infrastructure, and environmental compliance and protection costs.

As a result, we will be developing a new 5-year business plan this year. This will be informed by several key inputs, including what our team will be working on this year, the Asset Management Plan (AMP), the Integrated Resource Plan (IRP), the municipality's Population Growth Studies and the development of a new Rate Design Structure.

As in last year's Business Plan, many of our initiatives will be implemented over multiple years. As a result, further advancing plans, studies and programs will ultimately improve customer service. We will continue our Water Supply Enhancement Program, Water Safety Plan, Wastewater Treatment Facility Study, and Biosolids Project for this fiscal year.

These are all designed to ensure Halifax Water anticipates changing environmental conditions and adapting to more rigorous environmental requirements. This includes a continued focus on implementing our corporate-wide Environmental Management System (EMS) and completing a Climate Action Plan.

In 2023/24, we will continue to focus on increasing our workforce capacity by adding people in areas that allow us to address the resource requirements, climate change, and an increased stormwater service delivery area. As we continue to add people to manage these resource requirements, we remain focused on our employees' physical and psychological health and safety.

Through our one team, one water approach, Halifax Water employees focus on collaborating to benefit our customers and community. As with last year, the goals for this year's Business Plan demonstrate that we are all working together with shared and common goals. These strategic and ambitious goals will bring immediate and long-term value to Halifax Water customers.

We are looking forward to a successful year.

Louis de Montbrun, CPA, CA

General Manager and CEO (Acting)



Working together with mutual trust, respect and shared values that focus on our commitment to customers, community, and the environment.



People



Health, Safety &
Environment



Financial &
Regulatory
Accountability




Operational
Excellence


STRATEGIC INITIATIVES AND PROGRAMS 2023/24

People

We attract and retain high-quality team members in an inclusive and respectful work environment. We are committed to our customers and the communities where we live and work, determined to provide a high level of service and a sustainable future through ongoing engagement.

 <p>Increase institutional capacity by filling new and vacant positions critical to achieving utility objectives.</p>	Goal	<ul style="list-style-type: none"> Recruit and hire a new General Manager in Q1 of 2023/24. Recruit and hire for engineering positions approved in the 2022/23 and 2023/24 fiscal years.
	Rationale	<ul style="list-style-type: none"> A General Manager and their leadership are crucial to the organization. Additional engineers are essential to addressing resource capacity gaps and delivering on our planned capital work established in the current business plan and budget.
	Impact	<ul style="list-style-type: none"> We must remain competitive in a tight labour market. <ul style="list-style-type: none"> Retention of current employees is a key factor in our ability to meet our goals. Our ability to hire impacts our planned capital project delivery.

 <p>Continue to implement Document Management System.</p>	Goal	<ul style="list-style-type: none"> Complete the implementation of the Document Management System (DMS). <ul style="list-style-type: none"> Complete phase two of the DMS functional rollout by September 1. Complete phase three by the end of Q3. Close out by the end of Q4.
	Rationale	<ul style="list-style-type: none"> The DMS will facilitate easier knowledge transfer between current and retiring staff. It will also enable staff to access organizational knowledge more effectively and efficiently through robust searching and accessibility.
	Impact	<ul style="list-style-type: none"> This mitigates the risk of loss of information and documentation by inadvertent destruction, retirements, or inability to locate information.


 Proactive and Constructive Approach to Labour Management.	Goal	<ul style="list-style-type: none"> • Complete the CUPE Local 227 Job Review by the end of Q2. • Engage in pre-bargaining exploratory meetings with CUPE Locals 1431 and 227 by the end of Q2. • Engage in collective bargaining negotiations by the end of Q4.
	Rationale	<ul style="list-style-type: none"> • Planning for and negotiating collective agreements allow both the unions and management to clearly understand expectations from a procedural, logistical and financial perspective.
	Impact	<ul style="list-style-type: none"> • Maintains operational continuity and reduces the risk of uncertainty and low morale associated with operating without an up-to-date collective agreement.


 Continue to increase engagement with stakeholders and customers.	Goal	<ul style="list-style-type: none"> • Building a comprehensive stakeholder engagement plan to support long-term planning for Halifax Water by Q1. <ul style="list-style-type: none"> ○ Develop realistic timelines and appropriate engagement tactics that align with the timing of critical initiatives, such as redesigning the rate design structure, RDC, IRP etc. ○ Conduct a stakeholder heat map for each initiative to ensure stakeholders can inform our planning.
	Rationale	<ul style="list-style-type: none"> • Engaging stakeholders helps us better understand whom we serve and leads to improvements in Halifax Water projects and processes.
	Impact	<ul style="list-style-type: none"> • Through a more collaborative approach that embraces positive and productive dialogue, we can better inform our business decisions and better understand the impact of our decisions on stakeholders. This understanding also helps build greater trust and support for our financial and regulatory decisions with everyone.


 <p>Complete the year-two activities of the Diversity, Equity, and Inclusion Framework.</p>	<p>Goal</p> <ul style="list-style-type: none"> • Implement Diversity, Equity, and Inclusion (DEI) and fair hiring policies by Q1. • Complete promotional campaign to assist with increasing women in non-traditional roles (Operations) by Q2. • Increase employee participation in Diversity Moments by 50% by Q2. • Deliver respectful workplace training by Q4. • Continue to train on unconscious bias. • Complete the Human Resources analytics dashboard and add more metrics on diversity by Q4.
	<p>Rationale</p> <ul style="list-style-type: none"> • Increasing diversity in the workplace will provide for greater creativity and innovation and increase employee morale. • Better understand diverse perspectives. • Ensuring that we are an organization that embraces diversity will assist employees wanting to stay and be productive. • Increase employee morale as they will have a sense of belonging and fitting in.
	<p>Impact</p> <ul style="list-style-type: none"> • Improve retention of employees. • Create an organizational culture of inclusivity and belonging. • Improve our understanding of and ability to respond to the communities we serve. • Enhance our reputation of being an employer of choice with job seekers.


Health, Safety & Environment


The health and safety of our employees, contractors and the public is our top priority. We are focused on a safety-first culture, working to provide healthy, safe, sustainable, and reliable services for our community.


 <p>Adopt standards for psychological health and safe workplaces to continue to build a safe work culture.</p>	Goal	<ul style="list-style-type: none"> • Create a psychological health and safe workplaces framework by Q2 to be implemented over the next three years.
	Rationale	<ul style="list-style-type: none"> • Improve our safety culture and support employee mental health. • Having a healthy and safe workplace for employees is paramount for Halifax Water.
	Impact	<ul style="list-style-type: none"> • Ensuring employees are safe both physically and mentally will reduce workplace injuries. • Improves employee morale and productivity.

 <p>Develop a Climate Action Plan.</p>	Goal	<ul style="list-style-type: none"> • Develop a Climate Action Plan (CAP) for Halifax Water for approval by the Halifax Water Board in Q4.
	Rationale	<ul style="list-style-type: none"> • A CAP will guide Halifax Water's investment decisions and ensure the long-term resiliency of our environment and infrastructure. It will also allow the utility to establish targets and track the progress of mitigative measures and adaptation strategies. • A CAP will support HalifACT 2050 actions that provide value to Halifax Water's ratepayers and align with the utility's EMS program.
	Impact	<ul style="list-style-type: none"> • Improves our planning for future infrastructure requirements as we adjust the evolution of climate science. • Improves service and reduces the need to recover costs related to climate change and the impact on our infrastructure. • Provides direction and better prepares us for the changing climate, reduces energy use, lowering emissions as we continue to provide a high level of service (LOS) to customers.

 <p>Enhance wastewater modelling and develop a strategy to consistently meet regulatory reporting requirements regarding CSOs and SSOs.</p>	Goal	<ul style="list-style-type: none"> Enhance data availability and structure to report combined sewer overflows (CSOs) and sanitary sewer overflows (SSOs) more efficiently. Have an implementation strategy by Q3 to inform the updates to the Environmental Compliance Plan over Q2 2024/25 to Q2 2025/26.
	Rationale	<ul style="list-style-type: none"> Assessing flow monitoring equipment for accuracy and developing a long-term strategy to optimize the use of this flow monitoring equipment in the wastewater system, ultimately identifying a multi-year management and mitigation program.
	Impact	<ul style="list-style-type: none"> Enhanced accuracy of reporting and responses to non-compliance with federal and provincial regulations. Improves our ability to proactively address discharges to the environment, thereby reducing potential impacts on receiving waters.


 <p>Finalize and implement the Water Safety Plan.</p>	Goal	<ul style="list-style-type: none"> Complete the governance framework for the Water Safety Plan by Q2. Complete the first draft of the Water Safety Plan for all drinking water systems by Q4.
	Rationale	<ul style="list-style-type: none"> Building on the Water Quality Master Plan, Halifax Water is developing a comprehensive and adaptive risk assessment and risk management approach to the quality and safety of drinking water. This approach involves continuous improvement and risk management, including constantly assessing new risks.
	Impact	<ul style="list-style-type: none"> The Water Safety Plan will help to mitigate several corporate risks, including source lake recovery, climate change, critical infrastructure failure, water contamination, chemical supply chain disruption, asset management and aging infrastructure, adopting leading practices, and customer experience. The Water Safety plan will provide a means for integrating with other corporate plans, including the infrastructure master plan, compliance plan and capital plans.


 <p>Gain approvals, execute the contract, and start the design of the new Biosolids Processing Facility.</p>	<p>Goal</p>	<ul style="list-style-type: none"> • Halifax Water will request the required approvals, award and execute the contract and begin the detailed design of a new Biosolids Processing facility. <ul style="list-style-type: none"> ○ Present a construction and operating contract for approval by the Halifax Water Board and NSUARB by Q4.
	<p>Rationale</p>	<ul style="list-style-type: none"> • Biosolids processing is an integral part of the wastewater treatment cycle and is critical to meeting our LOS to our stakeholders. The existing facility is approaching its processing capacity limits and is at the end of its useful life. It needs to be replaced to accommodate the forecasted increase in biosolids production resulting from population growth and the requirement for secondary wastewater treatment of wastewater as required by CCME regulations by 2040.
	<p>Impact</p>	<ul style="list-style-type: none"> • This project has the potential to mitigate the following organizational risks: <ul style="list-style-type: none"> ○ Environmental – Ensures the continued service and performance of our Biosolids Management Program. ○ Financial – significantly reduces the capital and operating life cycle costs to process biosolids, which will, directly and indirectly, benefit ratepayers. ○ Infrastructure and capital assets – ensure the facility can meet the processing requirements and utilize by-products of the treatment processes. ○ Regulatory – ensures continued compliance with current regulatory requirements and upgrading the HHSPs to a secondary level of treatment by 2040.


 <p>Continue to advance the Water Supply Enhancement Program.</p>	<p>Goal</p>	<ul style="list-style-type: none"> As we continue to advance our Water Supply Enhancement Plan, we will: <ul style="list-style-type: none"> Complete detailed design and request funding approval for new clarifiers at the JD Kline Water Supply Plant (WSP) in Q4. Complete detailed design and request funding approval for the Lake Major WSP clarifiers in Q4. Begin detailed design of the Lake Major pumping station and intake by Q4.
	<p>Rationale</p>	<ul style="list-style-type: none"> The Water Supply Enhancement Program will equip both large water supply plants with a more robust and resilient treatment process, allowing the plants to continue producing high-quality water while dealing with changing source water quality driven by lake recovery and climate change. Maintains the JD Kline and Lake Major WSP in a state of good repair. Equips WSPs to provide advanced treatment to deal with the taste and odour-causing algal and other emerging risks to source water quality.
	<p>Impact</p>	<ul style="list-style-type: none"> This program helps ensure we can continue providing safe and high-quality water.


Financial & Regulatory Accountability


We are ensuring that Halifax Water has the capacity to fund existing and future infrastructure. We prudently manage assets and operate our business by balancing value and customer service.

 <p>Develop the next Five-Year Business Plan, including a long-term funding strategy for operating and capital budgets.</p>	Goal	<ul style="list-style-type: none"> Develop the five-year business plan for 2025/26 - 2029/30 by the end of Q3. Develop a new template for the five-year business plan that aligns with the "four pillars" used in the annual business plan and the new purpose statement by the end of Q1. Seek approval from Halifax Water Board in Q4.
	Rationale	<ul style="list-style-type: none"> This satisfies the NSUARB financial reporting requirements and the HRM Council Administrative Order regarding Halifax Water. Supports Halifax Water's commitment to increased stakeholder engagement.
	Impact	<ul style="list-style-type: none"> The next five-year business plan will set the organization's long-term direction. It will incorporate improvements in our risk management, increased resource capacity and a commitment to stakeholders.

 <p>Develop the detailed design for Cogswell District Energy System.</p>	Goal	<ul style="list-style-type: none"> Subject to the NSUARB approval, begin the process to secure HRM Council approval to expand the service boundary to align with the current construction by the end of Q2. Begin the process of drafting regulations for the DES by the end of Q3. Begin the detailed design by the end of Q2.
	Rationale	<ul style="list-style-type: none"> Development of the Cogswell District Energy System is important to reduce GHG emissions, aligning with HaliFACT2050.
	Impact	<ul style="list-style-type: none"> This project helps Halifax Water reduce GHG emissions.


 <p>Successfully implement the new Enterprise Resource Planning System (ERP) and Capital Management and Planning Information System.</p>	<p>Goal</p> <ul style="list-style-type: none"> • Implement the new Cayenta ERP system in the first half of the fiscal year, including developing sound business processes to support the implementation. <ul style="list-style-type: none"> ○ Ensure that employees are appropriately trained in using the ERP upon implementation and go-live. ○ Ensure that functionality, integration and reporting within the new ERP support efficiencies in decision-making and administrative and business processes. ○ Establish a clear plan for continued enhancements of functionality in the ERP. • Implement a new Capital Planning and Management Information System (CPMIS) to manage the creation, budgeting and administration of capital projects, including the capability for reporting and auditing, by the end of the fiscal year.
	<p>Rationale</p> <ul style="list-style-type: none"> • A new ERP is required to manage the utility effectively. As the utility's new ERP system, Cayenta will streamline many financial and customer relationship management processes and provide more effective reporting. • With the IRP requirement to increase the annual capital expenditures, it is necessary to replace the existing spreadsheet-based management system to effectively manage projects, improve reporting and achieve increased accountability by project managers for budget and schedule.
	<p>Impact</p> <ul style="list-style-type: none"> • The ERP will support the financial management and the continued financial health of the utility. The ERP is a significant, organization-wide implementation and will impact all parts of the organization. • Staff from across the organization will have improved access to information to support decision-making. • Greater access to project reporting and project information will improve project planning and scheduling, timeliness of project delivery and provide enhanced reporting on project financial performance


 <p>Develop and finalize an updated HRM-Halifax Water Service Level agreement.</p>	Goal	<ul style="list-style-type: none"> Finalize an updated service level agreement with HRM and present it to the Halifax Water Board by Q4.
	Rationale	<ul style="list-style-type: none"> Having standards for conducting business between Halifax Water and HRM will allow for greater efficiencies and lead to less confusion and frustrations from the public.
	Impact	<ul style="list-style-type: none"> Decreases the likelihood of customer confusion and complaints related to which entity is responsible for a particular service. This improves Halifax Water's reputation and relationship with its stakeholders (HRM, developers, etc.) and regulators (NSUARB).


 <p>Develop a revised rate design and file required rate applications.</p>	Goal	<ul style="list-style-type: none"> Develop the framework for a new rate design for water and wastewater, and seek approvals for a revised Cost of Service Manual by the end of Q4. Develop a strategy for rate applications by Q3. File a rate application for stormwater services in Q4, if required.
	Rationale	<ul style="list-style-type: none"> A revised rate design is required to ensure rates are affordable, provide the financial stability required, and ensure that users pay for the services they utilize.
	Impact	<ul style="list-style-type: none"> A revised rate design will support the utility's financial viability and provide a framework for long-term affordable rates to fund operating and capital requirements.


Operational Excellence


We are committed to service, reliability, and quality for our customers. We ensure a more sustainable community by focusing on safely and efficiently building, operating, and maintaining our critical infrastructure.

 <p>Develop and Implement the Comprehensive Emergency Management Program.</p>	Goal	<ul style="list-style-type: none"> Complete key components of the Comprehensive Emergency Management Program (CEMP), including the Emergency Response Plan and Business Continuity Plan (BCP), by Q2. Implement the CEMP Program by Q4. Conduct an emergency simulation (a tabletop exercise) to test the plan by Q4.
	Rationale	<ul style="list-style-type: none"> The CEMP is revising the current Emergency Management Plan (EMP) that enhances Halifax Water's emergency response measures and further develops its business continuity planning.
	Impact	<ul style="list-style-type: none"> The CEMP will provide clear and concise emergency management information and training aligned and integrated with other systems and processes throughout the organizations.

 <p>Keep significant capital projects and planning studies on track through regular monitoring and reporting.</p>	Goal	<ul style="list-style-type: none"> Complete all critical planning activities such that the development of the next IRP begins as required by the NSUARB in 2024/25.
	Rationale	<ul style="list-style-type: none"> The IRP is a key guiding document for Halifax Water's capital project delivery and long-term sustainability. Staying on track with planning studies and projects is a key factor in Halifax Water's long-term sustainability.
	Impact	<ul style="list-style-type: none"> Reduces service interruptions due to infrastructure failure. Ensuring that we retain qualified staff could prevent Halifax Water from achieving this goal.

 <p>Enhance all capital-related areas (approval, budgeting, project planning and delivery).</p>	<p>Goal</p> <ul style="list-style-type: none"> • Launch new engineering department structure by Q1. • Complete Institutional Capacity Study by Q3. • Develop project management and planning process by the end of Q4.
	<p>Rationale</p> <ul style="list-style-type: none"> • To meet its asset renewal, compliance, and growth requirements, Halifax Water needs to deliver on the IMP required spending average of \$135 million per year. To accomplish this, Halifax Water needs to: <ul style="list-style-type: none"> ○ enhance its planning systems, budgeting, and approval processes ○ increase the number of people focused on project planning and delivering.
	<p>Impact</p> <ul style="list-style-type: none"> • Enhancing the planning, budgeting and approval processes and increasing the number of staff planning and delivering capital projects will allow Halifax Water to meet the required level of capital project delivery in a cost-effective and timely manner.

 <p>Develop the five-year Information & Technology Services Road Map and continue to improve cyber security.</p>	<p>Goal</p> <ul style="list-style-type: none"> • Deliver a new five-year IT road map in Q1. • Continue to improve cyber security by: <ul style="list-style-type: none"> ○ Completing Multi-Factor Authentication project in Q1. ○ Completing live test of Disaster Recovery facility in Q3. ○ Develop a response plan to Municipal Auditor General's IT cyber audit by the end of Q1.
	<p>Rationale</p> <ul style="list-style-type: none"> • The current IT roadmap, which expires at the end of 2022/23, focuses on establishing foundational IT systems. While essentially complete, some of the original themes of connecting employees everywhere and improving customer experience are not fully realized. Further, data and analytics are becoming more important to daily operations. • Cyber security is rapidly evolving. Halifax Water must have robust measures in place against cyber threats to protect sensitive data and maintain continuity of service.
	<p>Impact</p> <ul style="list-style-type: none"> • This helps mitigate the risk of a cyber-attack or loss of sensitive data. • Increases connectivity with employees and improves data analytic capabilities and the customer experience.

 <p>Develop dashboards and metrics to measure and support operational excellence and the level of service to our customers.</p>	<p>Goal</p>	<ul style="list-style-type: none"> • Develop maintenance reports on a selected number of assets by the end of Q4. • Formalize performance standards for customer response and the level of service required to meet these standards by the end of Q4.
	<p>Rationale</p>	<ul style="list-style-type: none"> • By adopting standardized metrics, we can: <ul style="list-style-type: none"> ○ Demonstrate greater accountability and value for the services we provide to our customers (did we meet our commitments) ○ Make more informed decisions as part of business planning and budget development and can assist with financial forecasting. ○ Assign the appropriate service levels and timing to reduce the likelihood of service interruptions and reduce operating costs associated with emergencies.
	<p>Impact</p>	<ul style="list-style-type: none"> • Dashboards and established metrics allow Halifax Water to: <ul style="list-style-type: none"> ○ Improve tracking of infrastructure inventory and maintains critical infrastructure, improving drinking water quality, service reliability, regulatory compliance and public health benefits. ○ Reduce unplanned/emergency repairs that strain operational resources and our ability to execute maintenance plans. ○ Increase operation focus on work execution. ○ Optimize resources to achieve defined service levels better.

BUDGET SUMMARY

Capital Budget

Halifax Water's 2023/24 capital budget at a total value of \$146,692,000 and detailed information on the capital budget is provided in Appendix B.

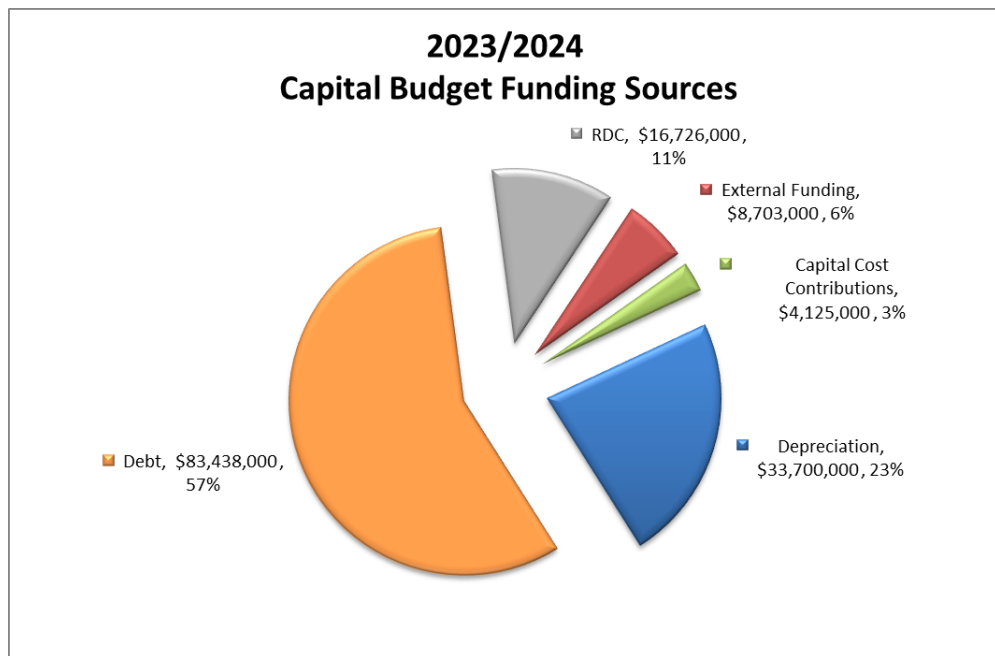
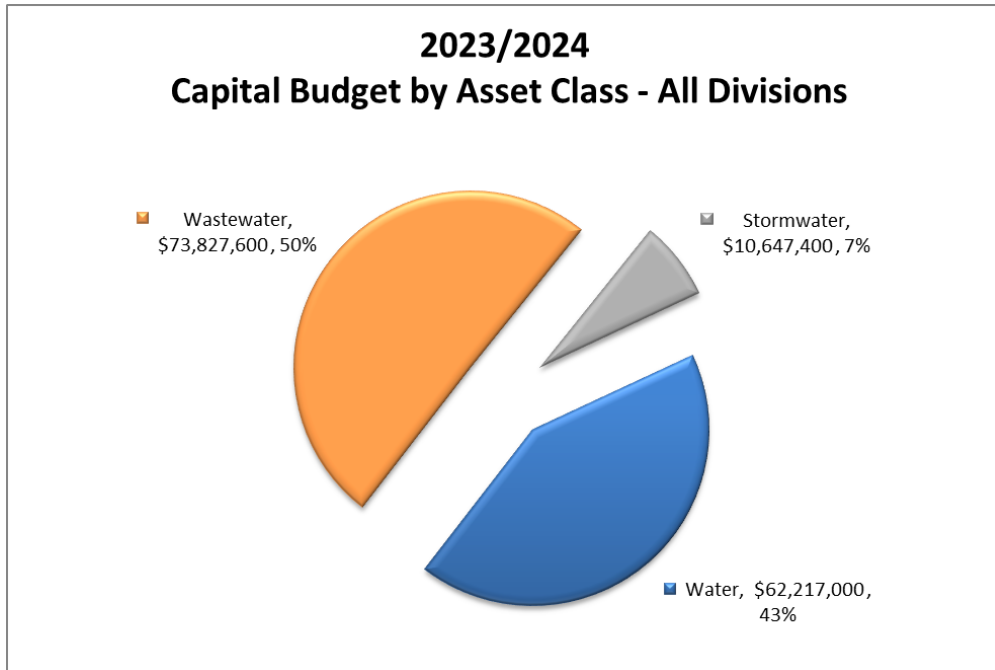
Halifax Water's 2019 IRP identifies a 30-year capital investment plan valued at \$2.7 billion (net present value) and a requirement to achieve an average level of spend of \$135 million per year. In relation to the IRP, the capital budget program focuses on providing the required infrastructure for asset renewal, regulatory compliance, and growth.

The 2023/24 capital budget recognizes Halifax Water's significant challenge in increasing a capital budget from approximately \$30 million ten years ago to an average annual IRP target of \$135 million and, in some years, exceeding \$200 million.

Preparation of the 2023/24 capital budget also balanced the expectation of what can reasonably be delivered with capital program targets identified. Developing a budget based on our current workforce and business process constraints will help improve our performance tracking to the capital budget targets. At the same time, delivering on our recommended annual IRP capital program target provides improved service sustainability and a reduced risk of service interruption.

The proposed capital budget for 2023/24 aligns with the budget outlined in the most recent five-year business plan for 2020/21 to 2024/25. It shows an increase of \$40 million from last year's budget of \$106 million for a proposed budget of \$146,692,000). This is intended to achieve critical projects with well-advanced planning while respecting the current capacity to deliver, augmented by some human resource additions.

The funding plan for the capital budget comprises the following funding sources; depreciation, debt, regional development charge reserve, capital cost contribution, Federal/Provincial infrastructure funding, HRM cost sharing and energy rebates.



Water		Wastewater		Stormwater	
Depreciation	\$ 13,293,000	Depreciation	\$ 17,835,000	Depreciation	\$ 2,572,000
Debt	\$ 39,790,000	Debt	\$ 36,089,600	Debt	\$ 7,558,400
RDC	\$ 4,593,000	RDC	\$ 11,983,000	RDC	\$ 150,000
External Funding	\$ 4,541,000	External Funding	\$ 3,795,000	External Funding	\$ 367,000
Capital Cost Contributions	\$ -	Capital Cost Contributions	\$ 4,125,000	Capital Cost Contributions	\$ -
	\$ 62,217,000		\$ 73,827,600		\$ 10,647,400

Operating Budget

The operating budget for 2023/24 reflects a projected deficit of \$2.3 million. The budget is based on regulated rates and charges approved by the NSUARB, effective April 1, 2023. Base charges for water and wastewater have remained unchanged since April 1, 2016.

The main cost drivers of Halifax Water's operating budget are salaries and wages, energy costs, chemicals, depreciation, and debt servicing. Operating expenditures are proposed to increase by \$7.2 million or 6.0% compared to the prior year's budget. Full details of the operating budget are provided in Appendix C.

Operating Budget Summary (in thousands)						
	Approved Budget 2022/23	Proposed Budget 2023/24	Per Rate Application 2023/24	Change from Prior Year	Change from Rate App	
Operating revenues	\$ 152,765	\$ 168,896	\$ 152,765	\$ 16,132	\$ (16,132)	
Operating expenditures	128,788	135,949	134,564	7,161	(1,385)	
Earnings from operations	<u>23,977</u>	<u>32,947</u>	<u>18,200</u>	<u>8,970</u>	<u>(14,746)</u>	
Financial and other revenues	<u>733</u>	<u>951</u>	<u>733</u>	<u>218</u>	<u>(218)</u>	
Financial and other expenditures	<u>35,598</u>	<u>36,207</u>	<u>35,734</u>	<u>610</u>	<u>(473)</u>	
Loss for the year	<u>\$ (10,888)</u>	<u>\$ (2,309)</u>	<u>\$ (16,801)</u>	<u>\$ 8,579</u>	<u>\$ (14,492)</u>	

All three services (water, wastewater and stormwater) forecast deficits for the 2022/23 fiscal year. With the approval from the NSUARB in 2022/23 to increase rates effective April 1, 2023, wastewater is the only service with budgeted earnings for 2023/24. Halifax Water received approval to utilize \$2.4 million of accumulated operating surpluses to offset the shortfall in water operations. In addition, during the rate application hearing, Halifax Water identified to the NSUARB that the proposed increases in stormwater rates were not sufficient for the service to break even and that further stormwater rate increases would be required. Halifax Water is planning to submit a cost of service application to the NSUARB early in 2024. If approved, the updated cost of service manual will be used to support future rate adjustments.

Operating Budget Key Assumptions

Revenue budgets have been developed based on the approved rate increases effective April 1, 2023. Consumption is projected to remain the same in 2023/24 as decreasing consumption from existing customers is projected to offset increases caused by growth. Halifax Water is budgeting for 680 new water customer connections and 640 new wastewater customer connections, on par with the prior year.

Halifax's Consumer Price Index (CPI) is currently at 7.30%. The increase in Halifax Water's total operating expenditures is slightly less than this. Specific assumptions regarding some of Halifax Water's most significant expenses are shown in the table below.

Significant Operational Expenditures	Estimated Cost Increase Assumptions
Chemicals	5.00%
Electricity	10.37%
Furnace oil	15.00%
Natural gas	15.00%
Salaries	1.75-2.50%**
** Halifax Water has three employee groups governed by two collective agreements and one compensation policy. This range provides an allowance for step increases as employees move through various salary bands.	

The budgets for depreciation and non-operating expenses, such as debt servicing and the dividend/grant in lieu of taxes paid to the municipality, are developed based on capital spending and additions to utility plant in service.

PERFORMANCE MEASUREMENT

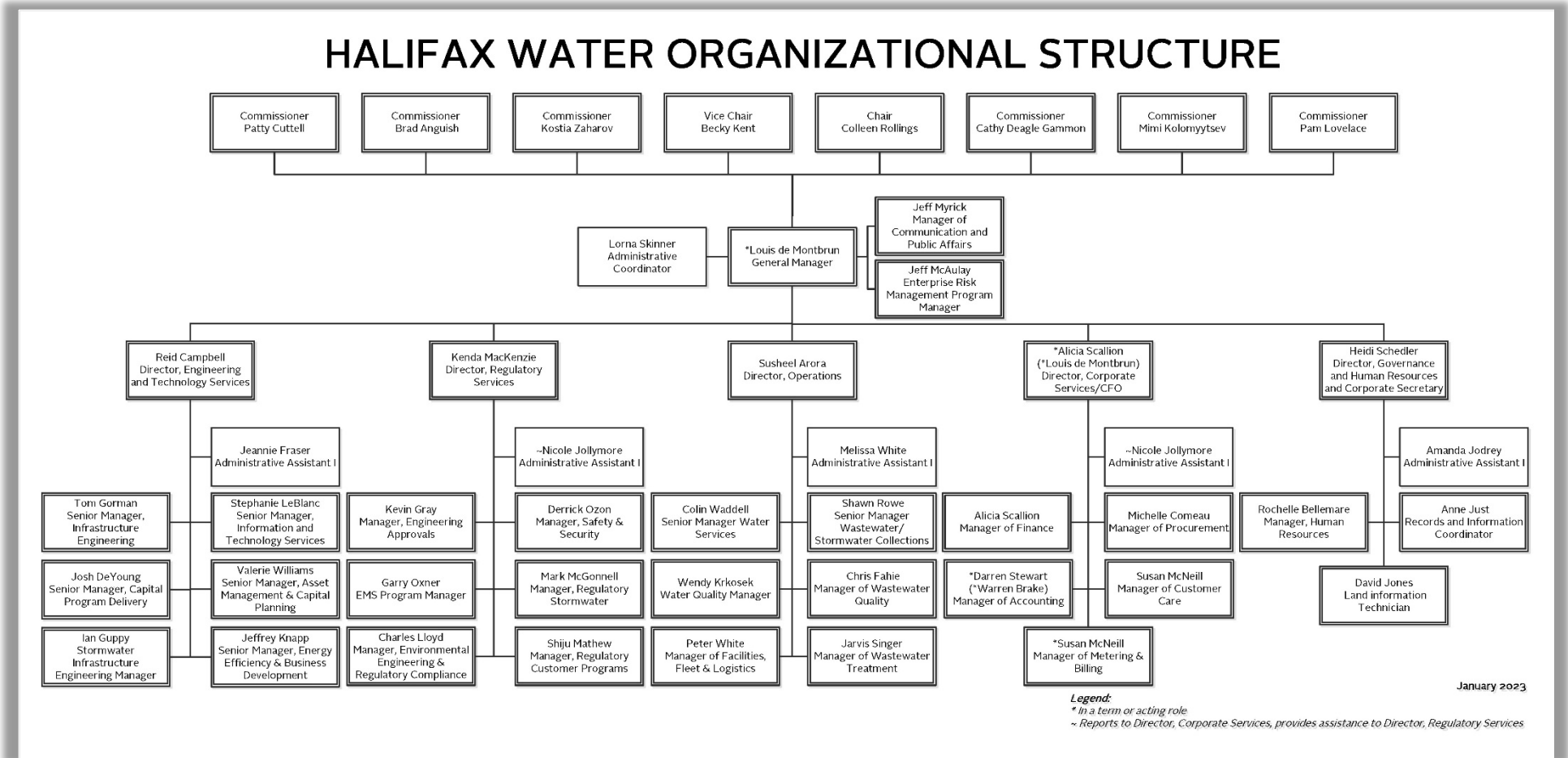
At the end of the 2023/24 fiscal year, Halifax Water's overall performance will be assessed against the Corporate Balanced Scorecard (CBS). Halifax Water has been utilizing a CBS to measure utility performance since 2001. Each year the Halifax Water Board sets organizational indicators and reviews performance results. The CBS targets for 2023/24 will be presented for approval at the March 2023 meeting of the Halifax Water Board.

There are eight Critical Success Factors (CSFs) derived from Halifax Water's vision statement. Under each of the CSFs, there are organizational indicators to track performance and allow for the establishment of targets. This year the eight critical success factors will be organized based on the four pillars:

People	Health, Safety & Environment
<ul style="list-style-type: none"> • The average number of days of absenteeism • % of grievances resulting in arbitration • % of jobs filled with internal candidates • Customer satisfaction about water quality - % from customer survey • Customer satisfaction with service - % from customer survey 	<ul style="list-style-type: none"> • The average score on internal safety audits • Lost time accidents - # of accidents resulting in lost time per 100 employees • Safe driving - # of traffic accidents per 1,000,000 km driven • Training - # of employees trained or re-certified before the due date • % of completed safety talks • # of IC&I properties inspected by Pollution Prevention each year • Energy management kWh/m³ reduction associated with capital projects • Adherence with Water Quality Master Plan - % of sites achieving targets • Bacteriological tests - % free from total coliform Bio-solids residual handling - % of sludge meeting bio-solids concentration targets
Financial & Regulatory Accountability	Operational Excellence
<ul style="list-style-type: none"> • Operating expense/revenue ratio percentage Annual cost per customer connection – Annual water cost per customer connection – wastewater • Capital budget expenditures - % of budget spent by the end of fiscal year • Department of Labour, Skills (DLS&I) and Immigration compliance - # of incidents with written compliance orders • % of public health and environmental regulatory infractions resulting in an environmental warning report, summary offence ticket, ministerial order, or prosecution • % of WWTFs complying with NSECC approval permits 	<ul style="list-style-type: none"> • Water leakage control – target leakage allowance of 160 litres per service connection per day • I&I reduction - # of inspections on private property for discharge of stormwater into the wastewater system • Peak flow reduction from wet weather management capital projects • Hours of unplanned outages in GIS and Cityworks Water service outages - # of connection hours/1000 customers • Wastewater service outages – # of connection hours/1000 customers • The average speed of answer – % of calls answered within 20 seconds

Appendix A: Organizational Structure and Service Overview

ORGANIZATIONAL STRUCTURE



SERVICE OVERVIEW

Operations

The Operations Department provides water, wastewater, and stormwater services. While respectfully managing the system to ensure each is independently financed based on the user pay model, all activities are organized through a "one team, one water" approach that makes it more seamless for customers.

Water Services

The Water Services division's mandate is to ensure a safe supply of water to Halifax Water's customers from "Source to Tap." The activities include operating and maintaining various systems:

- *Source Water Protection:* responsible for managing and protecting watershed land, developing and maintaining source water plans, enforcement of Protected Water Areas and other relevant source water regulations, source water community relations including working with and developing watershed advisory boards, real property maintenance of source water lands, and forestry management of watershed lands.
- *Water Quality Management:* responsible for water quality planning, water quality monitoring, process support to treatment plants, customer inquiries and investigations, water quality support to capital projects, policy development, research, and collaboration with Dalhousie University in Natural Sciences and Engineering Research Council's (NSERC) Alliance Grant Program at Dalhousie University.
- *Water Supply Plant Operations:* responsible for operation and maintenance of three large water supply plants (JD Kline/Pockwock, Lake Major and Bennery Lake), six small systems, six dams, two emergency water supplies and 35 chlorine monitoring devices and re-chlorination stations.
- *Distribution System Operations:* responsible for operating and maintaining the water distribution and transmission systems. The system is managed according to three geographic regions responsible for over 1,574 km of transmission and distribution mains, 8,500 fire hydrants, 86,500 service connections, 143 pressure control/flow metering facilities, 20 pumping stations, 16,000 valves and 19 water storage facilities. This also includes responding to third-party requests for buried infrastructure locates.

Wastewater Services

The Wastewater and Stormwater Services division's activities include operating and maintaining municipal systems. In this regard, the Wastewater and Stormwater Services division has the mandate to protect the environment while providing essential collection and treatment services to its customers. These essential services are delivered in sections responsible for stormwater and wastewater activities in three regions and 14 treatment facilities.

Wastewater Services strives to provide uninterrupted delivery of the following services:

- *Wastewater Treatment Facility Operations:* responsible for operation and maintenance of 14 WWTFs and associated infrastructure, regulatory reporting, and implementing and

coordinating capital upgrades with other Halifax Water departments. These facilities treat approximately 75 million cubic meters of wastewater annually. The department also operates four additional small treatment facilities under contract from HRM and the province.

- *Biosolids Processing:* responsible for liquid transport, dewatering and processing of sludge, operation, and maintenance of various dewatering equipment at WWTFs, administering trucking contracts for dewatered biosolids and BPF operations contract, and processing of biosolids from on-site septic systems. The BPF, located at the Aerotech Industrial Park, produces a soil amendment for beneficial use in agriculture.
- *Collection System Operations:* responsible for the operation, repair and maintenance of the wastewater collection and trunk sewer system. The system is managed according to three geographic regions responsible for over 1,425 km of collection pipes, 165 pump stations, 21 CSO facilities, and 83,000 service connections.
- *Septage Treatment Services:* This is an unregulated activity for Halifax Water, but it provides an essential service to residents who do not have a centralized wastewater service. The septage from septic hauling companies is treated at the Aerotech WWTF.
- *Facilities, Fleet & Logistics Services:* responsible for supplying, maintaining, and repairing approximately 270 pieces of mobile equipment and vehicles ranging from trailers and small utility service vehicles to large excavation, construction, and transportation equipment. Responsible for replacing vehicles and equipment on a life cycle costing basis, vehicle records management, and regulatory compliance. This section also operates and maintains corporate facilities at the Cowie Hill campus and provides logistical and service support to operations and treatment facilities to facilitate efficient operations.

Stormwater Services

The Stormwater Services division operates and maintains stormwater infrastructure within the public right-of-way and easements. This service has undergone significant changes over the past few years and continues to progress to achieve a higher LOS.

- *Collection System Operations* provides operation, repair and maintenance of the stormwater collection and trunk sewer system. Shared crews manage the system within the three geographic regions with responsibility for approximately 900 km of stormwater collection pipes, 46 stormwater retention facilities, over 1,200 km of ditches, 3,288 cross culverts and 16,700 driveway culverts. This section provides proactive maintenance of the pipes, ditches, and other systems to ensure uninterrupted flow within Halifax Water infrastructure. Staff also replace driveway and cross culverts on a priority basis to manage the infrastructure with sound asset management practices. In June 2022, Halifax Water became responsible for providing stormwater in new areas that include parts of the communities of Boutilliers Point, Ingramport, Head of St Margaret's Bay, Lewis Lake, Hubley and Upper Tantallon, East Preston, Lake Echo, Mineville, and Lawrencetown.

Service Review: supports the Stormwater Engineer within the Regulatory Services department, conducts drainage investigations, stormwater billing exemption requests, and supports other areas of the Operations Department.

Engineering and Technology Services

The Engineering and Technology Services (ETS) Department provides engineering and asset management services for planning, designing, constructing, and maintaining water, wastewater, and stormwater infrastructure. It is also responsible for all of Halifax Water's digital infrastructure services, including information management, geographic information systems, and operational technology.

The ETS Department has six specific operational sections delivering programs.

- *Asset Management*: responsible for developing the Asset Management (AM) Program, including the overall strategy, inventories, condition and performance assessments, and the development and delivery of the annual Asset Management Plan. This section is also responsible for flow modelling and monitoring, developing and long-term infrastructure master planning, including implementing the IRP and developing the five-year and one-year capital budget.
- *Infrastructure Planning*: responsible for planning and scheduling significant Halifax Water asset construction and replacement projects. They are also responsible for planning the development of water and wastewater networks and establishing Halifax Water design standards for Halifax Water infrastructure.
- *Capital Project Delivery*: responsible for the design, construction and commissioning of most Halifax Water capital projects. They are also responsible for monitoring and reporting on capital project performance and establishing and training staff in capital project management methodology and construction management and administration.
- *Energy Management & Business Development*: responsible for projects involving resource recovery or energy generation, developing energy sales and servicing customers for these services. They are also responsible for engineering services related to energy efficiency and GHG emission reduction, strategic energy planning and climate change mitigation.
- *Strategic Projects*: Responsible for managing and executing Halifax Water projects and programs deemed strategic due to their cost, risk or technical complexity. They are responsible for their projects' strategic procurement and risk management plans.
 - Information and Technology Services consisting of:
 - i. *Engineering Information*: responsible for the corporate GIS, including maintaining and distributing digital records relevant to our infrastructure. The section is responsible for ongoing GIS development, including desktop and mobile GIS applications and supports capital projects and other initiatives through Computer Aided Drafting (CAD) and map production.
 - ii. *Information Services (IS)*: responsible for the administration of services relating to network resources (storage, servers, printers, etc.), users, access control and network security, server hardware and operating systems, all computer equipment (including desktops, laptops, monitors, printers, and servers), corporate desktop software, and updating and delivery of the Information Technology (IT) Strategic Plan including all IT project delivery services. *Technical Services*: responsible for operation and maintenance of the SCADA system, the process communications network, and the AMI collection network; implementation of the SCADA master plan, process control, cyber security,

instrumentation maintenance, electrical maintenance, water pumping stations, and operation and development of the process data warehouse.

Regulatory Services

The Regulatory Services Department supports the utility through the following sections; Environmental Engineering, Engineering Approvals, Regulatory Compliance, Safety and Security, Stormwater Engineering and EMS.

- *Environmental Engineering*: responsible for two key programs, Pollution Prevention and the private side I&I reduction. The section also supports updating NSECC permits to operate and withdraw water and oversee projects related to contaminated sites and impacts on Halifax Water's infrastructure.
 - *Pollution Prevention*: responsible for promoting compliance of waste discharges with Halifax Water's Rules and Regulations through education and inspections.
 - *Inflow and Infiltration*: assist the Wet Weather Management Program in locating and addressing private side sources of I&I.
 - *Regulatory Compliance*: responsible for sampling the water treatment and distribution systems for bacteria and residual chlorine, ensuring compliance with Canadian Drinking Water Guidelines and operational permits issued by NSECC. Similar sampling is completed for wastewater effluent parameters for compliance with permits issued by NSECC, consistent with federal regulations. The group is also tasked with compiling and submitting reports associated with the sampling results to NSECC. Regulatory Compliance is completing work with the Water Quality Management section to implement new permit tracking, data management, and reporting software as part of the IT Strategic Program.
 - *NSECC Permits*: coordinates permit renewals and amendments.
- *Engineering Approvals*: responsible for ensuring connections to and expansions of our system adhere to the Halifax Water Design Specifications, the Supplementary Standard Specification, and the Halifax Water Regulations. In addition, the group oversees the administration of the Backflow Prevention Program, which provides a layer of protection to the water distribution system from potential contamination events (cross-connections) from medium to high-risk customers. The group also administers new service connections, including inspecting new services and renewals and administering Regional Development Charges and Capital Cost Contribution Charges.
- *Safety & Security*: responsible for providing overall support and delivery of Halifax Water's safety program and oversight of the security systems and programs to protect Halifax Water's critical infrastructure.
- *Stormwater Engineering*: responsible for conducting drainage investigations, stormwater billing exemption requests, and operations support. Drainage investigations may be triggered by a customer inquiry on private property or an operational issue on Halifax Water-owned infrastructure. The Stormwater Engineering team reviews the drainage issues and renders a

position which may involve an operational fix or a capital improvement. Complaints stemming from stormwater billing are vetted through the Stormwater Engineer, and a decision is provided to the customer.

- *Environmental Management System (EMS)*: provides a system of procedures, records, and processes to manage environmental issues and assist with regulatory compliance. It also makes day-to-day operations more sustainable and engages employees in these operational activities. The EMS program can be audited against ISO 14001 standards and, if found to comply, receives certification through ISO. The ISO standard focuses on organizational leadership and identifying risks and the associated influences, both internal and external, on an organization.

Corporate Services

The Corporate Services Department consists of five sections, serving internal and external customers.

- *Finance*: responsible for developing operating budgets, funding plans for the capital budget, rate applications and financial modelling for business plans. This group assists in preparing the capital budgets and confirms the availability of funding sources. The group is responsible for forecasting revenues and expenditures, including associated trend analysis, administering the pension plan, internal control testing, and quality assurance activities around financial transactions, including payroll.
- *Accounting*: responsible for timely and accurate financial reporting, financial accounting, fixed asset accounting, financial analyses, and preparing financial statements. This group is also responsible for revenue; budgeting and forecasting; predicting cash flows; developing and implementing accounting procedures; internal controls; managing the billing and collection of non-customer charges; and coordinating and supporting the annual external financial statement audit. Accounting also assists in preparing capital budgets.
- *Procurement*: responsible for planning and delivering procurement services to the organization, ensuring compliance with corporate policies, legislation, and trade agreements. This section develops and implements reporting and monitoring systems, programs and procedures for inventory and procurement. Procurement also supports and guides internal departments in acquiring goods, services, and construction to meet Halifax Water's objectives and capital programs.
- *Customer Care*: responsible for managing customer contacts, establishing corporate customer service standards, goals, and objectives, and coordinating the improvement of business processes in Customer Care and other departments.
- *Metering and Billing*: responsible for installing, maintaining, reading, sampling, and testing meters, establishing standards and billing customers for Water, Wastewater and Stormwater Services in a timely and accurate manner.

Administration

- *General Manager's Office*: responsible for the overall administration of the utility. Some initiatives led by the General Manager's Office include governance, business planning, public and

stakeholder relationships, and employee relations. Communications, Governance, and Human Resources fall directly under the General Manager's Office.

- *Communications*: responsible for external and internal communications, maintaining the internet and intranet sites, media relations, and social media, and providing support to operations and capital delivery to ensure the public is kept informed of significant projects, service disruptions, and initiatives.
- *Governance and Human Resources*: responsible for legal functions, corporate records management, FOIPOP administration, and land administration. The General Counsel acts as the Corporate Secretary to the Halifax Water Board and helps ensure that board governance processes function smoothly. Also responsible for delivering all human resource initiatives, including effective workforce planning, organizational change and development, recruitment functions, disability management, health and wellness initiatives, labour/employee relations, compensation and benefits functions, pension administration, and employment equity.

Unregulated Business

Halifax Water conducts some lines of business that are ancillary to the core water, wastewater, and stormwater services. These activities constitute approximately 1% of the utility's business. They include leasing land for telecommunications, cell phone and radio towers, and some energy-related initiatives such as leasing land for wind turbines and generating electricity through in-line turbines in the water system. The most material lines of un-regulated business are the treatment of septage from waste haulers dealing with private septic systems and the treatment of airline effluent. Halifax Water can also provide some services such as contract operations, consulting or leak detecting on a fee-for-service basis. Halifax Water offers consulting services to the Atlantic First Nations Water Authority. Unregulated business is conducted for the benefit of the regulated rate base.

Appendix B: 2023/24 Capital Budget

HALIFAX WATER
Capital Budget 2023/24
Summary

Asset Category	Project Costs
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<i>Water - Land -- T O T A L</i>	\$125,000
<i>Water - Transmission -- T O T A L</i>	\$17,935,000
<i>Water - Distribution -- T O T A L</i>	\$9,900,000
<i>Water - Structures -- T O T A L</i>	\$8,640,000
<i>Water - Treatment Facilities -- T O T A L</i>	\$13,980,000
<i>Water - Energy -- T O T A L</i>	\$200,000
<i>Water - Security -- T O T A L</i>	\$75,000
<i>Water - Equipment -- T O T A L</i>	\$310,000
<i>Water - Corporate Projects - T O T A L</i>	\$11,052,000
TOTAL - Water	\$62,217,000

<i>Wastewater - Collection System -- T O T A L</i>	\$17,940,000
<i>Wastewater - Forcemains -- T O T A L</i>	\$6,850,000
<i>Wastewater Structures -- T O T A L</i>	\$13,825,000
<i>Wastewater - Treatment Facility -- T O T A L</i>	\$21,255,000
<i>Wastewater - Energy -- T O T A L</i>	\$600,000
<i>Wastewater - Security -- T O T A L</i>	\$50,000
<i>Wastewater - Equipment -- T O T A L</i>	\$1,292,000
<i>Wastewater - Corporate Projects -- T O T A L</i>	\$12,015,600
TOTAL - Wastewater	\$73,827,600

HALIFAX WATER
Capital Budget 2023/24
Summary

Asset Category	Project Costs
<i>Stormwater - Pipes -- T O T A L</i>	\$5,291,000
<i>Stormwater - Culverts -- T O T A L</i>	\$2,465,000
<i>Stormwater - Corporate Projects -- T O T A L</i>	\$2,891,400
TOTAL - Stormwater	\$10,647,400
GRANDTOTAL	\$146,692,000

HALIFAX WATER
Capital Budget 2023/24
Water

Project Number	Project Name	Project Cost
<u>Water - Land</u>		
3.033	Watershed Land Acquisition	\$125,000
<u>Water - Land -- T O T A L</u>		\$125,000
<u>Water - Transmission</u>		
3.042	Critical Valve Replacement Program	\$250,000
3.587	Prince Albert Road Transmission Main / PRV Replacement	\$150,000
3.722	Cowie Reservoir Control Chamber - Pipework Optimization Study	\$75,000
3.571	Highway 118 Crossing - Shubie Park to Dartmouth Crossing	\$8,000,000
3.553	Peninsula Intermediate Looping - Quinpool Road to Young St (Windsor St 2023) ***	\$500,000
3.399	Cogswell Interchange - Water Transmission Main Realignment	\$2,560,000
3.658	Bedford to Burnside Transmission Main Phase 1 Remainder of TM Pipework	\$5,700,000
3.653	Bedford to Burnside Transmission Main Phase 3 - Rock Trench Preparations	\$640,000
3.232	MacIntosh Run Estates -Transmission Main Oversizing	\$60,000
<u>Water - Transmission -- T O T A L</u>		\$17,935,000
<u>Water - Distribution</u>		
3.022	Water Distribution - Main Renewal Program	\$6,200,000
3.067	~ Valves Renewals	\$200,000
3.068	~ Hydrants Renewals	\$75,000
3.069	~ Service Lines Renewals	\$100,000
3.39	Lead Service Line Replacement Program	\$2,000,000
3.738	Water Quality Lab Infrastructure	\$40,000
3.296	Water Sampling Station Relocation Program	\$40,000
3.294	Automated Flushing Program	\$30,000
3.696	Tower Road CN Bridge - Watermain Replacement	\$60,000
3.697	Herring Cove Road Watermain Renewal - HRM Integrated Project	\$120,000
3.699	Raymond St / Lakecrest Drive Storm Sewer Replacement - Watermain	\$150,000
3.704	Windsor Street Exchange Redevelopment - Water Infrastructure	\$170,000
3.735	Cathedral Lane Sewer Separation - Watermain Replacement	\$415,000
3.578	New Woodside Industrial Park Feed ***	\$300,000
<u>Water - Distribution -- T O T A L</u>		\$9,900,000
<u>Water - Structures</u>		
3.601	Control Chamber Valve Replacement Program	\$125,000
3.602	Control Chamber - Electrical Panel Replacement Program	\$60,000
3.263	District Metered Areas (DMA) Program	\$125,000
3.455	Reservoir Mixing and Residuals Management Upgrade Program	\$150,000
3.623	Booster Station - Building Envelope - Capital Upgrade Program	\$30,000
3.606	Highway #7 Booster Station - Fire Pump Replacement	\$600,000
3.698	Robie Control Chamber Upgrades	\$400,000
3.700	Robie Emergency Pump Station - Pump Upgrade	\$150,000
3.705	Esson Road PRV Replacement	\$615,000
3.706	Mount Edward Control Chamber - CSE Retrofit	\$20,000
3.707	Albro Lake PRV - CSE Retrofit	\$100,000
3.708	Gordon Avenue PRV Chamber - CSE Retrofit	\$135,000
3.709	White Hills Meter Chamber Replacement	\$25,000
3.713	Waverley Control Chamber - CSE Retrofit	\$115,000
3.712	Mount Edward Reservoir #1 Replacement	\$200,000
3.701	Leaman Dr. Emergency Booster Station	\$200,000
3.714	North Preston Reservoir Building Replacement	\$60,000
3.716	Robie Reservoir Gatehouse - Inlet Outlet Control Upgrades	\$230,000
3.717	Geizer 158 Dump Valve Chamber - Control Valve Replacement	\$50,000
3.718	Hollis St Meter Replacement	\$20,000
3.666	Lake Major Dam - Little Salmon River - DFO Offsetting Requirements	\$410,000
3.719	Geizer 158 - New Reservoir	\$400,000
3.664	Robie 2 PRV Chamber Valve Replacement	\$50,000
3.477	Aerotech Boosted System - Capital Upgrades	\$550,000
3.589	Aerotech Booster Station Replacement	\$1,800,000
3.508	Beaver Bank Reservoir Rehabilitation	\$800,000
3.641	Dam Safety Review - Chain Lake Dam - Capital Work	\$750,000
3.642	Dam Safety Review - Pockwock Lake Dam - Capital Work	\$320,000
3.580	Lyle Emergency Booster Upgrades	\$150,000
<u>Water - Structures -- T O T A L</u>		\$8,640,000

HALIFAX WATER
Capital Budget 2023/24
Water

Project Number	Project Name	Project Cost
<u>Water - Treatment Facilities</u>		
J D Kline Water Supply Plant:		
3.604	JD Kline WSP - Pretreatment and Clarification - WSEP JDK-800.10	\$5,733,000
3.608	JD Kline WSP - Clearwell, reservoir and storage - WSEP JDK-800.25	\$1,557,000
3.611	JD Kline WSP - Backwash and Service Water Pumping Upgrade - WSEP JDK-800.50	\$842,000
3.617	JD Kline WSP - Advanced Treatment for Taste, Odour and Algae - WSEP JDK-800.80	\$191,000
3.680	JD Kline WSP - Lime System Renewal	\$630,000
3.720	JD Kline WSP - Caustic Tank Pipework Improvement and Containment Liner Rehab	\$50,000
3.721	JD Kline WSP - Upgrade Sludge Beds	\$50,000
Lake Major Water Supply Plant:		
3.618	Lake Major WSP - Clarification/Pretreatment - WSEP MAJ 800.15	\$928,000
3.619	Lake Major WSP - Intake/low lift Pump Station - WSEP MAJ-800.20	\$446,000
3.622	Lake Major WSP - Advanced treatment for Taste, Odour and Algae control - WSEP MAJ-800.85	\$183,000
3.321	Lake Major WSP - Replace Fluoride Tank and Piping	\$585,000
3.723	Lake Major WSP - Low Lift Station - Ventilation Upgrade	\$40,000
3.725	Lake Major WSP - Residuals Handling Area - Resiliency Upgrades	\$100,000
3.724	Lake Major WSP - Maintenance Area - Ventilation and HVAC Upgrades	\$75,000
3.736	Lake Major WSP - Roof Replacement	\$1,120,000
Bennery Lake Water Supply Plant:		
3.692	Bennery Lake WSP - Lagoon Maintenance Study and Improvements	\$300,000
3.489	Bennery Lake WSP - Manganese Removal Strategy	\$100,000
3.726	Bennery Lake WSP - Replace Polymer Mixing Tanks	\$10,000
3.727	Bennery Lake WSP - Driveway and Yard Drainage Upgrades	\$30,000
3.728	Bennery Lake WSP - Control Room Upgrades	\$40,000
Non-Urban Core WSP		
3.729	Small Systems - Replace Compressors at Middle Musquodoboit WSP and Collins Pak WSP	\$20,000
3.730	Small Systems - UV Replacement Program - Middle Musquodoboit WSP Collins Park WSP	\$100,000
3.731	Small Systems - Filter Column Replacement Program	\$10,000
3.732	Small Systems - Middle Musquodoboit WSP and Collins Park WSP - Power Flux VFD Modules	\$50,000
3.733	Install Boat Launch at JD Kline	\$65,000
3.734	Install Boat Launch at Collins Park WTP	\$60,000
3.737	Purchase new Emergency portable generator for Small Systems (Collins Park/Mid-Musquodoboit)	\$150,000
3.690	WSP Plants - Instrumentation and Controls Equipment Program	\$100,000
3.691	Pump and Equipment Overhauls Program for WSPs	\$250,000
3.739	Receiving Environment Assessment - Collins Park, Middle Musquodoboit, Lake Major	\$100,000
3.740	Receiving Environment Assessment - Bomont	\$25,000
3.741	Pockwock Water Withdrawal	\$40,000
<u>Water - Treatment Facilities -- T O T A L</u>		\$13,980,000
<u>Water - Energy</u>		
3.635	Energy Management Capital Program (Water)	\$100,000
3.107	Chamber HVAC Retro-Commissioning Program	\$100,000
<u>Water - Energy -- T O T A L</u>		\$200,000
<u>Water - Security</u>		
4.009	Security Upgrade Program (W)	\$75,000
<u>Water - Security -- T O T A L</u>		\$75,000
<u>Water - Equipment</u>		
3.101	Miscellaneous Equipment Replacement (Water)	\$60,000
	North Preston Meters	\$250,000
<u>Water - Equipment -- T O T A L</u>		\$310,000
<u>Water - Corporate Projects - T O T A L</u>		\$11,052,000
GRAND TOTAL - WATER		\$62,217,000

HALIFAX WATER
Capital Budget 2023/24
Wastewater

Project Number	Project Name	Project Cost
<u>Wastewater - Collection System</u>		
2.168	Wastewater System - Trenchless Rehabilitation Program	\$2,500,000
2.839	Eastern Passage Gravity Pressure Sewer	\$700,000
2.103	Herring Cove Road Wastewater Stormwater Renewal - HRM Integrated Project	\$120,000
2.103	Winston Drive Sewer Main Repair	\$95,000
2.357	Manhole Renewals WW	\$60,000
2.358	Lateral Replacements WW (non-tree roots)	\$1,820,000
2.563	Lateral Replacements WW (tree roots)	\$585,000
2.223	Wet Weather Management Program	\$350,000
2.074	Bedford West Collection System CCC	\$25,000
2.052	Integrated Wastewater Projects - Program	\$2,500,000
2.905	Windsor Street Exchange	\$150,000
2.692	Cogswell Redevelopment - Sewer Relocation	\$2,580,000
2.939	York's Lane PS Elimination	\$350,000
2.675	Bayers Road Phase 1 - Sewer Separation	\$1,200,000
2.674	South Park Street - Sewer Separation	\$350,000
2.982	Young Street Pocket - Sewer Separation - Route to Harbour	\$500,000
2.830	Eastern Passage RDII Reduction Program FMZ24 - Lake Loon	\$805,000
2.831	Eastern Passage RDII Reduction Program FMZ37 - Eastern Passage	\$250,000
2.832	Mill Cove RDII Reduction Program FMZ07 & FMZ40 - Lower Sackville	\$3,000,000
Wastewater - Collection System -- T O T A L		\$17,940,000
<u>Wastewater - Forcemains</u>		
2.993	Dingle FM Replacement & Twinning	\$850,000
2.945	390 Waverley Road Forcemain Upgrades	\$5,500,000
2.823	Akerley Blvd Forcemain Replacement	\$500,000
Wastewater - Forcemains -- T O T A L		\$6,850,000
<u>Wastewater - Structures</u>		
2.420	Emergency Pumping Station Pump Replacements	\$300,000
2.442	Wastewater Pumping Station Component Replacement Program - West Region	\$200,000
2.443	Wastewater Pumping Station Component Replacement Program - East Region	\$200,000
2.444	Wastewater Pumping Station Component Replacement Program - Central Region	\$275,000
2.1014	Main Street Pumping Station (Golf View Drive) Upgrade	\$1,350,000
2.66	Bissett PS Component Upgrade	\$2,650,000
2.665	CSO Upgrade Program	\$300,000
2.1004	Pier A Pumping Station VFD Replacement	\$150,000
2.1030	Duffus Street Pumping Station - Mechanical & Electrical Upgrades	\$300,000
2.821	Duffus Street PS Flow Meter Replacement	\$520,000
2.1031	Electrical & Controls Assessment - Wastewater Structures	\$100,000
2.1037	Valleyford Holding Tank - Retaining Wall Replacement	\$70,000
2.846	Quigley Corner Pumping Station Upgrade	\$4,000,000
2.654	PS Control Panel / Electrical Replacement	\$860,000
2.005	Autoport Pleasant Street PS Replacement	\$2,550,000
Wastewater Structures -- T O T A L		\$13,825,000

HALIFAX WATER
Capital Budget 2023/24
Wastewater

Project Number	Project Name	Project Cost
Wastewater - Treatment Facility		
2.056	Plant Optimization Program	\$125,000
2.522	Emergency Wastewater Treatment Facility equipment replacements	\$550,000
2.668	Wastewater Treatment Research Program Pilot Plant	\$100,000
2.1023	HHSPs - Critical Spares	\$250,000
Halifax WWTF		
2.765	Halifax WWTF - Raw Water Pump Refurbishment	\$60,000
2.774	Halifax WWTF - UV Disinfection System - New Modules and PLC Upgrade	\$1,000,000
2.1024	Halifax WWTF - Replace Garage Bay Doors	\$125,000
2.552	Halifax WWTF - MCC Ventilation Upgrades	\$50,000
2.1025	Halifax WWTF - Coarse Screen Room - Regrade Floor Inside Berm	\$50,000
2.1026	Halifax WWTF - Replace Alum Fill Tank Piping	\$50,000
2.103	Halifax WWTF - Replace Hypo Fill Line	\$75,000
Dartmouth WWTF		
2.876	Dartmouth WWTF - Raw Water Pump Refurbishment Program	\$30,000
2.788	Dartmouth WWTF - UV Disinfection System - New Modules and PLC Upgrade	\$775,000
NEW	Dartmouth WWTF - Replace Workshop Bay Door	\$30,000
NEW	Dartmouth WWTF - OCS Damper Actuators	\$50,000
NEW	Dartmouth WWTF - Repair Exterior Door Thresholds	\$25,000
NEW	Dartmouth WWTF - OCS - Carbon Cannister Replacements	\$200,000
NEW	Dartmouth WWTF - Instrumentation Sensors	\$65,000
NEW	Dartmouth WWTF - VFD Replacements	\$100,000
2.871	Dartmouth WWTF - SS Pipe Work Replacement Program	\$200,000
Herring Cove WWTF		
NEW	Herring Cove WWTF - Industrial Water Strainer	\$25,000
NEW	Herring Cove WWTF - Epoxy Coat Floor	\$15,000
NEW	Herring Cove WWTF - Walk Behind Floor Scrubber	\$15,000
NEW	Herring Cove WWTF - Replace Exterior Rear Doors	\$10,000
NEW	Herring Cove WWTF - Roof Replacement	\$500,000
Mill Cove WWTF		
2.903	Mill Cove WWTF - Dewatering - Centrifuge Rebuild Program	\$30,000
2.640	Mill Cove WWTF - Process Upgrades - Preliminary + Detailed Design	\$1,000,000
2.817	Mill Cove WWTF - Plant Upgrade - Design and Contract Admin	\$9,000,000
NEW	Mill Cove WWTF - Pipe Replacement Program	\$250,000
NEW	Mill Cove WWTF - UV AC Unit Replacements	\$25,000
NEW	Mill Cove WWTF - MCC 1 - Replace Ten Buckets	\$150,000
NEW	Mill Cove WWTF - Air Actuated Pumps/Compressors	\$30,000
Eastern Passage WWTF		
2.907	Eastern Passage WWTF - Centrifuge Rebuild	\$50,000
2.908	Eastern Passage WWTF - UV Bank Rebuilds	\$15,000
NEW	Eastern Passage WWTF - VFD Replacements	\$60,000
NEW	Eastern Passage WWTF - Secondary Clarifier Refits	\$150,000
NEW	Eastern Passage WWTF - Centrifuge Rebuild	\$50,000
Aerotech WWTF		
2.913	Aerotech WWTF - Dewatering - Centrifuge Rebuild	\$50,000
2.915	Aerotech WWTF - Lagoon - Building Repairs	\$75,000
NEW	Aerotech WWTF - Aerotech Drive Road Repairs	\$25,000
Timberlea WWTF		
2.509	Timberlea WWTF - Asset Renewal Program	\$150,000
NEW	Timberlea WWTF - RBC Air Scour Blower - VFD Replacement	\$10,000
NEW	Timberlea WWTF - Headworks - Epoxy Floor Coating	\$20,000
NEW	Timberlea WWTF - New Forklift	\$40,000
Community WWTFs		
2.918	Frame WWTF - New Membranes	\$35,000
NEW	Fall River WWTF - Replace Sand Filter Media	\$100,000
Biosolids Processing Facility		
2.737	Biosolids Processing Facility - Scissor Lift Replacement	\$25,000
2.926	Biosolids Processing Facility - Loader Replacement	\$300,000
2.927	Biosolids Processing Facility - LBB #1 Auger Replacement	\$125,000
2.931	Biosolids Processing Facility - Facility Upgrade - RFQ/RFP/Tender/Construction/Commissioning/Assessment	\$5,000,000
2.919	Biosolids Processing Facility - Gas Sensor Upgrade Program	\$15,000
Wastewater - Treatment Facility -- T O T A L		\$21,255,000

HALIFAX WATER
Capital Budget 2023/24
Wastewater

Project Number	Project Name	Project Cost
<u>Wastewater - Energy</u>		
2.362	Energy Management Capital Program (Wastewater)	\$500,000
2.491	Pump Station HVAC Retro-Commissioning Program	\$100,000
Wastewater - Energy -- T O T A L		\$600,000
<u>Wastewater - Security</u>		
4.008	Security Upgrade Program (WW)	\$50,000
Wastewater - Security -- T O T A L		\$50,000
<u>Wastewater - Equipment</u>		
2.161	I&I Reduction (SIR) Program Flow Meters and Related Equipment	\$25,000
2.1039	New Bump Station	\$10,000
2.1040	New Pole Camera	\$35,000
2.1041	Two new fridge / sampling units	\$10,000
2.1042	Mobile Bypass Pump	\$215,000
2.451	Miscellaneous Equipment Replacement (WW)	\$120,000
2.1019	Mobile Generator Purchase	\$140,000
2.1020	Lateral Cutter	\$245,000
2.1021	Lateral Lining Equipment	\$320,000
2.1022	Push Camera	\$27,000
2.1029	Wet Well Wizard	\$145,000
Wastewater - Equipment -- T O T A L		\$1,292,000
Wastewater - Corporate Projects -- T O T A L		\$12,015,600
GRAND TOTAL - WASTEWATER		\$73,827,600

HALIFAX WATER
Capital Budget 2023/24
Stormwater

Project Number	Project Name	Project Cost
Stormwater - Pipes		
1.038	Integrated Stormwater Projects - Program	\$1,200,000
1.102	Manhole Renewals SW Program	\$16,000
1.103	Catchbasin Renewals SW Program	\$65,000
1.135	Lateral Replacements SW Program	\$25,000
1.204	National Disaster Mitigation Program	\$50,000
1.145	Sullivan's Pond Storm Sewer System Replacement - Phase 2 Irishtown Rd to Harbour	\$500,000
1.246	Oathill Lake Stormwater System Renewal	\$260,000
1.188	Cogswell Redevelopment - SW Sewer Relocation	\$2,710,000
1.301	Rosedale Stormwater Sewer Renewal	\$100,000
1.302	Willett Street and Sybyl Court Storm System Upgrade - Preliminary Engineering	\$100,000
1.303	Dartmouth Northwest Stormwater Renewal Program - Preliminary Engineering	\$265,000
Stormwater - Pipes -- T O T A L		\$5,291,000
Stormwater - Culverts/Ditches		
1.104	Driveway Culvert Replacement Program	\$1,200,000
1.279	Cross Road Culvert Replacement Program - Field discovery and operations construction	\$100,000
1.288	Cross Road Culvert Replacement Program - Engineering	\$100,000
1.289	Culvert Extension 20 French Mast Lane	\$100,000
1.221	Culvert Replacement - Murray Rd at Caldwell Rd	\$75,000
1.305	Culvert Replacement - Canterbury Lane (Near Civic 2)	\$55,000
1.306	Culvert Replacement - Dolomite Court, near civic 7	\$85,000
1.307	Culvert Replacement - Foster Avenue, near civic 45	\$100,000
1.308	Culvert Replacement - Philip Drive, near civic 196	\$55,000
1.309	Culvert Replacement - Robinson Drive, near civic 77	\$60,000
1.310	Culvert Replacement - Gold Lane, near civic 5	\$70,000
1.290	Culvert Replacement - Grant Line Road, near civic 2	\$60,000
1.311	Culvert Replacement - Lakecrest Drive, near civic 82	\$60,000
1.312	Culvert Replacement - Rising Sun Trail, near civic 4	\$95,000
1.313	Culvert Replacement - Highway 2, near civic 2774	\$55,000
1.316	Culvert Replacement - Glenwood Drive, near civic 120	\$65,000
1.315	Culvert Replacement - Glenwood Drive, near civic 80	\$65,000
1.314	Culvert Replacement - Glenwood Drive, near civic 50	\$65,000
Stormwater - Culverts/Ditches -- T O T A L		\$2,465,000
Stormwater - Corporate Projects -- T O T A L		\$2,891,400
GRAND TOTAL - STORMWATER		\$10,647,400

HALIFAX WATER
Capital Budget 2023/24
Corporate Projects

Project Number	Project Name	Project Cost
<u>Corporate - Information Technology</u>		
4.151	Capital Planning	\$450,000
4.105	Cityworks Upgrade	\$200,000
4.011	Computer Replacement Program	\$400,000
4.206	Cayenta Upgrades	\$200,000
4.255	General IT System Upgrades	\$300,000
4.207	Pension Implementation	\$425,000
4.208	DA3 – Program & Project	\$2,300,000
4.215	EE - Retention, Succession and Attraction I&T Plan	\$250,000
4.216	EE - New AMI Ert Read System - Neptune 360	\$250,000
4.217	EE- Equipment	\$250,000
4.218	EE- ITSM Process	\$250,000
4.219	EE - Electrical Safety Program	\$250,000
4.222	CS - Case Mgmt	\$200,000
4.226	ES - AMI Battery Replacement	\$350,000
4.228	QSC - Enterprise Architecture	\$250,000
4.229	QSC - Detection Equipment CSO-SSO	\$800,000
4.231	QSC - Detection Equipment SCADA Wan Update	\$150,000
4.232	QSC - Strategic Planning Business Cases	\$150,000
4.239	QSC - TS Work Tracking	\$250,000
4.258	Project Process Enhancements	\$250,000
4.259	Health and Safety	\$500,000
4.012	Network Upgrades	\$280,000
4.107	Customer Portal	\$200,000
4.243	Security Awareness (Cyber Awareness)	\$146,000
4.244	Incident Response	\$290,000
4.246	Vulnerability and Patch Management	\$487,000
4.25	Asset and Configuration Management (Asset Management)	\$161,000
4.252	MAG Remediation	\$300,000
4.195	New Service Account Compliance Program	\$200,000
4.189	Central Spread Spectrum Radio Network Replacement Program	\$100,000
4.191	ICS Cyber-Security Enhancements 2022-2023	\$200,000
4.192	PI System Enhancements 2022-2023	\$400,000
4.193	AMI Communications Upgrade 2022/2023	\$200,000
4.19	SCADA Equipment Renewals 2022-2023	\$200,000
<i>Corporate - Information Technology -- T O T A L</i>		\$11,589,000
<u>Corporate - GIS</u>		
4.040	GIS Data Program	\$250,000
4.039	GIS FORMS Project	\$150,000
4.105	GIS/Cityworks Upgrade Program	\$200,000
4.059	GIS Data Model (Utility Network Readiness)	\$250,000
4.155	Stormwater Billing Imagery Acquisition and Analysis	\$250,000
4.01	Service Gap Project	\$250,000
<i>Corporate - GIS -- T O T A L</i>		\$1,350,000

HALIFAX WATER
Capital Budget 2023/24
Corporate Projects

Project Number	Project Name	Project Cost
<u>Corporate - Asset Management</u>		
4.156	Asset Management Program Roadmap Update – Implementation	\$150,000
2.872	Wastewater Sewer Condition Assessment	\$445,000
1.254	Storm Sewer Condition Assessment	\$195,000
2.043	Corporate Flow Monitoring Program	\$1,200,000
4.158	Condition Assessment Program	\$500,000
4.163	Annual Asset Management Plan Update	\$20,000
4.168	Model Enhancements	\$70,000
4.113	Climate Change Management Program	\$200,000
4.169	Infrastructure Master Plan Update	\$1,500,000
4.256	Fairview Stormwater Model	\$75,000
4.257	Halifax Peninsula Combined Sewer Model Verification	\$50,000
Corporate - Asset Management -- T O T A L		\$4,405,000
<u>Corporate - Facility</u>		
4.187	Burnside Operations Centre	\$4,300,000
4.077	Building Capital Improvements	\$375,000
3.221	Energy Management Capital Program	\$100,000
Corporate - Facility -- T O T A L		\$4,775,000
<u>Corporate - SCADA & Other Equipment</u>		
4.154	Customer Meters - New and Replacement	\$400,000
Corporate - SCADA & Other Equipment -- T O T A L		\$400,000
<u>Corporate - Fleet</u>		
4.006	Fleet Upgrade Program Stormwater	\$508,000
4.006	Fleet Upgrade Program Wastewater	\$2,032,000
4.007	Fleet Upgrade Program Water	\$900,000
Corporate - Fleet -- T O T A L		\$3,440,000
GRAND TOTAL - Corporate Projects		\$25,959,000

ALLOCATION BREAKDOWN:		
Water - Corporate Projects - T O T A L		\$11,052,000
Wastewater - Corporate Projects -- T O T A L		\$12,015,600
Stormwater - Corporate Projects -- T O T A L		\$2,891,400
GRAND TOTAL - Corporate Projects		\$25,959,000

HALIFAX WATER

Capital Budget 2023/24

Summary of Routine Capital Expenditures included within Capital Budget

Project Number	Project Name	Project Cost	Asset Class
3.067	~ Valves Renewals	\$200,000	Water
3.068	~ Hydrants Renewals	\$75,000	Water
3.069	~ Service Lines Renewals	\$100,000	Water
3.39	Lead Service Line Replacement Program	\$2,000,000	Water
3.101	Miscellaneous Equipment Replacement (Water)	\$60,000	Water
4.007	Fleet Upgrade Program Water	\$900,000	Water
2.357	Manhole Renewals WW	\$60,000	Wastewater
2.358	Lateral Replacements WW (non-tree roots)	\$1,820,000	Wastewater
2.563	Lateral Replacements WW (tree roots)	\$585,000	Wastewater
2.451	Miscellaneous Equipment Replacement (WW)	\$120,000	Wastewater
4.006	Fleet Upgrade Program Wastewater	\$2,032,000	Wastewater
1.102	Manhole Renewals SW Program	\$16,000	Stormwater
1.103	Catchbasin Renewals SW Program	\$65,000	Stormwater
1.135	Lateral Replacements SW Program	\$25,000	Stormwater
4.006	Fleet Upgrade Program Stormwater	\$508,000	Stormwater
4.154	Customer Meters - New and Replacement	\$400,000	Corporate
4.012	Network Upgrades	\$280,000	Corporate
4.011	Computer Replacement Program	\$400,000	Corporate
GRAND TOTAL - Routine Capital Projects		\$9,646,000	

Appendix C: 2023/24 Operating Budget

HALIFAX WATER
STATEMENT OF EARNINGS - ALL SERVICES - NSUARB
PROPOSED OPERATING BUDGET
APRIL 1, 2023 to MARCH 31, 2024
(in thousands)

	APPROVED BUDGET APR 1/22 MAR 31/23	PROPOSED BUDGET APR 1/23 MAR 31/24
Operating revenues	\$ 152,765	\$ 168,896
Operating expenditures	<u>128,788</u>	<u>135,949</u>
Earnings from operations before financial and other revenues and expenditures	<u>23,977</u>	<u>32,947</u>
Financial and other revenues		
Interest	105	324
Other	<u>628</u>	<u>627</u>
	<u>733</u>	<u>951</u>
Financial and other expenditures		
Interest on long term debt	6,669	7,050
Repayment on long term debt	21,846	22,191
Amortization of debt discount	233	201
Dividend/grant in lieu of taxes	6,804	6,589
Other	<u>46</u>	<u>175</u>
	<u>35,598</u>	<u>36,207</u>
Loss for the year	<u>\$ (10,888)</u>	<u>\$ (2,309)</u>

HALIFAX WATER
STATEMENT OF EARNINGS - WATER - NSUARB
PROPOSED OPERATING BUDGET
APRIL 1, 2023 to MARCH 31, 2024
(in thousands)

	APPROVED BUDGET APR 1/22 MAR 31/23	PROPOSED BUDGET APR 1/23 MAR 31/24
Operating revenues		
Water	\$ 48,771	\$ 53,669
Public fire protection	7,628	8,083
Private fire protection	1,335	1,652
Bulk water stations	334	338
Late payment and other connection fees	264	252
Miscellaneous	296	258
	<u>58,629</u>	<u>64,252</u>
Operating expenditures		
Water supply and treatment	11,246	12,621
Water transmission and distribution	12,441	13,203
Engineering and technology services	4,667	4,703
Regulatory services	1,465	1,521
Corporate services	3,985	4,172
Administration	2,986	3,157
Depreciation and amortization	12,171	12,594
	<u>48,961</u>	<u>51,972</u>
Earnings from operations before financial and other revenues and expenditures	<u>9,667</u>	<u>12,281</u>
Financial and other revenues		
Interest	72	259
Other	473	465
	<u>545</u>	<u>724</u>
Financial and other expenditures		
Interest on long term debt	2,306	2,767
Repayment on long term debt	6,063	6,077
Amortization of debt discount	84	79
Dividend/grant in lieu of taxes	5,918	5,664
Other	16	130
	<u>14,387</u>	<u>14,717</u>
Loss for the year	<u>\$ (4,175)</u>	<u>\$ (1,712)</u>

**HALIFAX WATER
STATEMENT OF EARNINGS - WASTEWATER - NSUARB
PROPOSED OPERATING BUDGET
APRIL 1, 2023 to MARCH 31, 2024
(in thousands)**

	APPROVED BUDGET APR 1/22 MAR 31/23	PROPOSED BUDGET APR 1/23 MAR 31/24
Operating revenues		
Wastewater	\$ 81,608	\$ 87,450
Leachate and other contract revenue	491	494
Septage tipping fees	475	535
Overstrength surcharge	0	0
Airplane effluent	76	105
Late payment and other connection fees	247	234
Miscellaneous	253	223
	83,149	89,040
Operating expenditures		
Wastewater collection	13,096	13,554
Wastewater treatment	23,395	25,065
Engineering and technology services	7,109	7,096
Regulatory services	1,674	1,733
Corporate services	3,480	3,640
Administration	2,582	2,730
Depreciation and amortization	16,093	17,310
	67,429	71,128
Earnings from operations before financial and other revenues and expenditures	15,721	17,912
Financial and other revenues		
Interest	21	104
Other	155	162
	176	266
Financial and other expenditures		
Interest on long term debt	3,639	3,385
Repayment on long term debt	13,635	13,790
Amortization of debt discount	127	99
Dividend/grant in lieu of taxes	736	786
Other	30	45
	18,167	18,104
Earnings (loss) for the year	\$ (2,270)	\$ 73

HALIFAX WATER
STATEMENT OF EARNINGS - STORMWATER - NSUARB
PROPOSED OPERATING BUDGET
APRIL 1, 2023 to MARCH 31, 2024
(in thousands)

	APPROVED BUDGET APR 1/22 MAR 31/23	PROPOSED BUDGET APR 1/23 MAR 31/24
Operating revenues		
Stormwater site generated service	\$ 6,790	\$ 8,873
Stormwater right of way service	3,996	6,515
Late payment and other connection fees	104	141
Miscellaneous	97	75
	10,987	15,604
Operating expenditures		
Stormwater collection	5,281	5,382
Engineering and technology services	2,165	2,210
Regulatory services	1,727	1,806
Corporate services	349	368
Administration	287	303
Depreciation and amortization	2,588	2,780
	12,398	12,849
Earnings from operations before financial and other revenues and expenditures	(1,411)	2,755
Financial and other revenues		
Interest	12	(39)
Other	0	0
	12	(39)
Financial and other expenditures		
Interest on long term debt	723	899
Repayment on long term debt	2,148	2,324
Amortization of debt discount	22	24
Dividend/grant in lieu of taxes	149	139
Other	0	0
	3,043	3,386
Loss for the year	\$ (4,442)	\$ (670)

HALIFAX WATER
STATEMENT OF EARNINGS - REGULATED AND UNREGULATED ACTIVITIES - NSUARB
PROPOSED OPERATING BUDGET
APRIL 1, 2023 to MARCH 31, 2024
(in thousands)

	APPROVED BUDGET	PROPOSED BUDGET
	APR 1/22 MAR 31/23	APR 1/23 MAR 31/24
REGULATED ACTIVITIES		
Operating revenues		
Water	\$ 48,771	\$ 53,669
Wastewater	81,608	87,450
Stormwater	10,785	15,388
Public fire protection	7,628	8,083
Private fire protection	1,335	1,652
Other	1,557	1,520
	<u>151,684</u>	<u>167,762</u>
Operating expenditures		
Water supply and treatment	11,214	12,615
Water transmission and distribution	12,441	13,203
Wastewater collection	13,014	13,458
Stormwater collection	5,281	5,382
Wastewater treatment	22,681	24,250
Engineering and technology services	13,942	14,001
Regulatory services	4,866	5,060
Corporate services	7,800	8,168
Administration	5,685	6,041
Depreciation and amortization	30,834	32,666
	<u>127,759</u>	<u>134,844</u>
Earnings from operations before financial and other revenues and expenditures	<u>23,925</u>	<u>32,918</u>
Financial and other revenues		
Interest	105	324
Other	32	30
	<u>137</u>	<u>354</u>
Financial and other expenditures		
Interest on long term debt	6,669	7,050
Repayment on long term debt	21,846	22,191
Amortization of debt discount	233	201
Dividend/grant in lieu of taxes	6,804	6,589
Other	0	129
	<u>35,552</u>	<u>36,161</u>
Loss for the year	<u>\$ (11,489)</u>	<u>\$ (2,888)</u>

	APPROVED BUDGET APR 1/22 MAR 31/23	PROPOSED BUDGET APR 1/23 MAR 31/24
UNREGULATED ACTIVITIES		
Operating revenues		
Septage tipping fees	\$ 475	\$ 535
Leachate and other contract revenue	491	494
Airplane effluent	76	105
Miscellaneous	38	0
	<u>1,080</u>	<u>1,134</u>
Operating expenditures		
Water supply and treatment	32	6
Wastewater collection	82	96
Wastewater treatment	714	815
Sponsorships and donations	73	73
Depreciation and amortization	18	18
Administration	110	98
	<u>1,029</u>	<u>1,105</u>
Earnings from operations before financial and other revenues and expenditures	<u>51</u>	<u>28</u>
Financial and other revenues		
Other	596	597
	<u>596</u>	<u>597</u>
Financial and other expenditures		
Other	46	46
	<u>46</u>	<u>46</u>
Earnings for the year	<u>\$ 601</u>	<u>\$ 579</u>

Appendix D: 2023/24 Business Plan on a Page



2023/24 Business Plan



Our Purpose

Our purpose is to supply and safeguard sustainable, high-quality water services.

Our Vision

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

Our Values

Relationships

We nurture relationships with our customers, our team members and the environment. We are engaged in the neighbourhoods we serve and we support continual learning across our team.

Innovation

We are among the top utilities across the continent and we are known on the global stage. We always ask, "how can we improve efficiency, sustainability, creativity and the customer experience?"

Accountability

We refuse to cut corners. We check in with our excellence standards regularly and look to one another for support. Safety steers our decision-making. We are driven to make our policies, decisions and projects as clear as our drinking water.

Protection

Halifax Water protects the health and well-being of our population. We exist to guard natural resources, finding ways to sustain our communities and environment.

Our Goals



People

We attract and retain high-quality team members in an inclusive and respectful work environment. We are committed to our customers and the communities where we live and work, determined to provide a high level of service and sustainable future through ongoing engagement.

- Increase institutional capacity by filling new and vacant positions critical to achieving utility objectives.
- Continue to implement Document Management System.
- Proactive and Constructive Approach to Labour Management.
- Continue to increase engagement with stakeholders and customers.
- Complete the year-two activities of the Diversity, Equity, and Inclusion Framework.



Health, Safety & Environment

The health and safety of our employees, contractors, and the public is our top priority. We are focused on a safety-first culture, working to provide healthy, safe, sustainable, and reliable services for our community.

- Adopt standards for psychological health and safe workplaces to continue to build a safe work culture.
- Develop a Climate Action Plan.
- Enhance wastewater modelling and develop a strategy to consistently meet regulatory reporting requirements regarding CSOs and SSOs.
- Finalize and implement the Water Safety Plan.
- Gain approvals, execute the contract, and start the design of the new Biosolids Processing Facility.
- Continue to advance the Water Supply Enhancement Program.



Financial & Regulatory Accountability

It is fundamental to ensure that Halifax Water has capacity to fund existing and future infrastructure. We prudently manage assets and operate our business by balancing value and customer service.

- Develop the next Five-Year Business Plan, including a long-term funding strategy for operating and capital budgets.
- Develop the detailed design for Cogswell District Energy System.
- Successfully implement the new Enterprise Resource Planning System (ERP) and Capital Management and Planning Information System.
- Develop and finalize an updated HRM-Halifax Water Service Level agreement.
- Develop a revised rate design and file required rate applications.



Operational Excellence

We are committed to service, reliability, and quality for our customers. Focused on safely and efficiently building, operating, and maintaining our critical infrastructure, we ensure a more sustainable community.

- Develop and Implement the Comprehensive Emergency Management Program.
- Keep significant capital projects and planning studies on track through regular monitoring and reporting.
- Enhance all capital-related areas (approval, budgeting, project planning and delivery).
- Develop the five-year Information & Technology Services Road Map and continue to improve cyber security.
- Develop dashboards and metrics to measure and support operational excellence and the level of service to our customers.



Appendix B

2022/23 Operating Results (in thousands)

	Actual Year to Date Jan 31/23	Approved Budget 2022/23	Forecast 2022/23
Operating revenues	\$ 129,318	\$ 152,765	\$ 155,722
Operating expenditures	104,171	128,788	128,586
Earnings from operations	<u>25,147</u>	<u>23,977</u>	<u>27,136</u>
Financial and other revenues	<u>1,086</u>	<u>733</u>	<u>1,245</u>
Financial and other expenditures	<u>32,261</u>	<u>35,598</u>	<u>35,513</u>
Loss for the year	<u>\$ (6,028)</u>	<u>\$ (10,888)</u>	<u>\$ (7,132)</u>