City of Windsor
Stormwater Financing Study

Stormwater Advisory Group Mtg #5

July 28, 2020
7:00 pm – 9:00 pm
Virtual Meeting via Microsoft Teams

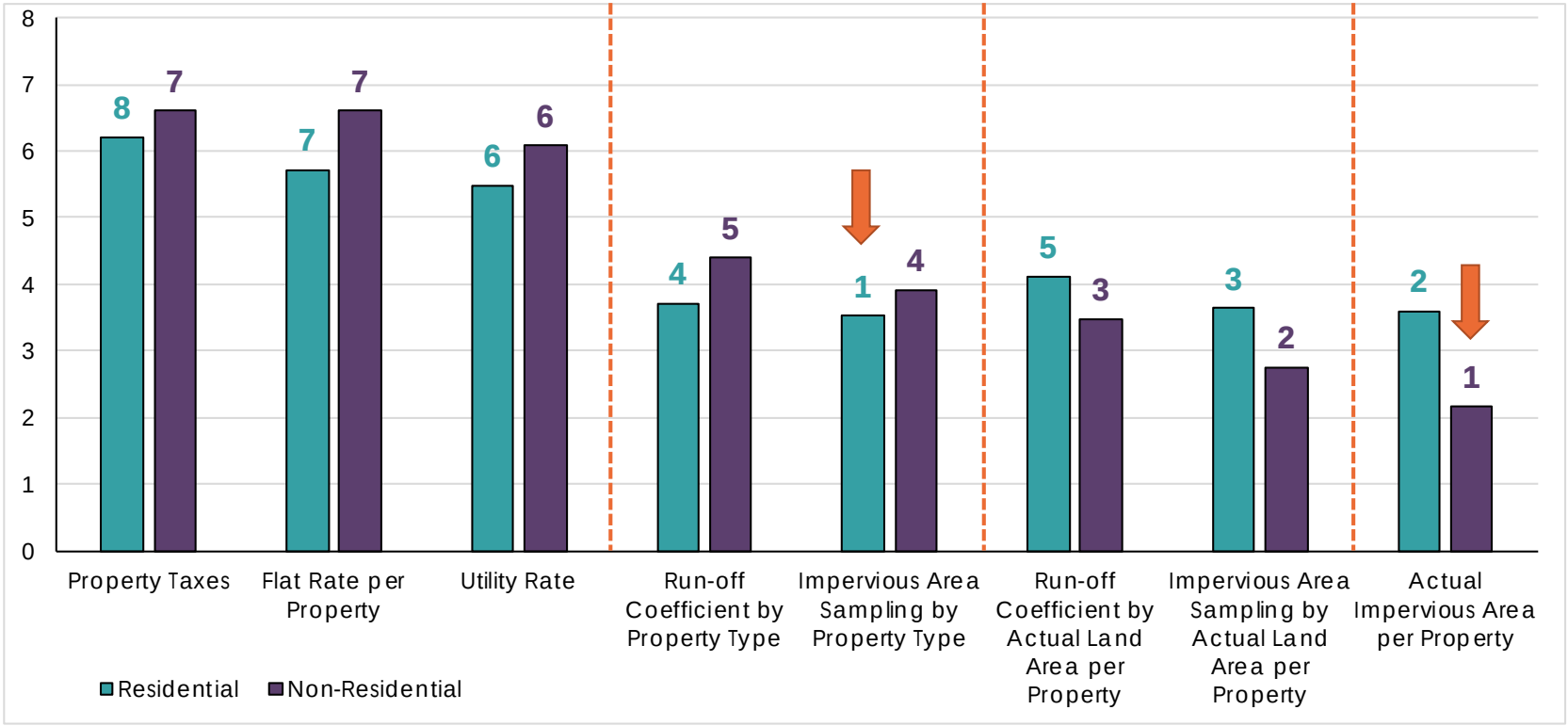
Agenda

1. Rate Structure Direction to Date
2. Review of Funding Model Inputs
   a. Projected Multi-Year Annual Stormwater Costs
   b. Property Classification
   c. Growth Forecast
3. Review of Funding Model Outputs
   a. Model Run - 5-year phase-in
   b. Municipal Rate Comparison
4. Policy Discussion
5. Next Steps

1. Rate Structure Selection

1. Rate Structure Direction to Date

Average ranking based on 26 responses provided by SAG members and City staff:



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Note:
1 = most preferred
8 = least preferred

1. Rate Structure Direction to Date

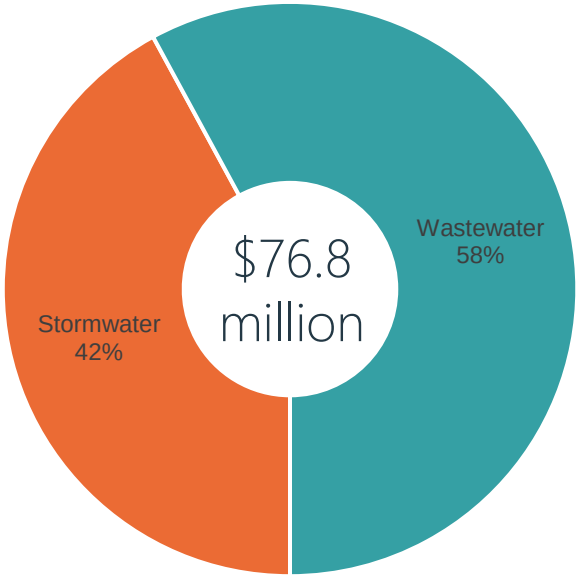
- **Residential properties** – on average, the most preferred rate structure would be a tiered flat rate (informed by run-off coefficients established by statistical sampling)
- **Non-residential properties** – on average, the most preferred rate structure would be a charge based on measured impervious area

- Preliminary calculations based on these preferences
  - Three residential categories based on density (low, medium, high)
  - Estimated $/impervious acre for non-residential

2. Funding Model Inputs

2.1 Funding Supported by Current Sewer Surcharge Rates

2020 budgeted sewer surcharge revenue:



Customer Type	Stormwater	Wastewater	Total
Residential [A]	$330	$453	$783
Commercial (Small) [B]	$1,261	$1, 735	$2,996
Commercial (Large) [C]	$5,406	$7,440	$12,846

[A] Residential assumes ⅝" service and 200 m^3 annual water consumption
[B] Commercial (Small) assumes a 1" service and 1,000 m^3 annual water consumption
[C] Commercial (Large) assumes a 2" service and 4,706 m^3 annual water consumption

2.1 Stormwater Services Budget Forecast

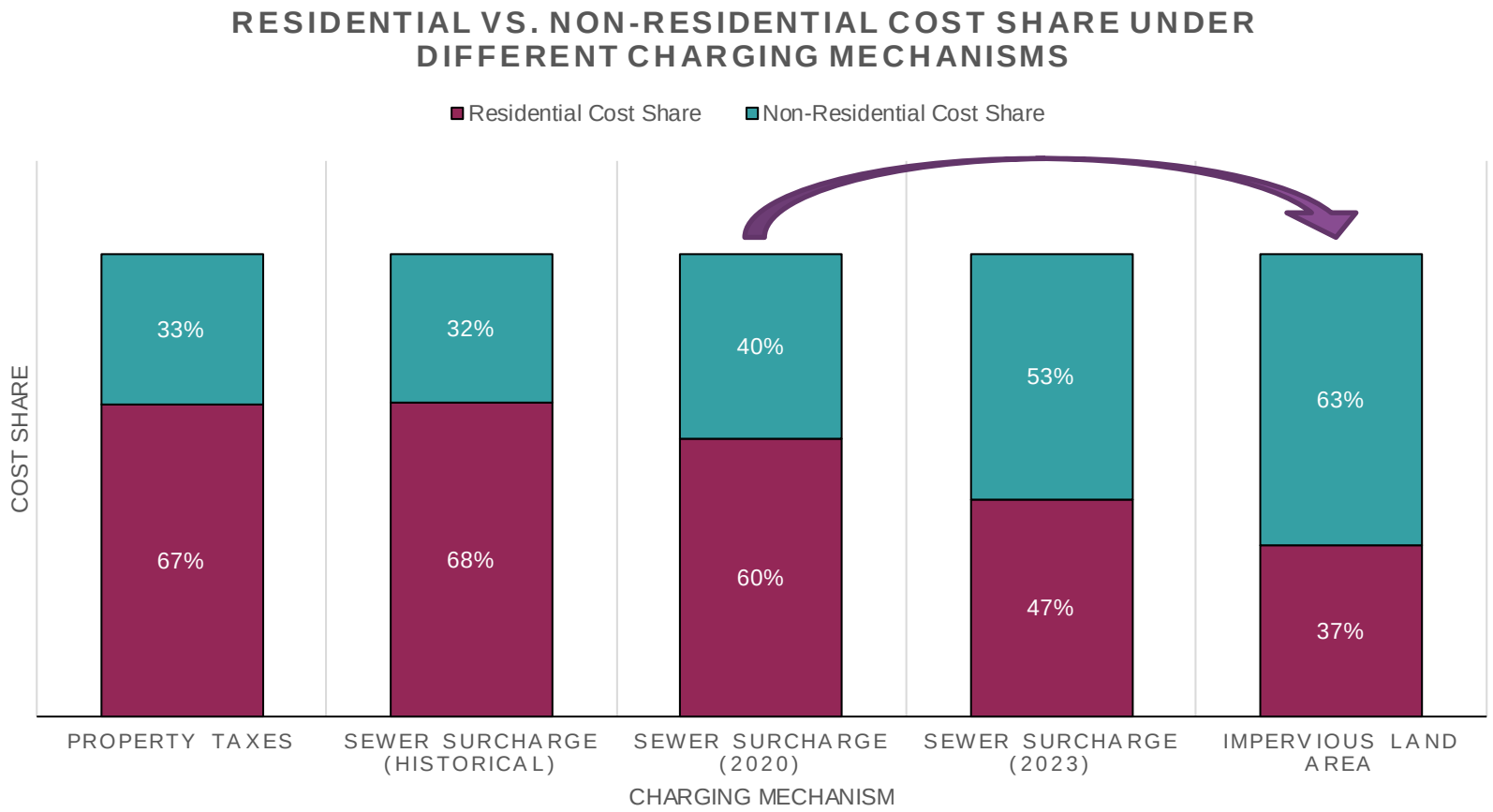
- 2020 budgeted sewer surcharge revenue allocated to stormwater = $32.3 million
- Preliminary cost estimate of recommended levels of service = $46.4 million annually (in 2020$)
- Proposed 5-year phase-in to the recommended funding level
- Detailed forecast provided in Handout #1

2.2 Property Classification

- Estimated share of impervious land area within major property classifications, based on the City's Tax Roll

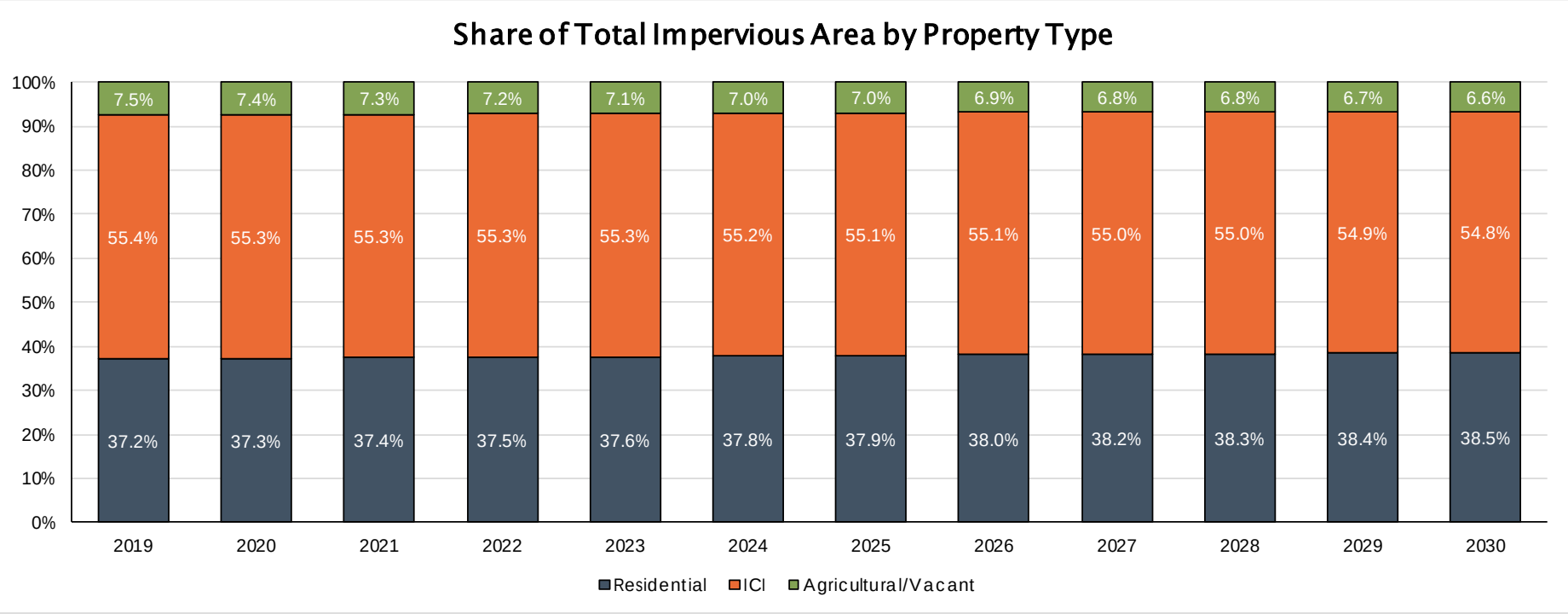
Property Type	Land Area (hectares)	Run-off Coefficient	Estimated Impervious Area (hectares)	Share of Total Impervious Area
Commercial	1,507	0.75	1,130	21%
Industrial	1,974	0.75	1,480	28%
Institutional	442	0.75	331	6%
Agricultural/Vacant	3,958	0.10	396	7%
Residential (Low Density)	3,860	0.45	1,737	33%
Residential (Medium Density)	195	0.55	107	2%
Residential (High Density)	237	0.55	130	2%
Total	**12,172**		**5,312**	**100%**

2.2 Property Classification (continued)



2.3 Growth Forecast

- Estimate how the share of impervious land area within each of the major property classifications will change over time



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Growth forecast is based on the City's 2020 Development Charges Background Study (dated March 5, 2020)

3. Funding Model Outputs

3.1 Funding Model Outputs

- Handout #2
- Additional items not discussed during LOS exercise:
  - Billing Administrative Charges
  - Allocation of Program Support
  - Provision for operating budget increases due to development
- Applied indexing factors

3.2 Municipal Rate Comparison

Comparison of Annual Stormwater & Wastewater Bills in Municipalities with Dedicated Stormwater Funding

Annual Wastewater & Stormwater Bill for an Average Single Family Detached Dwelling

Windsor (current) - reflects 2020 Sewer Surcharge Rates and level of funding.

Windsor (2021 - calculated) - reflects year 1 of phase-in to proposed Stormwater program of $44.3 million and an Impervious Area-based rate structure.

Wastewater

Stormwater

* Based on 2019 rates.
All other bill amounts estimated based on 2020 rates.

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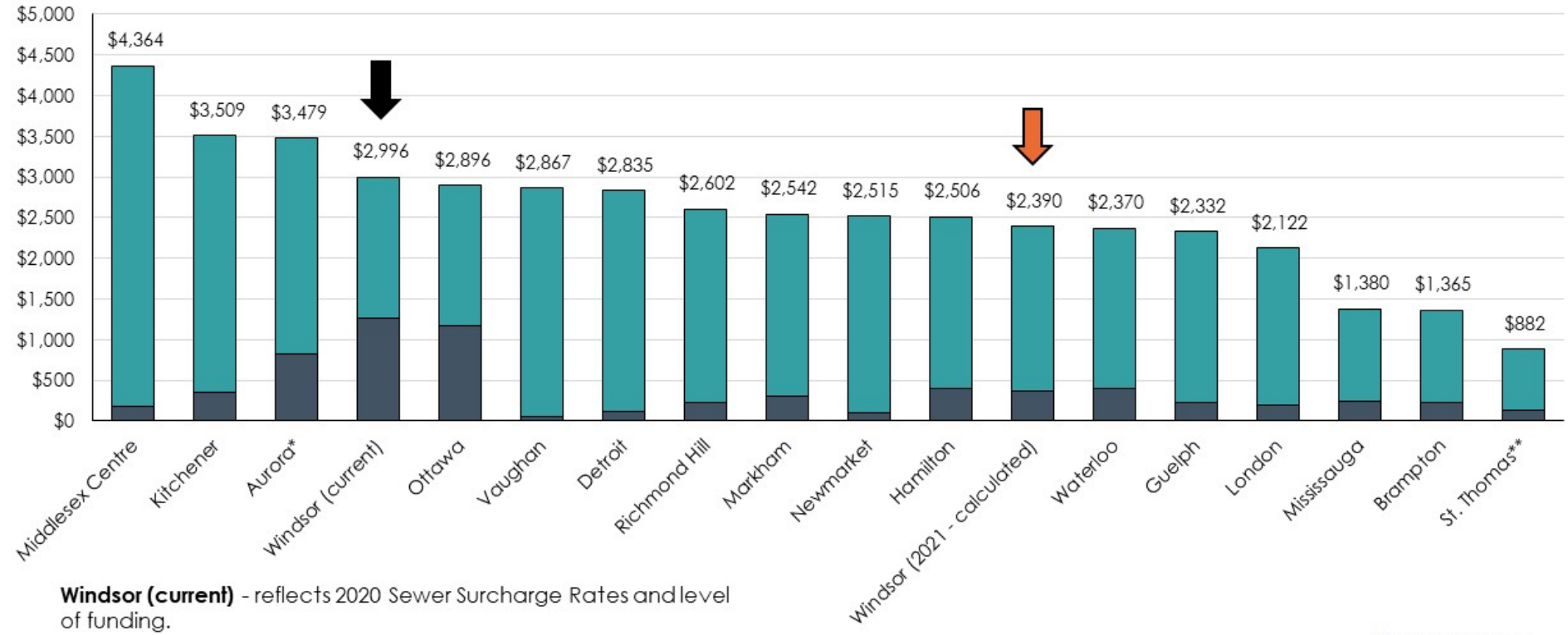
"Average Single Family Detached Dwelling" has been defined using the following parameters:
Annual water consumption: 200 m^3
Water meter size: ⅝"

Annual Wastewater & Stormwater Bill for a Small Non-residential Property



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* Based on 2019 rates.
All other bill amounts estimated based on 2020 rates.
** Based on Sanitary Sewage Rate for Commercial.

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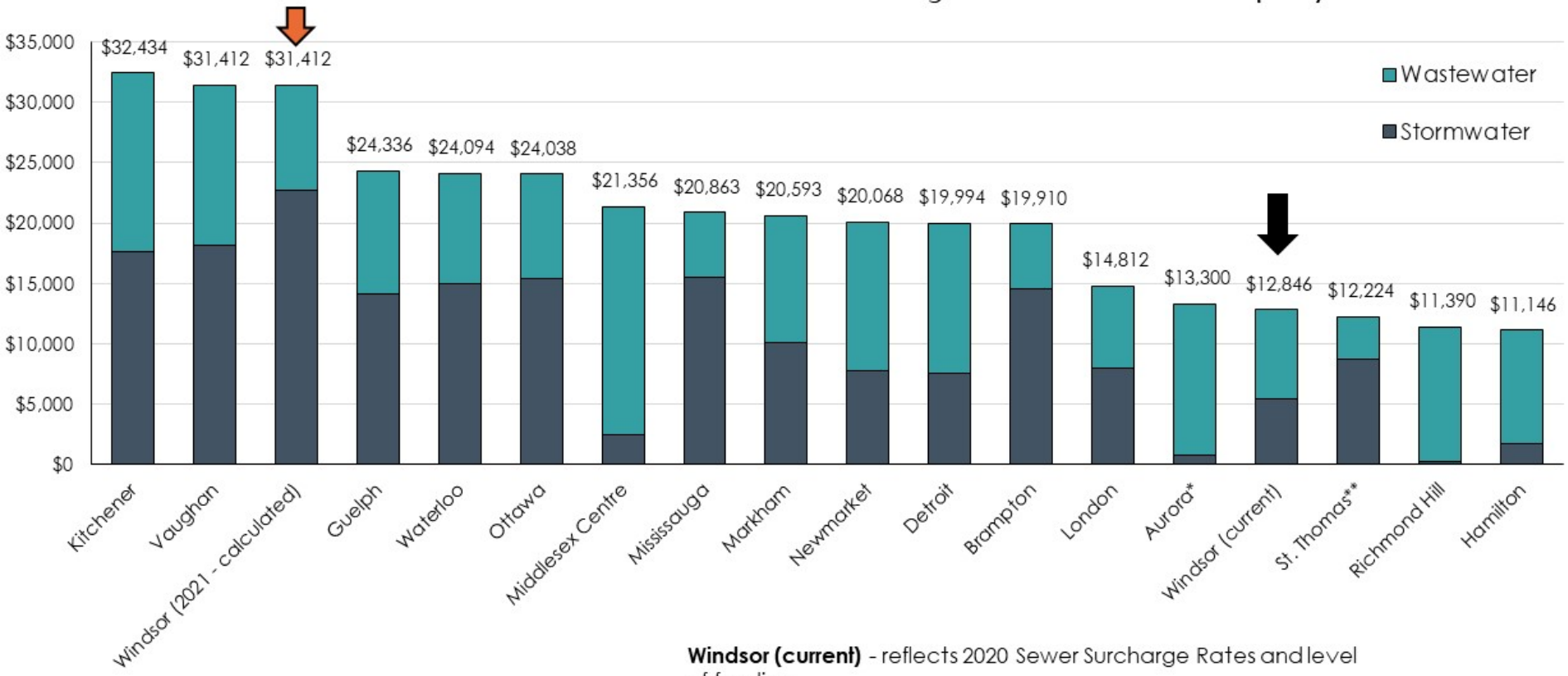
"Small Non-residential" has been defined using the following parameters:
Impervious area: 600 m^2
Current value assessment: $1.10 million
Annual water consumption: 1,000 m^3
Water meter size: 25 mm

Annual Wastewater & Stormwater Bill for a Large Non-residential Property



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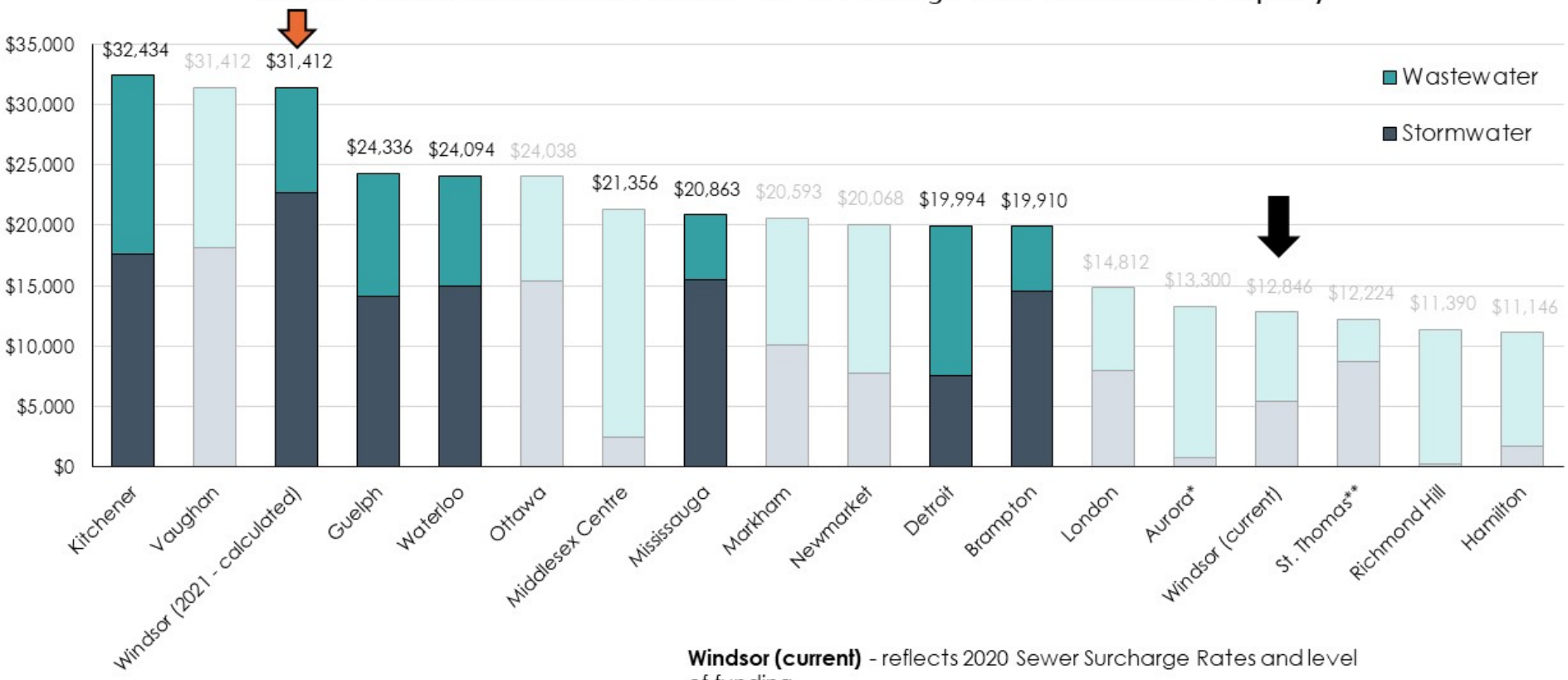
"Large Non-residential" has been defined using the following parameters:
Impervious area: 38,283 m^2
Current value assessment: $36 million
Annual water consumption: 4,706 m^3
Water meter size: 50 mm

Annual Wastewater & Stormwater Bill for a Large Non-residential Property



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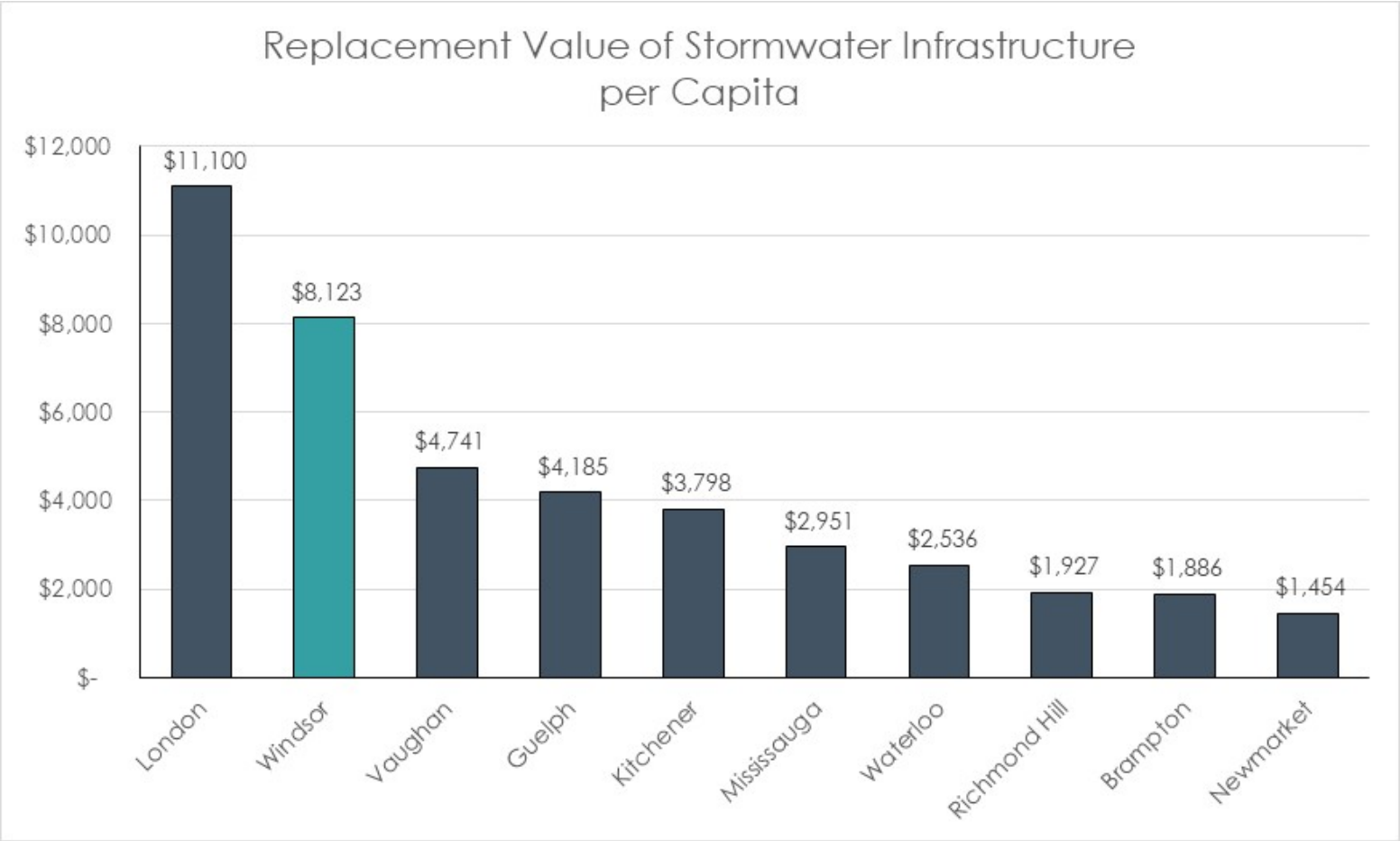
Factors Impacting Program Costs



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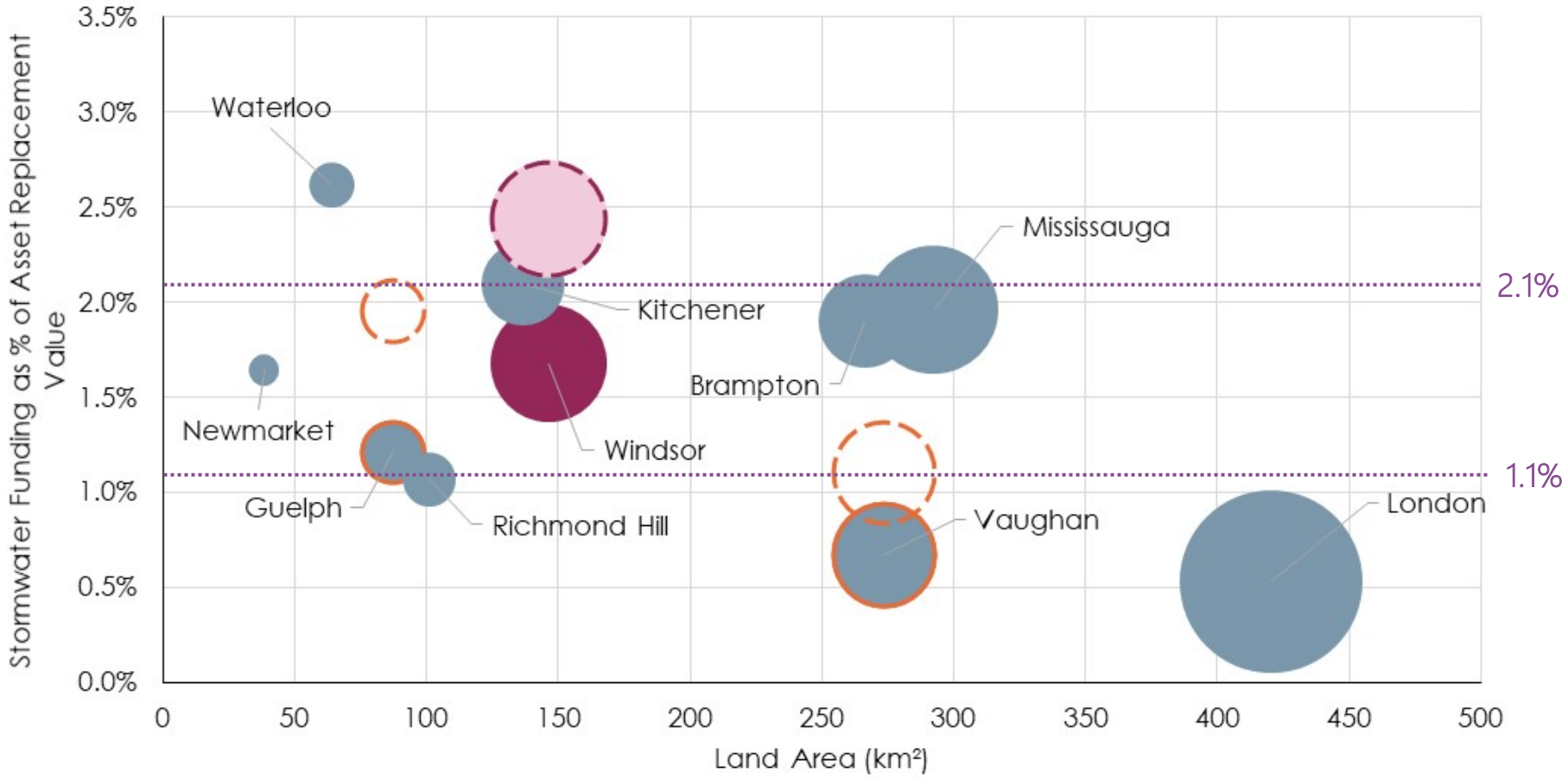

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Size of bubble corresponds to replacement value of stormwater infrastructure.

Indicates where current funding level differs from target funding level.

4. Policy Discussion

Credit/Incentive Programs

Credit/Incentive Policy Survey

- Out of the 15 municipalities surveyed, 7 provide various forms of credits:
  - City of Mississauga
  - City of London
  - City of Waterloo
  - City of Kitchener
  - City of Guelph
  - Town of Newmarket
  - City of Detroit

Credit/Incentive Policy Survey

City of Mississauga

- Stormwater Credit Program provides a stormwater charge reduction to owners of multi-residential and non-residential properties whose stormwater practices or measures provide a direct benefit to the city's stormwater management program.
  - Participation in the program is by application only
  - Credits are valid for up to five years and subsequently can be renewed
- Subsidies are available to places of worship, veterans' organizations, low income seniors and persons with disabilities.

Credit/Incentive Policy Survey

City of Mississauga

Category	Evaluation Criteria	Total Credit (50% maximum)	
Peak Flow Reduction	Per cent reduction of the 100-year post-development flow to pre-development condition of the site	Up to 40%	Up to 50%
Water Quality Treatment	Per cent of site (hard surface) receiving water quality treatment consistent with Provincial criteria for enhanced treatment.	Up to 10%	
Runoff Volume Reduction	Per cent capture of first 15 mm of rainfall during a single rainfall event.	Up to 15%	
Pollution Prevention	Develop and implement a pollution prevention plan.	Up to 5%	

Credit/Incentive Policy Survey

City of London

- Reduction program for stormwater rates of up to 50% for ICI properties over 0.4 hectares
- Applicant must submit a storm drainage report, prepared and stamped by a Professional Engineer, that shows the subject site has stormwater management practices that go above and beyond established stormwater requirements and warrants a rate reduction

Credit/Incentive Policy Survey

City of Waterloo

- Credits of up to up to 45 percent off the stormwater fee
- Residential credits calculated based on the total potential volume of rainwater captured and diverted from the stormwater system
- Non-residential credits based on three categories:
  - Flood reduction or quantity control (up to 25 percent credit)
  - Pollution control or quality control (up to 15 percent credit)
  - Education (up to 5 percent credit)

Credit/Incentive Policy Survey

City of Guelph

- Residential rebates for:
  - Rainwater Harvesting System (up to $2,000)
  - Rain Gardens (up to $2,000)
  - Discounted rain barrels
- Non-residential credit of up to 50% of stormwater charge

Credit category	Description and basis for charge reduction	Maximum credit
Peak flow reduction	Facilities that control the peak flow of stormwater discharged from the property, based on the outlet rate in comparison to natural hydrologic conditions.	15 per cent
Runoff volume reduction	Facilities that control the amount of stormwater retained on the property, based on retention volume resulting from increased infiltration, evapotranspiration, or reuse.	40 per cent
Water quality treatment	Facilities that control the quality of stormwater discharged from the property, based on treatment type, pollutant load reduction, or MOECC level of protection.	15 per cent
Operations and activities	Non-structural measures including education programs and pollution prevention / risk management practices.	15 per cent

Credit/Incentive Policy Survey

City of Markham

- No direct credits/incentives towards the SW fee
- Private Plumbing Protection Rebate Program

Private Plumbing Protection Measure	Maximum Rebate
Backwater Valve (Indoor) – Installed on Storm Lateral	$1,750
Backwater Valve (Outdoor) – Installed on Storm Lateral	$2,000
Weeping Tile Disconnection and Redirect to Storm Lateral	$3,000
Weeping Tile Disconnection and Sump Pump Installation	$5,000
Storm Lateral – Reline & Repair	$2,500

Credit/Incentive Policy Survey

City of Markham

- Downspout Disconnection Program
  - Properties identified through preliminary property investigations and smoke testing
  - Homeowners who receive a disconnection notice from the City will be eligible for financial assistance
    - The City will reimburse 80% of the cost for completing the downspout disconnection, up to a maximum of $500
    - The City will reimburse 100% of the cost for a rain barrel purchased by the home owner, up to a maximum of $150

Credit/Incentive Policy Survey

Summary

- Various credit programs exist, with a focus on non-residential properties
- Maximum credit is typically capped around 45-50% of the stormwater charge otherwise payable
- Based on recent experience, the uptake rate for eligible properties appears to be low
- Rebates/incentives more common for residential properties

5. Next Steps

5. Next Steps

a) Upcoming Study Steps

- Public engagement (on-line video & survey) — September
- Present Study Findings to Council — November (+/-)