

Item No. 10.3.1

Note: This is the same presentation which is attached to Information Item No. 4 of the April 15, 2014 Council Package.



Stormwater Costs of Service and Rates

March 2014



Providing world-class services for our customers and our environment



Halifax Water - the Basics

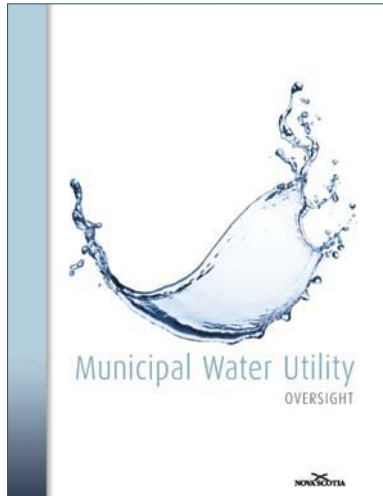
- **Origin – 1945 Public Service Commission (later renamed as Halifax Water Commission)**
- **1996 water utility amalgamation saw the formation of Halifax Regional Water Commission**
- **August 1, 2007 wastewater/stormwater transfer to Halifax Water**
- **First regulated water, wastewater and stormwater utility in Canada**
- **Operates in accordance with an Act of Provincial Legislature with rates, rules and regulations approved by Halifax Water Board and the Nova Scotia Utility and Review Board [NSUARB]**
- **Operates like a business and is self financed directly from user fees and fire protection revenue**

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▶ The Regulators of Halifax Water



- **NOVA SCOTIA ENVIRONMENT**
 - REGULATES WATER SAFETY ISSUES
- **NOVA SCOTIA UTILITY AND REVIEW BOARD**
 - REGULATES WATER, WASTEWATER, STORMWATER RATES

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▶ Halifax Water's Customer Base

- Slightly over 83,000 piped customer connections – water and/or wastewater, plus approximately 15,000 stormwater only customers
- The majority of customers (80%) receive all three services, however there are some that receive only one service, or two services
- Service boundaries are approved by HRM Council and differ slightly for water, wastewater and stormwater service
- The stormwater service boundary is defined in the 2007 Agreement which transferred wastewater and stormwater assets to Halifax Water

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▶ Challenges for the Utility

- Establishing a cost of service based rate design for wastewater and stormwater services
- Meeting existing wastewater standards, and new federal regulations
- Aging wastewater infrastructure and insufficient funding
- Lack of historical data on age, location, condition and capacity of some wastewater and stormwater assets

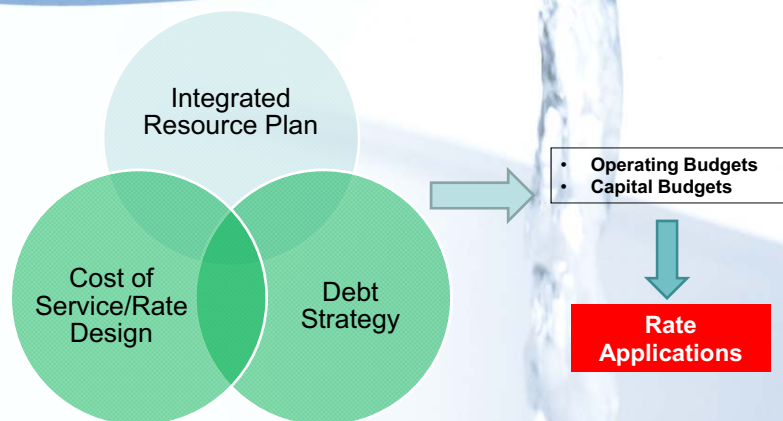
The NSUARB ordered some initiatives that have helped the utility address some of these challenges

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▶ Strategic Initiatives.... Keeping us Fiscally Healthy





Financing Strategies that support Environmental Stewardship

- Using pricing signals to promote conservation. Higher volumetric charges versus base charges for water consumption and wastewater discharge
- Establishing separate stormwater charges that reflect cost causation
- Charges that will influence behavior to reduce stormwater getting into the wastewater system (do not currently exist)
- Surcharging for over-strength WW flows (in addition to other enforcement mechanisms)
- Separating “growth” related costs and projects, and implementation of development charges.

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How do other jurisdictions bill for stormwater service?

- Based on water consumption
- Frontage charges
- Per lot charges
- Based on size of structure
- Based on assessed value through property taxation
- Based on an assigned category of run-off factor
- Based on a proxy for impervious area, or assigned category
- Based on actual impervious area

Using impervious area as a billing determinant has a stronger correlation to cost causation, is defensible and objective because it can be measured, and is administratively cost effective

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▶ Development of the billing determinant – Impervious Area

- Halifax Water purchased satellite imagery and impervious area is measured from 8 spectral layers
- Selected parcels were ground-truthed with actual survey of impervious area and the variance between the survey results and satellite imagery was 0.16%, indicating 99.84% accuracy
- In 2009 looked at 20,000 properties and determined that even though lot sizes differ, the ratio of impervious area to pervious area does not change much, therefore it is possible to develop a residential average impervious area
- For ICI customers (Institutional, Commercial, Industrial) it is necessary to specifically measure the impervious area for each property

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▶ How did we determine who gets a stormwater bill?

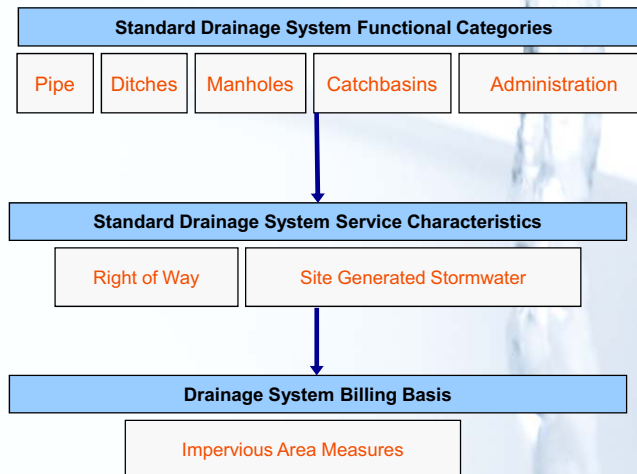
- Topographic maps, watershed boundaries, maps showing location of HRWC owned stormwater infrastructure, and the stormwater boundary were used to do a preliminary assessment of which properties are receiving a service
- Many properties were exempted (approximately 5,000). The result is not perfect; recognized there would be other properties that would ultimately be exempted
- Sections 7 (6) to (13) of the Regulations set out a process to appeal whether a property is exempt or not. It is being administered with two steps, the first step being less formal.
- To date, only one customer/property has moved to the formal process by filing a Notice of Objection. Most inquiries will be resolved through the informal process.

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▶ Cost Allocation Process: Stormwater



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▶ Stormwater Charge Basis

	Historic	Current
Right of Way Flow	0%	38%
Site Generated Flow	0%	62%
Base Charge - based on Wastewater/Stormwater rates	24%	0%
Volumetric Charge - based on Wastewater/Stormwater rates	76%	0%
TOTAL BILL	100%	100%

- Stormwater revenue requirements and services have not changed significantly, but how it is collected, and who pays, changed July 1, 2013
- August 2013 commenced billing stormwater as a separate service for the 83,000 "piped" customers
- March 2014 commenced billing stormwater for the stormwater only customers

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Stormwater Infrastructure Overview

- **Halifax Water responsible for municipal stormwater infrastructure in relation to 2007 Transfer Agreement**
- **Stormwater service costs approximately \$10M a year**
- **Stormwater infrastructure includes storm pipes, manholes, catchbasins, culverts, ditches, retention ponds and drainage swales**
- **The street network is also designed to manage stormwater flows (major storms)**
- **Some residents who are not water or wastewater customers do receive stormwater service, typically ditching maintenance and culvert replacements**
 - 480 km of ditches
 - HRWC replaced 185 culverts last year

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Stormwater Rates – Approved by NSUARB July 1, 2014

- **Stormwater expenses related to management of stormwater from the street right of way billed to HRM. HRM has asked Halifax Water to collect this on HRM's behalf starting in 2014/15**
- **Costs related to private property runoff are billed to property owners. Site Generated Flow Charge - \$0.133 per m² for 2013/14, and \$0.149 m² in 2014/15**
- **Properties that do not ultimately drain to an Halifax Water system are exempt**
- **ICI Customers billed based on impervious area, as measured by satellite imagery**
- **Residential Customers billed a uniform charge based on average impervious area - \$29.86 per year for 2013/14 and \$33.39 in 2014/15**

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Copies of the Integrated Resource Plan, Cost of Service Manual, Debt Study, Rate Application, and Halifax Water's Rules and Regulations are available on the main page of Halifax Water's website (www.halifaxwater.ca)



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