Halifax Water

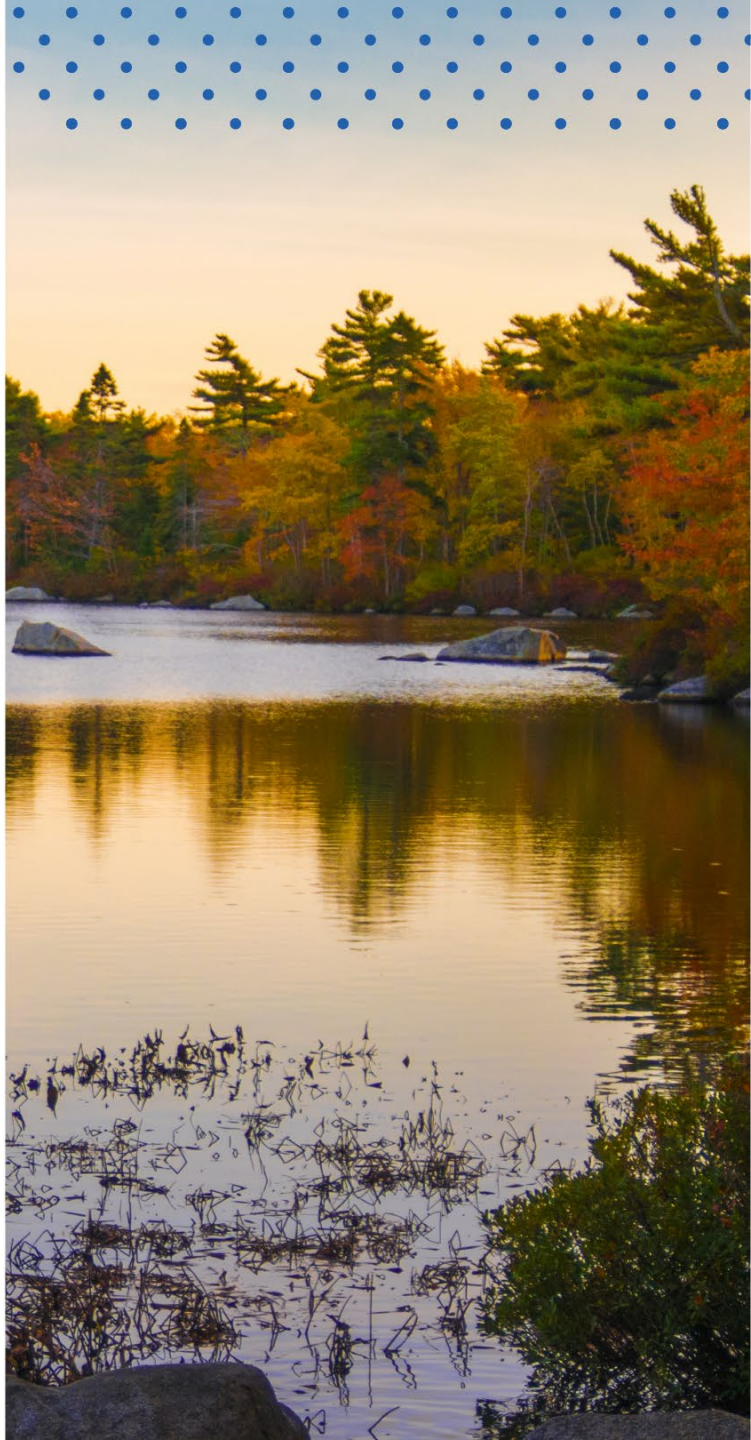
Regional Development Charge – Interested Party Engagement

Workshop #4 – Application of the Charge (ICI Methodology)

Please note this session is being recorded and will be posted to Halifax Water's RDC website

Wednesday February 12, 2025

STRAIGHT from the SOURCE



Pause for Discussion

Halifax Water

Agenda

- Current Process and Background for ICI (Industrial Commercial Institutional)
- Options Discussion
  - Option #1: Current Application for ICI
  - Option #2: Size of the Water Meter
  - Option #3: Number of Fixtures
  - Option #4: Residential Equivalent Units

RDC Model – Employment Assumptions

Population Projections

Start Date	End Date	Period (years)	Residential Growth (people)	Residential Growth (units)	Residential Growth (singles unit dwelling & townhouses)	Residential Growth (multi-unit dwellings)	Residential Growth (cumulative people)	Employment Growth (PE)	Employment Growth (equivalent area sq.ft.)	Employment PE Growth (cumulative PE)
April 1, 2016	March 31, 2021	5	18,548	9,092	2,364	6,728	18,548	10,788	8,731,013	10,788
April 1, 2021	March 31, 2026	5	19,595	9,605	2,497	7,108	38,143	11,397	9,223,893	22,185
April 1, 2026	March 31, 2031	5	21,212	10,398	2,703	7,695	59,355	12,338	9,985,469	34,523
April 1, 2031	March 31, 2036	5	22,162	10,864	2,825	8,039	81,517	12,890	10,432,218	47,413
April 1, 2036	March 31, 2041	5	23,727	11,631	3,024	8,607	105,244	13,800	11,168,705	61,213
April 1, 2041	March 31, 2046	5	25,969	12,730	3,310	9,420	131,213	15,104	12,224,066	76,317
	Total		**131,213**	**64,320**	**16,723**	**47,597**		**76,317**	**61,765,364**	

Integrated Master Plan - Population

		Start Date	End Date
Time period	30 years	April 1, 2016	March 31, 2046
Residential growth	131,213		
Employment growth to 2046	79,086		
Total Growth	**210,299**		
H-24 - Employment/Resdiential Ratio * 0.96	**58.16%**		
Residential growth	131,213		
Employment PE growth to 2046	76,317		
Total Growth (PE Adjusted)	**207,530**		
Residential growth	63.23%		
Employment growth	36.77%		

Assumptions, NSUARB decision document #280268 dated February 12, 2021

2.04	people per unit (PPU)
0.965	population equivalent (PE) to one employee (U-16 methodology of M09494)
26.0%	single unit dwelling market share
74.0%	multi-unit dwelling market share
58.0%	target employment growth HRM Regional Plan
58.16%	employment PE growth (derived using H-24 M09494)
781	employment denisty floor space per worker (FSW, sq.ft./worker)
809	employment density floor space per worker population equivalent (FSWPE, sq.ft/worker PE, 781sq.ft./.965)

Regional Development Charge - Variables

		Start Date	End Date
2019 estimated RDC collections	1 year	April 1, 2019	March 31, 2020
Financial model	20 years	April 1, 2020	March 31, 2040
Time period	21 years	April 1, 2019	March 31, 2040
Total residential growth	89,370		
Total employment population equivalent grov	51,980		
Total Growth (PE)	**141,350**		
Residential growth	63.23%		

Period Growth (PE)

Start Date	End Date	Period (years)	Residential	Employment (PE)	Total
April 1, 2016	March 31, 2046	30	131,213	76,317	207,530
April 1, 2016	March 31, 2040	24	100,499	58,453	158,952
April 1, 2019	March 31, 2040	21	89,370	51,980	141,350

Population Projections | Water - Phase Costs | Water - Financial Model | Water - Charge | Wastewater - Phase Costs | Wastewater - Financial Model | Wastewa

RDC Model – Employment Growth

End Date	Residential Growth (people)
March 31, 2021	18,548
March 31, 2026	19,595
March 31, 2031	21,212
March 31, 2036	22,162
March 31, 2041	23,727
March 31, 2046	25,969

×

58.16%
Employment Population Equivalent (PE)
(derived using H-24 M09494)

=

Employment Growth (PE)
10,788
11,397
12,338
12,890
13,800
15,104

RDC Model – Employment Growth – Equivalent Area

Employment Growth (PE)
10,788
11,397
12,338
12,890
13,800
15,104

809 employment density floor space per worker population equivalent (sq.ft/worker PE)

Employment Growth (equivalent area sq.ft.)
8,731,013
9,223,893
9,985,469
10,432,218
11,168,705
12,224,066

$$\frac{\mathbf{781}\ employment\ density\ floor\ space\ per\ worker}{0.965\ population\ equivalent\ (PE)\ to\ one\ employee\ (U16\ of\ M09494)}$$

Blended Average explained in U-3 M09494

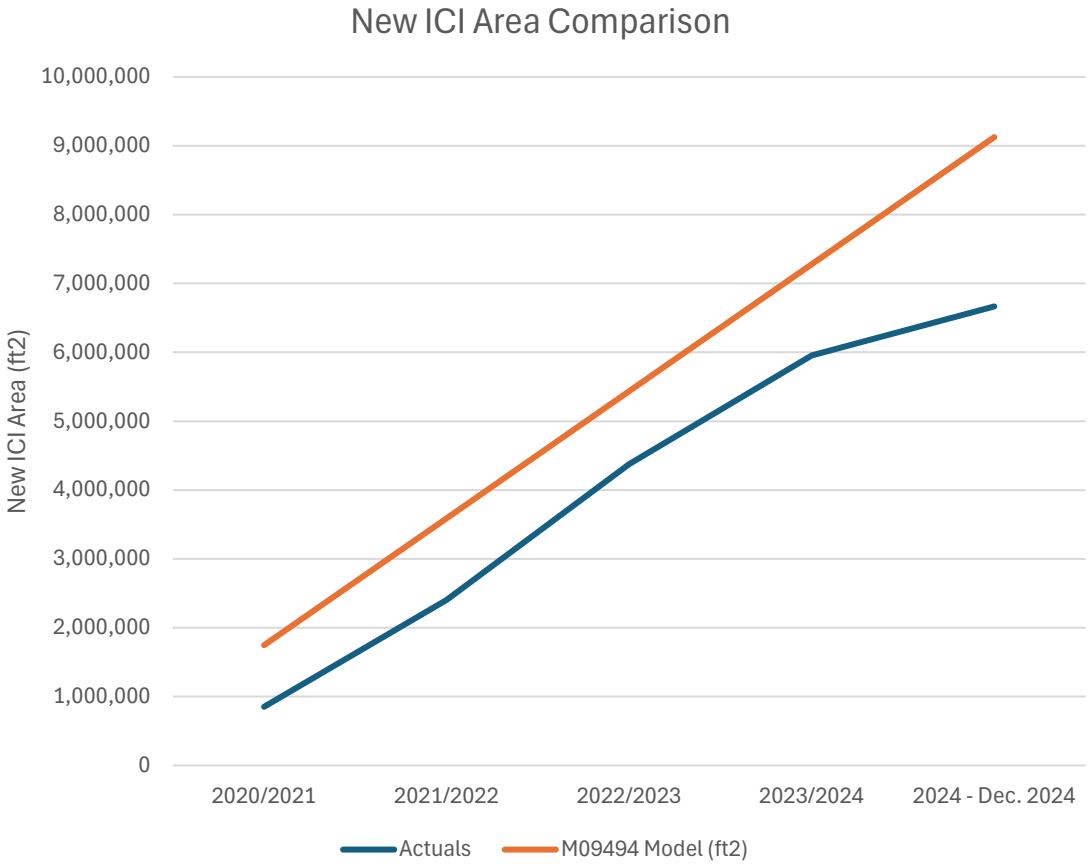
Municipality	Industrial	Commercial	Institutional
Hamilton	1,200	450	700
Ottawa	990	385	400
York Region	800	353	900
Halton Region	1,468	402	697
Peel Region	1,604		
Durham Region	1,259	420	678
Brant County	1,550	550	680
London	1,000	425	700
Niagara Region	1,200	500	700
Simcoe County	1,076	538	
Average	**1215**	**447**	**682**

Blended Average	781

Pause for Discussion

Comparison: M09494 Model versus Actuals

- Assumptions:
  - Cumulative Area starting on April 1, 2020
  - **Actuals:** Based on **new water permits** when submitted; does not included refunds or changes
  - **M09494 Model:** Numbers from the approved RDC model
  - 2024/2025 is not completed yet, M09494 Model assumed full year

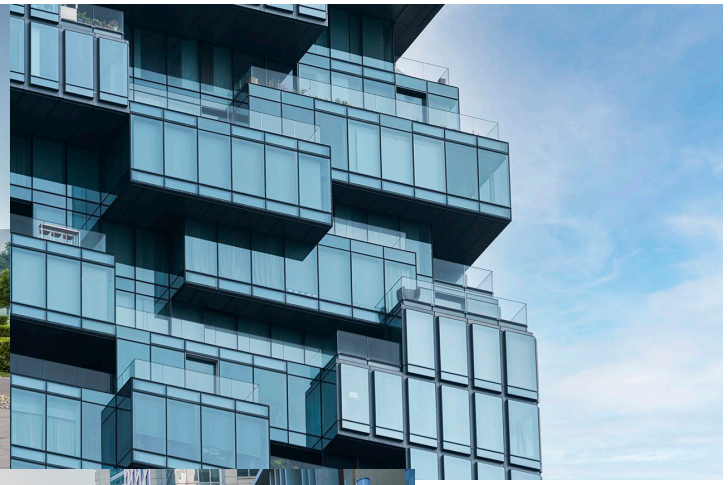


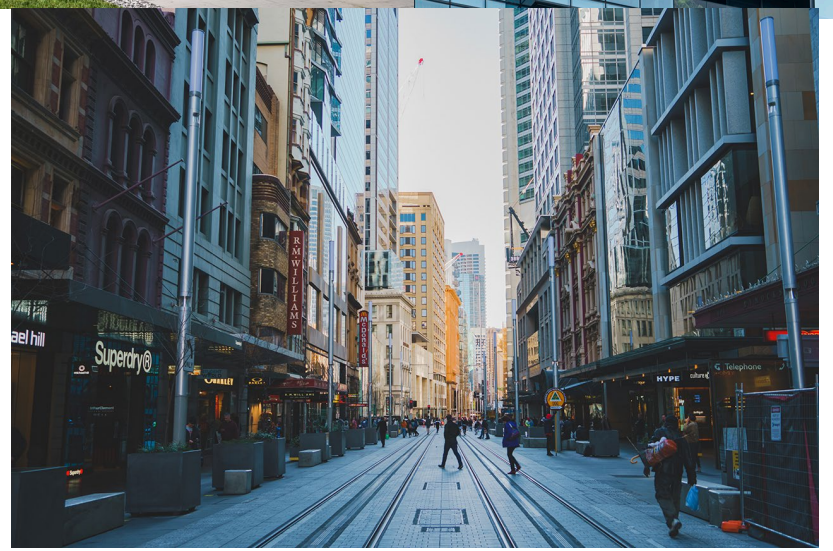
M09494 – Developing a New Cost Allocation Methodology

Options Discussions

- Option #1: Current Application for ICI
- Option #2: Size of the Water Meter
- Option #3: Number of Fixtures
- Option #4: Residential Equivalent Units

Option #1 – Current Application of the Charge





- There are three RDC rates: SUD, MUD, ICI (m^2)
- Calculated from forecasted populations and averages

Option #1 – Current Application of the Charge

Advantages	Disadvantages
- Familiar method that is built into the existing permitting portal - Forecasted through population estimates - Demolishment of a building with no immediate plans for redevelopment does not result in an RDC refund - Calculating the net increase in residential units and/or square footage of floor space is simple - Change in tenant/building use as an ICI customer does not require a re-calculation of the RDC	- There is a vast range of demand for ICI (or nonresidential) customers and only one category

Option #2 - Size of the Water Meter

- RDC could be charged based on the water meter size, calculated based on use, pressure, and number and type of fixtures.

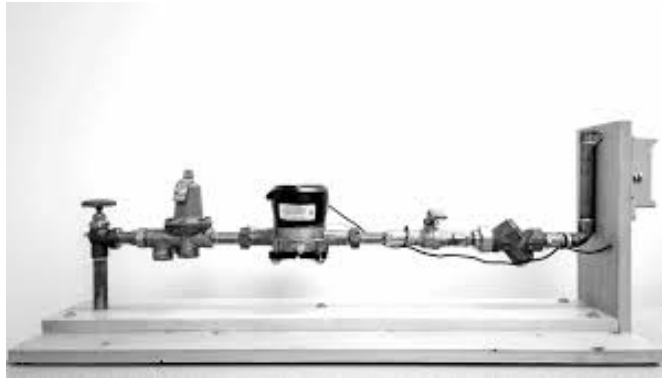


Table 3.1 – Water Meters

Meter Size (Metric)	Meter Size (Imperial)	Neptune Model	90% Max Inst. Flow (usgpm)	Maximum Instantaneous Flow (usgpm)
15 mm	5/8”	T-10 Positive Displacement	18	20
19 mm	3/4”	T-10 Positive Displacement	27	30
25 mm	1”	T-10 Positive Displacement	45	50
38 mm	1.5”	T-10 Positive Displacement	90	100
50 mm	2”	T-10 Positive Displacement	144	160
75 mm	3”	Tru/Flo Compound Water Meter	315	350
100 mm	4”	Tru/Flo Compound Water Meter	540	600
150 mm	6”	Tru/Flo Compound Water Meter	1215	1350
150 mm	6”	HP Potectus III S Fire Service Meter	2790	3100
200 mm	8”	HP Potectus III S Fire Service Meter	4500	5000
250 mm	10”	HP Potectus III S Fire Service Meter	7200	8000

Option #2 - Size of the Water Meter

Advantages	Disadvantages
- Upsizing the water meter will depend on a Halifax Water permit - Range of water meter sizes (approx. 11 sizes) - Charge based on the potential peak capacity of the water meter	- Inequality with small water meters *Example: 15mm water meter could service a SUD or 4 MUDs* - Building Owners may not upsize water meters for tenants - Wastewater only customers still need a fixed rate - Existing customers that have already paid RDC that may complete future renovations - Difficult to forecast long term

Option #3 - Number of Fixtures

- RDC could be charged based on the number of fixtures

Halifax Water

WATER METER SIZING CALCULATION SHEET
FOR NON-FIRE SERVICE WATER METERS

FORM DM1

HALIFAX WATER
450 Cowie Hill Road, PO Box 8388, RPO CSC
Halifax, Nova Scotia, B3K 5M1
Phone: (902) 490-6918
Fax: (902) 490-1584
Email: EngineeringApprovals@HalifaxWater.ca

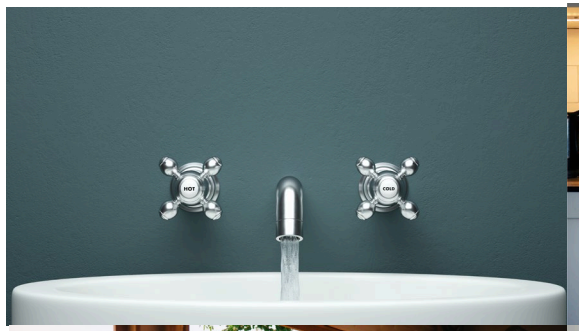
Applicant, Customer & Premise Information

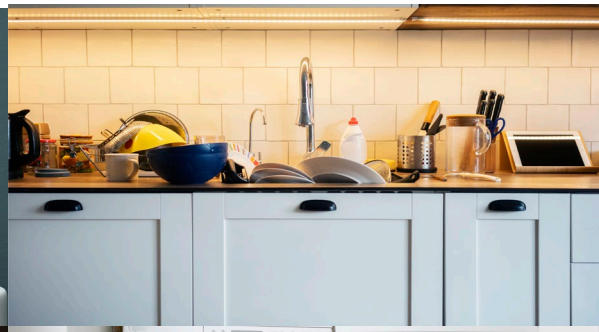
Date: _____ Building Permit Number: _____
Name: _____ Email: _____
Phone Number: (____) _____ Fax Number: (____) _____
Location/Address: _____
Property Identification Number (PID): _____ Lot Number: _____
Premise Use: _____
Type of Premise: ☐ Residential ☐ Multi-Unit Res. ☐ Industrial ☐ Commercial ☐ Institutional
Degree of Hazard: ☐ Minor ☐ Moderate ☐ Severe Number of Multi-Units: _____

Calculation

Step 1 – Fixture Demand – Adjust fixture value as required for public, commercial, industrial and institutional uses. Attach calculation sheets. Use AWWA M22 Fixture Value Methodology.

Fixture	Fixture Value		Number of Fixtures		Fixture Units
		x		=	
		x		=	
		x		=	
		x		=	
		x		=	
		x		=	
		x		=	
		x		=	





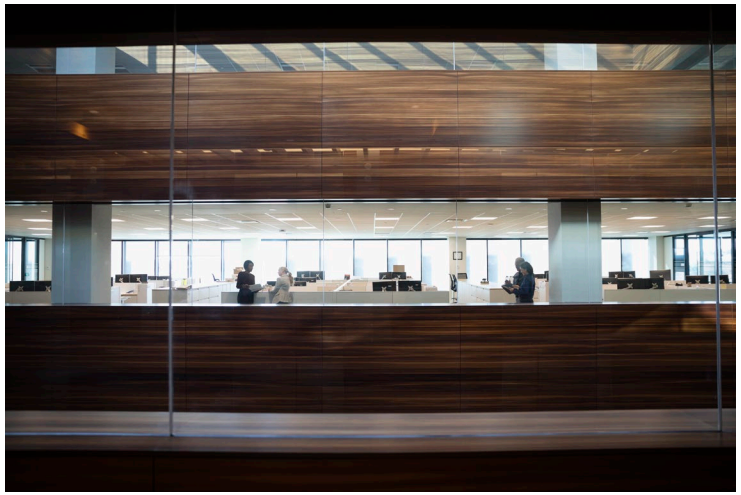
Pause for Discussion

Option #3 - Number of Fixtures

Advantages	Disadvantages
- Provides greater differentiation in fees then the size was the water meter - Information is available in new building/water permits - Renovation permits are initially reviewed by Halifax Water	- More detailed information is required for fixtures counts through permit review and reconciliation once building is complete - Existing customer that have already paid RDC - No mechanism to account for the reduction of fixtures in existing customers - Renovation permits that change after the initial review may be missed by Halifax Water - Calculation of the net increase in fixtures for permits with demolitions is unmanageable - Difficult to forecast

Option #4 – Residential Equivalent Units

- Residential Equivalent Units (REU): the unit of measurement which consists of the amount of a normal water/wastewater contributed from a single residential dwelling
- The use of a property is dependent on the HALIFAX's Land Use By-laws
- Example: 1 REU = 1,000 L/day
    - New Water Permit estimate is 10,000 L/day / 1,000 L/day per REU = 10 REU



Option #4 – Residential Equivalent Units

Advantages	Disadvantages
- Provides a differentiation in fees - General knowledge between industrial, commercial, and institutional	- Specific tenant information is often unknown at the time of building permit/water meter - Occupancy Permit review for Halifax Water - Difficult to forecast diverse uses - No mechanism to account for the reduction to the REU - Calculation of the net increase in REUs for permits with demolitions is difficult - Tenant fee versus an owner fee

Summary of Workshop #4 – Application of the Charge

- Current Process and Background for ICI
- Options Discussion
  - Option #1: Current Application for ICI
  - Option #2: Size of the Water Meter
  - Option #3: Number of Fixtures
  - Option #4: Residential Equivalent Units
- **Next Steps:**
- Send feedback to RDC2025@halifaxwater.ca
- Visit Regional Development Charge Stakeholder Engagement 2025 | Halifax Water
- Workshop #5 – Additional Time if Required