Addendum to the Works Committee Agenda

Council Chambers
Regional Headquarters Building
605 Rossland Road East, Whitby

Wednesday, February 3, 2021 **9:30 AM**

Note: Additional agenda items are shown in bold

1. Roll Call

2. Declarations of Interest

3. Adoption of Minutes

A) Works Committee meeting – January 6, 2021

4. Statutory Public Meetings

There are no statutory public meetings

5. Delegations

There are no delegations

6. Presentations

6.1 G. Anello, Director of Waste Management Services, and R. Jagannathan, Director of Transportation Services, re: 2021 Works Department Business Plans and Budgets (2021-W-6) [Item 8.2B)]

7. Waste

7.1 Correspondence

A) Correspondence from June Gallagher, Clerk, Municipality of Clarington dated January 19, 2021, re: Terms of Reference for the Energy From Waste – Waste Management Advisory Committee (EFW-WMAC)

Recommendation: Refer to staff for a response

B) **Correspondence from Linda Gasser, Whitby Resident, dated February 2, 2021, re: Agenda Item 7.2 A, Durham staff proposed appointees to EFW WMAC (2021-WR-2)** **Pages 5 - 6**

New **Recommendation: Refer to consideration of Item 7.2 A) Energy from Waste-Waste Management Advisory Committee (Host Community Agreement Committee) Membership Appointments (2021-WR-2)**

C) **Correspondence from Linda Gasser, Whitby Resident, dated February 2, 2021, re: Report 2021 WR-3 - Anaerobic Digestion and the Environmental Assessment Act** **7 - 10**

New **Recommendation: Refer to consideration of Item 7.2 B) Anaerobic Digestion and the Environmental Assessment Act (2021-WR-3)**

7.2 Reports

A) Energy from Waste-Waste Management Advisory Committee (Host Community Agreement Committee) Membership Appointments (2021-WR-2)

B) Anaerobic Digestion and the Environmental Assessment Act (2021-WR-3)

8. Works

8.1 Correspondence

A) **Confidential Memorandum from Susan Siopis, Commissioner of Works dated February 1, 2021 re: Tertiary Treatment at Duffin Creek Water Pollution Control Plant (WPCP), in the City of Pickering** **Under Separate Cover**

New **Recommendation: Receive for Information**

B) **Correspondence from Linda Gasser, Whitby Resident, dated February 2, 2021, re: Municipal Benchmarking Canada Report (2019 data) Waste Management** **11 - 33**

New **Recommendation: Refer to consideration of Item 8.2 B) 2021 Works Department Business Plans and Budgets (2021-W-6)**

8.2 Reports

A) Extension of the Standardization of Programmable Logic Controllers, Related Process Control Equipment and Control System Software and the Renewal of Agreements with GE Intelligent Platforms Canada, Gray Matter Systems Canada and Gescan and the implementation of an Agreement with Emerson Automation Solutions to Support the Supervisory Control and Data Acquisition Systems Controlling Regional Water Supply and Wastewater Facilities (2021-W-5)

B) 2021 Works Department Business Plans and Budgets (2021-W-6)

Link to the 2021 Works Department Business Plans and Budgets for General Tax and Solid Waste Management

C) Project Update and Sole Source of Additional Engineering Services for Upgrades at the Bowmanville WSP, in the Municipality of Clarington (2021-W-8)

D) The Oak Ridges Moraine Groundwater Program (ORMGP), formerly known as York-Peel- Durham-Toronto (YPDT) and Conservation Authorities Moraine Coalition (CAMC) Groundwater Management Program, Status Update and Renewal of Memorandum of Understanding (2021-W-9)

E) Alignment of the Planned Connection Between the Proposed Highway 401 Crossing at Hopkins Street and Champlain Court, in the Town of Whitby (2021-W-10)

9. Advisory Committee Resolutions

There are no advisory committee resolutions to be considered

10. Confidential Matters

10.1 Reports

A) Confidential Report of the Commissioner of Works – Proposed or Pending Acquisition or Disposition of Land for Regional Corporation Purposes as it relates to an Update on the Proposed Manning-Adelaide Connection Project, in the Town of Whitby/City of Oshawa (2021-W-7)

11. Other Business

12. Date of Next Meeting

    Wednesday, March 3, 2021 at 9:30 AM

13. Adjournment

Notice regarding collection, use and disclosure of personal information:

Written information (either paper or electronic) that you send to Durham Regional Council or Committees, including home address, phone numbers and email addresses, will become part of the public record. This also includes oral submissions at meetings. If you have any questions about the collection of information, please contact the Regional Clerk/Director of Legislative Services.

February 2, 2021.

Works Committee
Regional Municipality of Durham
605 Rossland Rd. East, Whitby Ontario

Re: Agenda Item 7.2 A, Durham staff proposed appointees to EFW WMAC 2021-WR-2

I wish to draw a concern to the attention of Works Committee regarding one of staff's proposed appointees to EFW WMAC.

See Page 2 for staff description of activities expected to be on EFW WMAC's agendas over the next term:
4.2 Key topics anticipated to be addressed during the upcoming term include:

a. Organics management program development
b. Green bin program expansion
c. Transition to extended producer responsibility
d. Long term waste management plan development and implementation activities
e. Transfer station infrastructure improvements and service level optimization
f. Energy from waste performance updates from staff

Recall that GHD has been one of Durham's consultants regarding Durham's organics management strategy including development of a Mixed Waste Pre-sort and Anaerobic Digester.

See attachment 2 of the report – note the following description at bottom of page under "Other Information" for the appointee from Scugog:

Master of Resource and Environmental Management
B.Sc. (Zoology)

Environmental Planner, GHD

Solid Waste Management Professional Experience in sustainability.
Public sector and private sector work experience

Since staff indicated there were 21 applicants, surely Works could appoint a suitable applicant from the remaining 16 who would be less likely to have conflicts of interest, real or perceived.

Another WMAC appointee is shown as having retired from an Ontario government ministry.

From Page 4 of WMAC Terms of Reference: https://www.durhamyorkwaste.ca/en/education-and-resources/resources/Documents/EFWWMAC_TermsOfReference.pdf

"Every potential appointee must disclose any obligation, commitment, relationship or interest that could conflict or may be perceived to conflict with his or her duties as part of the EFW-WMAC. A conflict of interest could arise in relation to personal matters including:

- *Directorships or other employment.*
- *Interests in business enterprises or professional practices.*
- *Share ownership.*
- *Existing professional or personal associations.*
- *Professional associations or relationships with other organizations.*
- *Personal associations with other groups or organizations, or family relationships."*

Looking at the list of topics expected to be on the agenda, some upcoming WMAC agendas will likely include items around the Organics strategy. Since at least 2017, GHD has been involved in consulting on Durham's organics strategy and proposed MWP and AD.

Durham Citizen Advisory Committees should not be populated by consulting firm employees/contractors which firms might still have or might have in future, contracts with the Region around issues sure to be on upcoming committee agendas. Consulting firm representatives sometimes attend and present at WMAC meetings.

WMAC should have the freedom to develop advice and not be put in the position of having to anticipate, recognize and/or filter out influence of members who might have relationships with consulting firms retained by Durham and especially for ongoing projects.

If Works Committee intends to appoint her despite the above stated concerns, more information about her employment with GHD should be disclosed.

Staff should advise Works Committee if she is a current or past employee of, or (sub)contractor for GHD, and if there is any possibility that she would be working for GHD in some capacity over the next two-year term of the WMAC.

I ask that Works Committee not accept the staff recommended appointee from Scugog and consider another applicant.

Thank you for your attention.

Linda Gasser
Whitby

February 2, 2021.

Works Committee
Regional Municipality of Durham
605 Rossland Rd. East, Whitby

Re: Report 2021 WR-3 Anaerobic Digestion and the Environmental Assessment Act

See below the original motion on December 16th Council agenda as well as the amending motion from those minutes, with amending motion referred to staff.

So that you don't throw out the baby with the bathwater, I ask you to consider the original Carter and Mitchell motion, separately from the Foster and Anderson amendment. Staff report responds mostly to that amendment.

Notice of Motions

December 16, 2020

10.1 Regulatory Framework to Manage the Operation of Anaerobic Digestion Facilities

Councillors Carter and Mitchell gave Notice that the following motion will be presented at the December 16, 2020 meeting, or subsequent meeting of Regional Council:

Whereas the Ministry of the Environment, Conservation and Parks has recently released draft revisions to the Food and Organic Waste Policy Statement;

And Whereas, this policy requires diversion targets to be met for food and organic waste in Ontario;

And Whereas, anaerobic digestion is one technology that is available to assist in meeting these regulatory requirements;

And Whereas, the capture of methane biogas for conversion into renewable natural gas or other forms of energy will be a model for the future to create a carbon neutral resource from the residential organics stream and help mitigate the current climate crisis if properly regulated, developed and managed;

And Whereas, fulsome Provincial oversight and regulations are required to manage the operation of anaerobic digestion facilities to ensure that any potential impacts on neighbouring properties, including but not limited to odour, noise and traffic, are mitigated;

And Whereas, fulsome Provincial oversight and regulations are required to manage the impact on the environment including impacts associated with emissions to air, soil, surface water and groundwater;

And Whereas, as an emerging industry, numerous projects have been proposed in a short timeframe within the Province, including within the Regional Municipality of Durham;

And Whereas, it is important to ensure that public sector anaerobic digestion facilities and private sector anaerobic digestion facilities are evaluated against a common regulatory framework to ensure a consistent approach;

Now therefore be it resolved;

1. That the Council of the Regional Municipality of Durham requests the Ministry of the Environment, Conservation and Parks to develop a regulatory framework to manage the operation of anaerobic digestion facilities, whether public sector or private sector owned and operated, and apply a consistent approach across the Province in order to ensure host communities of these facilities are protected from land use planning and environmental impacts;

2. That the regulatory framework apply equally to public sector anaerobic digestion facilities and private sector anaerobic digestion facilities;

3. That the regulatory framework address land use planning matters, such as, but not limited to, odour, noise and traffic;

4. That the regulatory framework address environmental matters, such as, but not limited to, emissions to air, soil, surface water and groundwater and that the impacts are properly mitigated; and

5. That a copy of this resolution be forwarded to all Durham Area M.P.Ps and all Durham area municipalities.

From Page 24 Minutes of Dec. 16 Regional Council meeting:

5. That a copy of this resolution be forwarded to all Durham Area MPPs and all Durham area municipalities.

CARRIED ON A RECORDED VOTE
LATER IN THE MEETING
(See Following Motions)

Moved by Councillor Foster, Seconded by Councillor Anderson,
(393) That the main motion (392) of Councillors Carter and Mitchell be amended by adding the following as a new Part 5. and re-numbering the remainder accordingly:

5. That the Province be requested to amend section 6.0.1 of the Environmental Assessment Act to include anaerobic digestion facilities in the list of waste disposal sites that require the support of each local municipality in which the anaerobic digestion facility would be situated.

MOTION REFERRED TO STAFF
ON A RECORDED VOTE
(See Following Motion)

Moved by Councillor Smith, Seconded by Councillor Joe Neal,
(394) That the amending motion (393) of Councillors Foster and Anderson be referred to staff for a report back to the Works Committee in February 2021.

CARRIED ON THE FOLLOWING
RECORDED VOTE:

Yes	No
Councillor Anderson	Councillor Ashe
Councillor Barton	Councillor Chapman
Councillor Carter	Councillor Collier
Councillor Dies	Councillor Crawford
Councillor Drew	Councillor Foster
Councillor Highet	Councillor McLean
Councillor Kerr	Councillor Pickles
Councillor Leahy	Councillor Ryan
Councillor Lee	
Councillor Mitchell	
Councillor Mulcahy	
Councillor John Neal	
Councillor Joe Neal	
Councillor Nicholson	
Councillor Roy	
Councillor Schummer	
Councillor Smith	
Councillor Wotten	

Staff write on page 5 in Sec. 6.2:

6.2 *The proposed amended motion would appear to be contrary to the Province's direction to encourage a circular economy for waste management*. ***The likely intent of the new section***

6.0.1 of the Environmental Assessment Act, is to restrict landfill and encourage alternatives such as Anaerobic Digestion, Energy from Waste and other technologies which are consistent with the circular economy approach to recycling and waste.

Should staff speculate around what the government's intent was around Section 6.0.1?

What staff provide here are merely opinions and their interpretations around the circular economy approach to recycling and waste.

On page 2 staff conversations and written exchanges cited in the report with MECP around MWP and AD, stated related final waste disposal would be below 1000 Tonnes per day.

These exchanges appear to have occurred before the MECP consulted in fall 2020 on **ERO 019-2377 Proposed Project List under the Amended Environmental Assessment Act.** Numerous parties including me commented on this matter specifically as being an arbitrary project threshold.

When you read the comments developed by your Planning Dept. staff in response to the Evergreen ECA applications for an AD in Oshawa, many of issues and concerns raised would apply equally to Durham's AD and should apply to public sector and private sector equally, and there would be additional issues relating to MWP.

From the glossary of Terms commonly used in Ontario environmental assessments

at: https://www.ontario.ca/page/terms-commonly-used-ontario-environmental-assessments

environment

The *Environmental Assessment Act* defines environment to mean:

a. Air, land or water;
b. Plant and animal life, including human life;
c. The social, economic and cultural conditions that influence the life of humans or a community;
d. Any building, structure, machine or other device or thing made by humans;
e. Any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from human activities; or,
f. Any part or combination of the foregoing and the interrelationships between any two or more of them.

environmental assessment

Environmental assessment is a study, which assesses the potential environmental effects (positive or negative) of an individual proposal. Key components of an environmental assessment include consultation with government agencies and the public; consideration and evaluation of alternatives; and, the management of potential environmental effects. Conducting an environmental assessment promotes good environmental planning before decisions are made about proceeding with a proposal. This is also referred to as an "individual" environmental assessment.

The foregoing definition of “environment” and what could be examined via an EA, allows proponents to have some confidence that their proposed projects address relevant potential environmental effects.

An Individual EA for Durham’s MWP and AD could examine issues that require proper consultation, professional review of potential environmental effects and could result in proper regulation and oversight.

Thank you for your attention.

Linda Gasser

Whitby

February 2, 2021.

Works Committee
Regional Municipality of Durham
605 Rossland Rd. East, Whitby

Re: Municipal Benchmarking Canada Report (2019 data) Waste Management

Chair and Members of Works Committee:

On July 7th, I wrote to Works Committee requesting they take the following actions:

That Works Committee direct staff to:

a) reinstate the Annual Waste Management Reports to be available by May for the previous year's data (though staff referred to 2019 tonnage data when seeking approval for MWP/AD, they did not provide it – they have it.) and
b) provide a report annually to Works Committee shortly after the release of MBN Canada data.

My letter was referred to item 7.1 (A) – memo from your Works Commissioner dated June 15, 2020 regarding MBN data – see that memo attached. Works then received both items for information. Translation – no action taken and no direction given to staff.

MBN Canada 2019 data was posted in December 2020. See their 2019 data Waste Management report attached and at: http://mbncanada.ca/app/uploads/2020/12/2019-Waste-Management.pdf. For those who don't want to click on links or open attachments, I also paste in individual slides below this letter for easier reference.

Those on Works Committee for longer than one term will recall that staff used to provide Committee with excerpts of MBN data in their Annual Servicing and Financing (S & F) Studies until 2018. The last time staff provided Works with MBN Data was #2018-COW-11 S & F study, which included select 2016 data. Then Works/Waste staff did away with S & F studies altogether, the last was in 2019.

At COW January 2020 Staff provided Works Committee with their much less detailed " Solid Waste Management: 2020 Strategic Issues and Financial Forecast", and for 2021 you haven't even gotten that to date.

Works Committee is flying blind and unable to exercise sufficient oversight around Waste budgets and over the Works Commissioner and the Waste Dept., who spend ever more public dollars on projects large and small, several outside core Waste responsibilities and some with insufficient justification as to how their pilot projects would be in the public interest and, which at times, even staff have had difficulty explaining, though asked simple and direct questions by councillors.

In her June 15th, 2020 memo your Works Commissioner wrote as follows:

"The MBD is compiled from information provided by participating municipalities that collect data related to standard service areas. The data can be used to assess trends ***and is most valuable when used by an individual municipality to compare year-over-year performance…..****The Durham cost per*

tonne for disposal includes the DYEC capital and operating, bypass waste, the landfill perpetual care and the associated support programs….

Staff will review the data each year and report if trends are observed that may be of strategic importance or could be useful in the management of our integrated waste management system."

2019 MBN data shows a large spike in Durham's disposal costs. In fact Durham's disposal costs per tonne are the **highest** of all reporting municipalities.

If ever there were a year when your Works Commissioner could and should have provided Works Committee with MBN data, it should have been this year as you head into Solid Waste budget discussions and as Durham's waste disposal costs skyrocket.

Citizens cautioned Works Committee and Council from the early days of the EA, that incineration is expensive, inefficient, inflexible on top of being highly polluting and GHG emissions intensive.

Since your incinerator started up in February 2015, with commercial operations beginning late January 2016, it has burned through ever larger amounts of financial and staff resources.

York Region also sends some of their waste to incinerators, including to the DYEC. I've shown their disposal cost per tonne in table.

Table below Total cost to dispose of one tonne of garbage for Durham & York -2009-2019 MBN

YEAR	Durham Disposal $ per Tonne	York Disposal $ per Tonne
2009	132	109
2010	144	107
2011	166	114
2012	157	124
2013	135	115
2014	157	114
*2015	159	118
**2016	237	159
2017	184	141
2018	194	164
2019	249	165

*incinerator start up Feb. 2015 ** from end Jan 2016 DYEC full operating fee to Covanta

While Durham's disposal costs have increased, Durham's Diversion Rate has decreased. Diversion achievements haven't and won't get delivered in one fell swoop by some magical infrastructure

Percent Diversion 2009-2019 for Durham and York Regions from MBN Canada

YEAR	Durham MBN reported % diversion	York MBN reported % diversion
2009	51	55
2010	52	50
2011	53	59
2012	53	54
2013	52.3	58
2014	53.2	64 & 64.2
2015	52	63.5
2016	52.8	61.5
2017	51	60
2018	49	60
2019	48	59

Below diversion reported to RRPA from Durham and York's Annual reports posted to DYEC website

From DURHAM REGION 2019 Annual Report

Durham Region submits an annual datacall to the province through the Resource Productivity and Recovery Authority (RPRA), to receive funding from producers to assist with costs of operating the Blue Box program. The datacall is the source of data used to confirm municipal diversion rates across the province.

RPRA Annual Waste Diversion

2015 – 54%	1st for Urban Regional Municipalities
2016 – 55%	1st for Urban Regional Municipalities
2017 – 65%*	1st for Urban Regional Municipalities, 3rd Overall in the Province
2018 – 64%	1st for Urban Regional Municipalities, 3rd (tied) Overall in the Province
2019 – 63%**	pending verification

All values are rounded.

RPRA diversion numbers from landfill after curbside collection does not include Durham Region's approved energy-from-waste initiatives.

*Updated from 55 per cent to reflect finalized 2017 RPRA diversion rate. First year RPRA recognized recycled materials recovered through energy-from-waste.

**2019 diversion data presented is unverified by RPRA at time of printing.

From YORK REGION 2019 Annual Report:

Resource Productivity and Recovery Authority
Annual Waste Diversion

2015	1st for Large Urban Municipalities	63%
2016	1st Overall in the Province	66%
2017	1st for Large Urban Municipalities	68%
2018	1st for Large Urban Municipalities	68%*
2019	Pending Verification	66%**

All values are rounded. The Authority does not recognize energy-from-waste as diversion. *Updated to reflect finalized 2018 RPRA diversion rate.

**2019 diversion rate impacted by high contamination in the blue box stream. The 2019 diversion data presented is pending verification by the Authority at the time of printing.

In closing, I request that Works Committee:

> Direct staff to describe in writing the breakdown of the individual cost components that make up that MBN per tonne disposal cost metric and to provide a report BEFORE the upcoming budget meetings for 2019 and what 2020 costs expected to total.

Works Committee should ensure the 2019 MBN Data also makes its to a Regional Council agenda so all Durham councillors are aware of increasing disposal costs as well as Durham's decreasing waste diversion rate.

Durham staff have made you a lot of promises, i.e. that if Council would spend $46 million on a Mixed Waste Presort (at the same time staff plan to collect additional materials in the Green Bin meaning there would be fewer organics in the garbage bag for the MWP to extract), claiming this would help increase Durham's diversion rate, but, without also informing Council IF or HOW the MWP technology has worked elsewhere in a context similar to what Durham staff have proposed.

Thank you for your attention.

Linda Gasser

Whitby

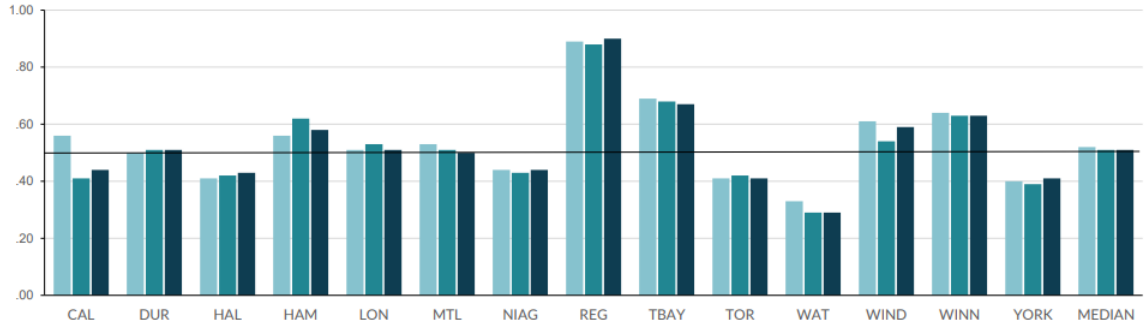
Encl. 2020 June 15 S. Siopis Memo re MBN
2019 MBN Waste Management Data report

The following 4 pages show 2019 MBN Waste Management Data Slides

Waste Management

Figure 34.2 Tonnes of Residential Solid Waste Disposed per Household

This measure indicates the amount of solid waste (or garbage) that is sent to landfills.



2017	0.56	0.50	0.41	0.56	0.51	0.53	0.44	0.89	0.69	0.41	0.33	0.61	0.64	0.40	0.52
2018	0.41	0.51	0.42	0.62	0.53	0.51	0.43	0.88	0.68	0.42	0.29	0.54	0.63	0.39	0.51
2019	0.44	0.51	0.43	0.58	0.51	0.50	0.44	0.90	0.67	0.41	0.29	0.59	0.63	0.41	0.51

Source: SWST220 (Service Level)

Hamilton: The increase in 2018 was primarily due to the temporary shutdown of the Central Composting Facility.

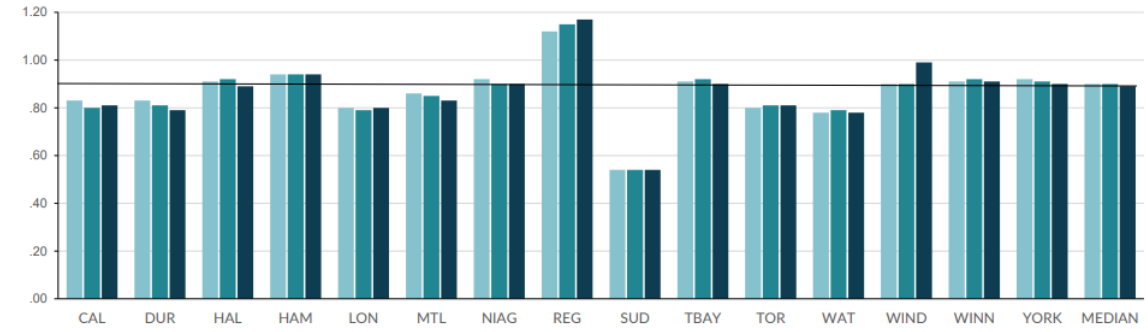
Sudbury: Does not report - unable to separate residential tonnage.

Windsor: 2017 results are high due to a catastrophic flooding that occurred in 2017. Additionally, 2019 saw an increase in bulk collection frequency as well as an increase in waste tonnage from local construction projects.

Waste Management

Figure 34.1 Tonnes of All Residential Material Collected per Household

Residential waste includes organics, blue box, leaf and yard, municipal hazardous or special waste, other recyclable materials such as wood, metal and tires, as well as construction and demolition materials.



2017	0.83	0.83	0.91	0.94	0.80	0.86	0.92	1.12	0.54	0.91	0.80	0.78	0.90	0.91	0.92	0.90
2018	0.80	0.81	0.92	0.94	0.79	0.85	0.90	1.15	0.54	0.92	0.81	0.79	0.90	0.92	0.91	0.90
2019	0.81	0.79	0.89	0.94	0.80	0.83	0.90	1.17	0.54	0.90	0.81	0.78	0.99	0.91	0.90	0.89

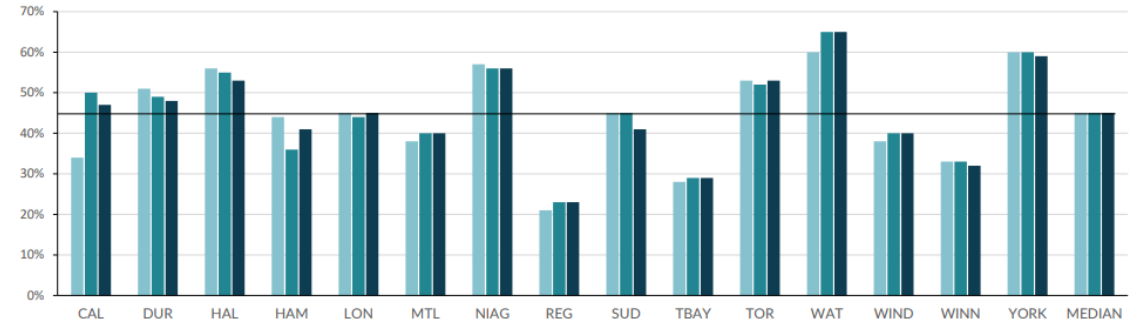
Source: SWST205 (Service Level)

Windsor: An increase in bulk collection frequency as well as waste tonnage from local construction projects contributed to the 2019 increase.

Waste Management

Figure 34.4 Percent of Residential Solid Waste Diverted

This measure demonstrates the percent of residential waste diverted away from landfills and incineration through programs such as organics, blue box, leaf and yard, municipal hazardous or special waste and other recyclable materials, e.g. wood, metal, tires.



2017	34%	51%	56%	44%	45%	38%	57%	21%	45%	28%	53%	60%	38%	33%	60%	45%
2018	50%	49%	55%	36%	44%	40%	56%	23%	45%	29%	52%	65%	40%	33%	60%	45%
2019	47%	48%	53%	41%	45%	40%	56%	23%	41%	29%	53%	65%	40%	32%	59%	45%

Source: SWST105 (Community Impact)

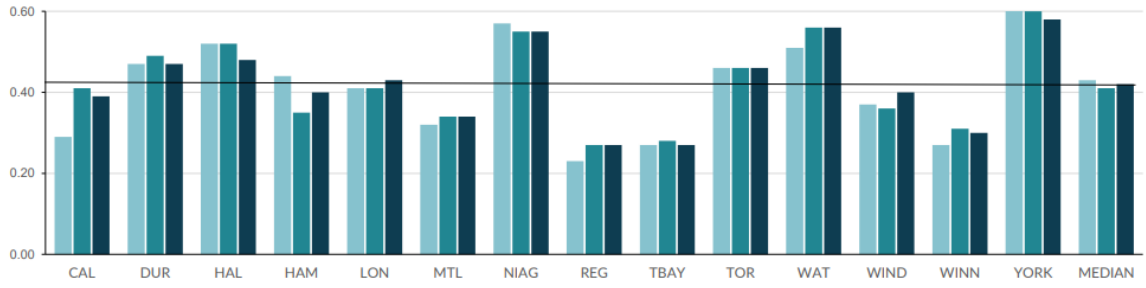
Calgary: The large increase in diversion in 2018 was due to the implementation of the Green Cart Program and change to every other week garbage collection, which was completed in the second half of 2017. 2018 was the first full year of program results.

Hamilton: The fluctuation in diversion rate is due to the temporary shut-down of the Central Composting Facility in 2018.

Waste Management

Figure 34.3 Tonnes of Residential Solid Waste Diverted per Household

This measure demonstrates the tonnes of residential waste diverted away from landfills and incineration through programs such as organics, blue box, leaf and yard, municipal hazardous or special waste and other recyclable materials.



2017	0.29	0.47	0.52	0.44	0.41	0.32	0.57	0.23	0.27	0.46	0.51	0.37	0.27	0.61	0.43
2018	0.41	0.49	0.52	0.35	0.41	0.34	0.55	0.27	0.28	0.46	0.56	0.36	0.31	0.60	0.41
2019	0.39	0.47	0.48	0.40	0.43	0.34	0.55	0.27	0.27	0.46	0.56	0.40	0.30	0.58	0.42

Source: SWST235 (Service Level)

Calgary: The large increase in diversion in 2018 was due to the implementation of the Green Cart Program and change to every other week garbage collection, which was completed in the second half of 2017. 2018 was the first full year of program results.

Hamilton: The decrease in 2018 was primarily due to the temporary shutdown of the Central Composting Facility.

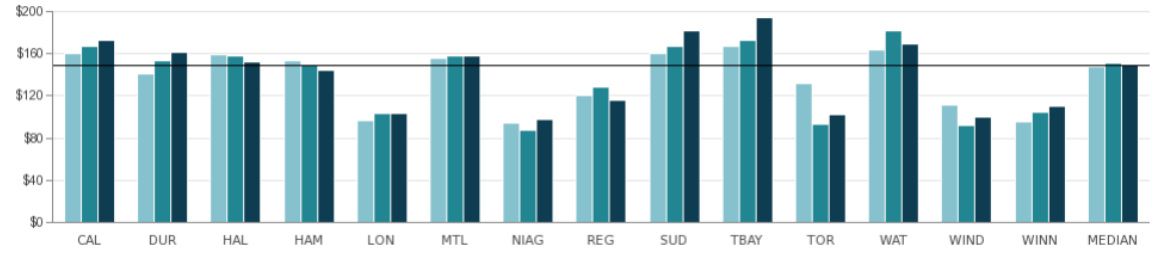
Sudbury: Does not report - unable to separate residential tonnage.

Windsor: Increase in diversion in 2019 is the result of higher than normal yard waste tonnages.

Waste Management

Figure 34.5 Total Cost for Garbage Collection per Tonne - All Property Classes

This measure reflects the total cost for garbage collection for all property classes which includes residential, and industrial, commercial and institutional (ICI) locations on a per tonne basis.



2017	$160	$141	$159	$154	$96	$156	$94	$120	$160	$167	$132	$164	$111	$95	$148
2018	$167	$154	$158	$149	$103	$158	$87	$129	$167	$173	$93	$182	$92	$104	$152
2019	$173	$161	$153	$144	$103	$158	$98	$116	$182	$195	$102	$169	$100	$110	$149

Source: SWST311T (Efficiency)

Thunder Bay: The increase in 2019 is due to a change in unfunded liabilities, including WSIB. Also, the tonnage of waste collected in 2019 went down, while the fixed costs of delivering the service increased. It should be noted the City of Thunder Bay uses municipal forces to provide this service.

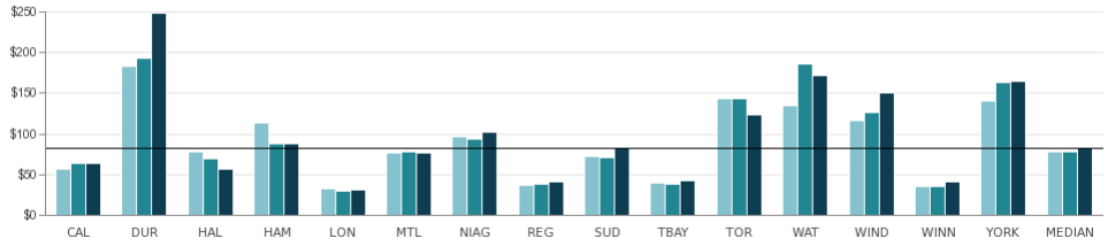
Windsor: Cost increase in 2017 due to a storm event that caused catastrophic flooding in the City.

York: Does not report - The Region operates a two-tier system. It is not responsible for curbside collection; however, the Region is responsible for all processing. York reports the total tonnes collected (see Fig 34.1 – SWST205) but is unable to report the total cost.

Waste Management

Figure 34.6 Total Cost for Solid Waste (All Streams) Disposal per Tonne - All Property Classes

This measure reflects the total cost for solid waste disposal for all Property Classes which includes residential, and industrial, commercial and institutional (ICI) locations on a per tonne basis. Additional costs such as transporting waste outside a community, aging infrastructure, capital costs, and the cost associated with the incineration of garbage, service agreements, increase in leachate treatment and fluctuating fuel costs can impact the results. In addition, declining landfill capacities typically result in increased landfill rates.



2017	$56	$184	$78	$113	$33	$77	$96	$36	$72	$40	$144	$135	$116	$35	$141	$78
2018	$63	$194	$70	$88	$29	$78	$93	$38	$71	$38	$143	$186	$126	$35	$164	$78
2019	$63	$249	$56	$88	$31	$77	$102	$41	$82	$42	$124	$172	$151	$41	$165	$82

Source: SWST325T (Efficiency)

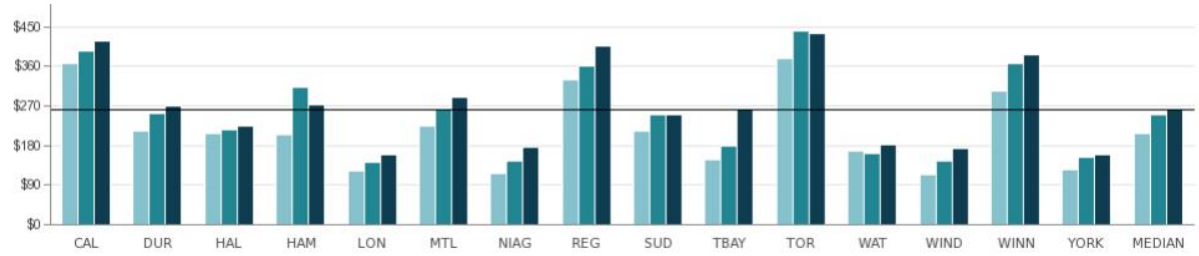
Halton: Decrease in 2019 due to increased Blue Box residue disposed and reduced amortization cost associated with the compression landfill.

Windsor: Increase in tipping fee, increase in tonnages, high leachate from new open cell as well as an increase in post closure costs have contributed to the overall increase in this measure.

Waste Management

Figure 34.7 Total Cost for Solid Waste Diversion per Tonne - All Property Classes

This measure reflects the total cost for solid waste diversion for all Property Classes which includes residential, and industrial, commercial and institutional (ICI) locations, on a per tonne basis.



2017	$368	$213	$208	$204	$122	$224	$116	$329	$212	$147	$378	$166	$114	$303	$125	$208
2018	$396	$254	$216	$312	$141	$261	$144	$360	$250	$180	$441	$161	$145	$368	$152	$250
2019	$419	$269	$225	$273	$159	$290	$175	$408	$250	$262	$435	$181	$174	$388	$159	$262

Source: SWST330T (Efficiency)

Hamilton: The increase in 2018 was primarily due to the temporary shut down of the Central Composting Facility.

Niagara: Increase in 2019 net operating cost was the result of decrease in end market revenues.

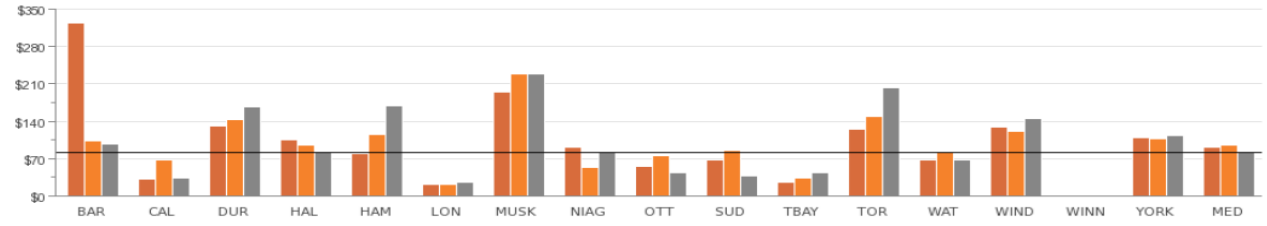
Thunder Bay: 2019 increase is due to a new service provider contract for recycling services and increased processing costs.

On following two pages find 4 MBN Slides showing Disposal costs per Tonne for 2009-2019

2009 - 2011

What is the total cost to dispose of a tonne of garbage?

Fig 20.6 OMBI Total Cost for Solid Waste Disposal per Tonne - All Property Classes (includes amortization)



2009	$325	$32	$132	$105	$79	$21	$194	$91	$56	$67	$25	$125	$67	$130	N/A	$109	$91
2010	$104	$67	$144	$96	$115	$21	$228	$53	$76	$85	$33	$149	$81	$121	N/A	$107	$96
2011	$97	$34	$166	$82	$168	$25	$229	$82	$43	$37	$44	$202	$68	$145	N/A	$114	$82

Source: SWST325T (Efficiency)

Note: In 2009, Barrie had a large post-closure cost which increased their operating cost.

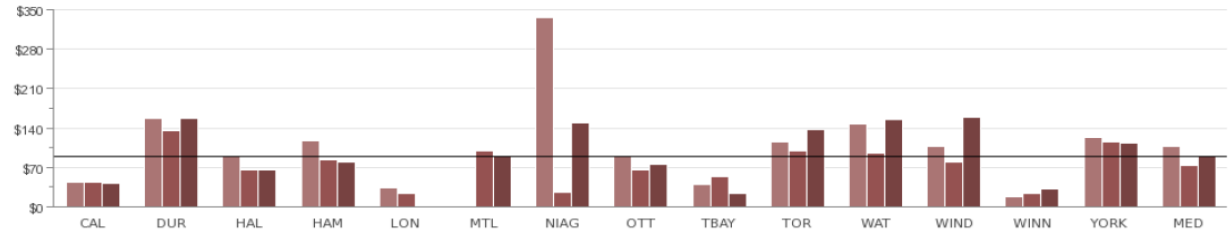
Note: Calculation includes amortization.

Comment: Results can be impacted significantly due to the recording of post-closure landfill liability costs. In addition, declining landfill capacities typically result in increased landfill rates. Other impacts, such as additional costs of transporting waste outside a community, aging infrastructure, capital costs, costs associated with the incineration of garbage, service agreements, increase in leachate treatment and fluctuating fuel costs also impact these results.

2012 – 2014

What is the total cost to dispose of a tonne of garbage?

Fig 34.4 Total Cost for Solid Waste Disposal per Tonne - All Property Classes (includes amortization)



2012	$43	$157	$91	$118	$33	N/A	$337	$91	$40	$116	$147	$107	$18	$124	$107
2013	$44	$135	$66	$83	$24	$99	$25	$65	$54	$100	$95	$80	$24	$115	$73
2014	$41	$157	$66	$79	N/A	$90	$149	$76	$23	$138	$155	$159	$31	$114	$90

Source: SWST325T (Efficiency)

Note: All Property Classes includes residential and ICI (Industrial, Commercial and Institutional) locations. In addition, declining landfill capacities typically result in increased landfill rates. Other impacts such as additional costs of transporting waste outside a community, aging infrastructure, capital costs, the cost associated with the incineration of garbage, service agreements, increase in leachate treatment and fluctuating fuel costs also impact the results.

These results can be impacted significantly due to the recording of post-closure landfill liability costs.

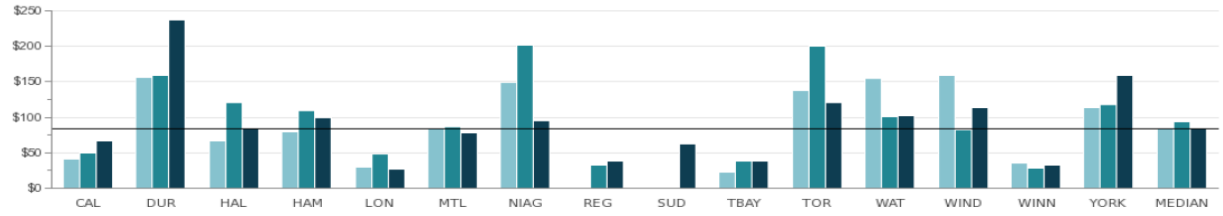
2014 to 2016

Fig. 34.6 Total Cost for Solid Waste (All Streams) Disposal per Tonne - All Property Classes

All Property Classes includes residential, and industrial, commercial and institutional (ICI) locations.

Other impacts such as additional costs of transporting waste outside a community, aging infrastructure, capital costs, and the cost associated with the incineration of garbage, service agreements, increase in leachate treatment and fluctuating fuel costs can impact the results. In addition, declining landfill capacities typically result in increased landfill rates.

The results can be impacted significantly due to the recording of post-closure landfill liability costs.



2014	$41	$157	$66	$79	$30	$85	$149	N/A	N/A	$23	$138	$155	$159	$35	$114	$85
2015	$50	$159	$120	$109	$48	$87	$202	$32	N/A	$38	$200	$101	$82	$28	$118	$94
2016	$66	$237	$83	$99	$27	$78	$95	$38	$62	$38	$120	$102	$114	$32	$159	$83

Source: SWST325T (Efficiency)

Comment:

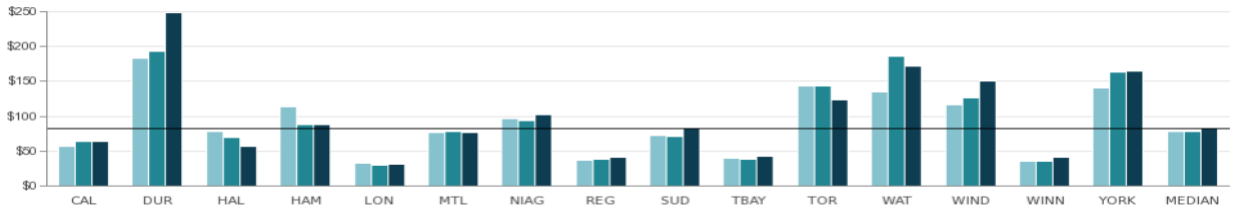
Durham and York Region's increase is due to the first full year of operations for the Durham York Energy Centre.

2017 – 2019

Waste Management

Figure 34.6 Total Cost for Solid Waste (All Streams) Disposal per Tonne - All Property Classes

This measure reflects the total cost for solid waste disposal for all Property Classes which includes residential, and industrial, commercial and institutional (ICI) locations on a per tonne basis. Additional costs such as transporting waste outside a community, aging infrastructure, capital costs, and the cost associated with the incineration of garbage, service agreements, increase in leachate treatment and fluctuating fuel costs can impact the results. In addition, declining landfill capacities typically result in increased landfill rates.



2017	$56	$184	$78	$113	$33	$77	$96	$36	$72	$40	$144	$135	$116	$35	$141	$78
2018	$63	$194	$70	$88	$29	$78	$93	$38	$71	$38	$143	$186	$126	$35	$164	$78
2019	$63	$249	$56	$88	$31	$77	$102	$41	$82	$42	$124	$172	$151	$41	$165	$82

Source: SWST325T (Efficiency)

Halton: Decrease in 2019 due to increased Blue Box residue disposed and reduced amortization cost associated with the compression landfill.

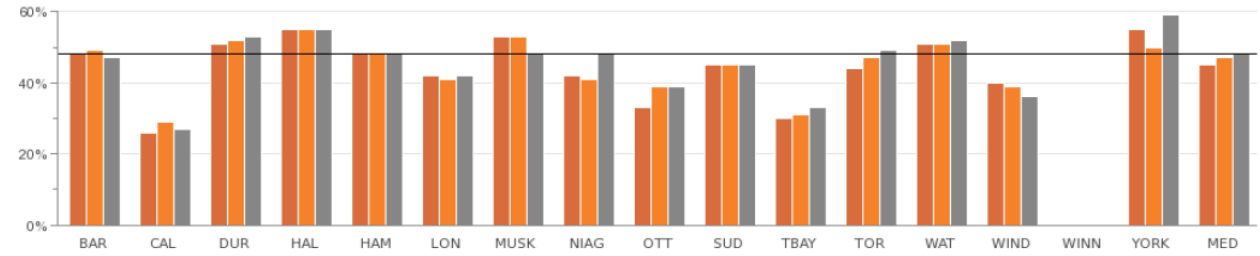
Windsor: Increase in tipping fee, increase in tonnages, high leachate from new open cell as well as an increase in post closure costs have contributed to the overall increase in this measure.

Below on following two pages find 4 slides showing Percent Diversion for years 2009-2019

2009-2011 Percent Diversion

What percent of residential waste is diverted away from landfills?

Fig 20.10 Percent of Solid Waste Diverted - Residential



2009	48%	26%	51%	55%	48%	42%	53%	42%	33%	45%	30%	44%	51%	40%	N/A	55%	45%
2010	49%	29%	52%	55%	48%	41%	53%	41%	39%	45%	31%	47%	51%	39%	N/A	50%	47%
2011	47%	27%	53%	55%	48%	42%	48%	48%	39%	45%	33%	49%	52%	36%	N/A	59%	48%

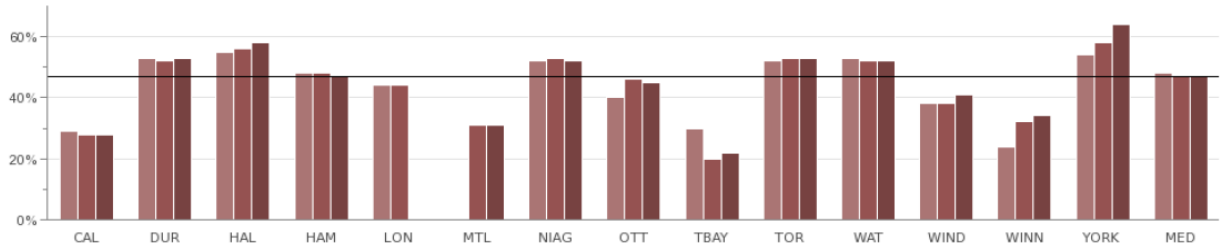
Source: SWST105M (Community Impact)

Comment: This measure demonstrates the percent of residential waste diverted away from landfills and incineration through programs such as organics, blue box, leaf and yard, municipal hazardous or special waste and other recyclable materials, e.g. wood, metal and tires.

2012 - 2014

What percent of residential waste is diverted away from landfills?

Fig 34.7 Percent of Residential Solid Waste Diverted –Single and Multi- Residential



2012	29%	53%	55%	48%	44%	N/A	52%	40%	30%	52%	53%	38%	24%	54%	48%
2013	28%	52%	56%	48%	44%	31%	53%	46%	20%	53%	52%	38%	32%	58%	47%
2014	28%	53%	58%	47%	N/A	31%	52%	45%	22%	53%	52%	41%	34%	64%	47%

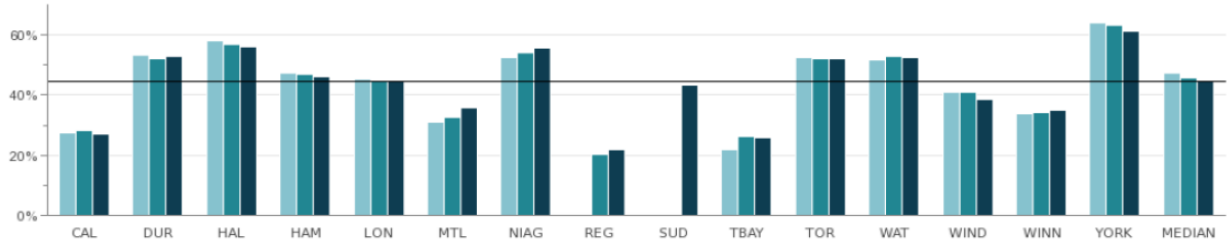
Source: SWST105M (Community Impact)

Note: The measure demonstrates the percent of residential waste diverted away from landfills and incineration through programs such as organics, blue box, leaf and yard, municipal hazardous or special waste and other recyclable materials, e.g. wood, metal, tires.

2014 – 2016

Fig. 34.4 Percent of Residential Solid Waste Diverted

This measure demonstrates the percent of residential waste diverted away from landfills and incineration through programs such as organics, blue box, leaf and yard, municipal hazardous or special waste and other recyclable materials, e.g. wood, metal, tires.

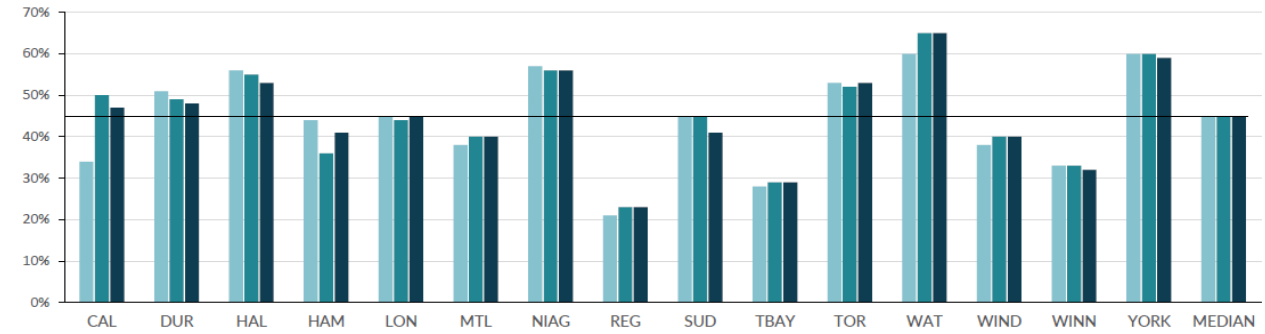


2014	27.5%	53.2%	58.2%	47.3%	45.4%	30.9%	52.4%	N/A	N/A	21.8%	52.7%	51.7%	41.1%	33.6%	64.2%	47.3%
2015	28.3%	52.0%	56.9%	47.1%	44.5%	32.5%	54.3%	20.3%	N/A	26.1%	52.3%	53.0%	40.9%	34.3%	63.5%	45.8%
2016	27.2%	52.8%	56.2%	46.0%	44.7%	35.9%	55.9%	21.7%	43.3%	25.9%	52.1%	52.6%	38.7%	34.9%	61.5%	44.7%

2017 - 2019

Figure 34.4 Percent of Residential Solid Waste Diverted

This measure demonstrates the percent of residential waste diverted away from landfills and incineration through programs such as organics, blue box, leaf and yard, municipal hazardous or special waste and other recyclable materials, e.g. wood, metal, tires.



2017	34%	51%	56%	44%	45%	38%	57%	21%	45%	28%	53%	60%	38%	33%	60%	45%
2018	50%	49%	55%	36%	44%	40%	56%	23%	45%	29%	52%	65%	40%	33%	60%	45%
2019	47%	48%	53%	41%	45%	40%	56%	23%	41%	29%	53%	65%	40%	32%	59%	45%

Source: SWST105 (Community Impact)

Calgary: The large increase in diversion in 2018 was due to the implementation of the Green Cart Program and change to every other week garbage collection, which was completed in the second half of 2017. 2018 was the first full year of program results.

Hamilton: The fluctuation in diversion rate is due to the temporary shut-down of the Central Composting Facility in 2018.

WASTE MANAGEMENT

VALUE PROPOSITION

I need my waste collected in a reliable manner and as scheduled. I expect my waste to be managed in an environmentally sustainable way and that any issues are addressed in a timely manner.

KEEP IN MIND:

Influencing Factors

Influencing factors can create variances in comparison data from year-to-year and from municipality-to-municipality.

Diversion Efforts
Nature and extent of municipality's diversion efforts

Education
How municipalities educate citizens through services and programs

Geography
Service provisions are impacted by various population types

Government Structure
Single-tier vs. Upper-tier municipalities

Infrastructure
Accessibility and distance to transfer stations and landfills

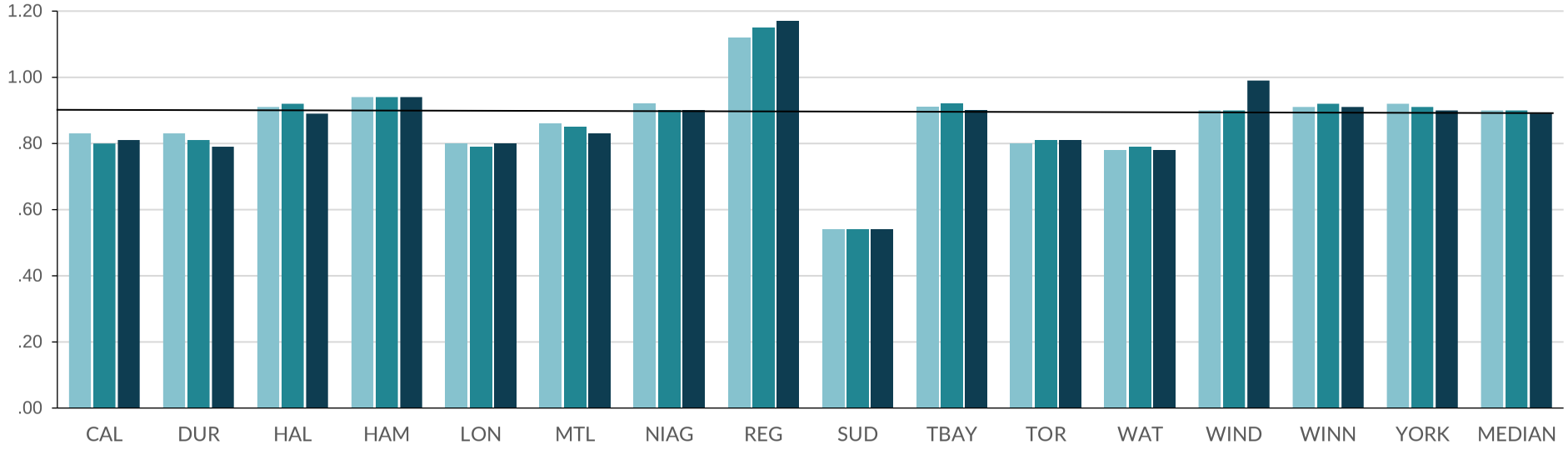
Organizational Form
Different service levels and standards

For a full description of influencing factors, please go to: www.mbncanada.ca

Waste Management

Figure 34.1 Tonnes of All Residential Material Collected per Household

Residential waste includes organics, blue box, leaf and yard, municipal hazardous or special waste, other recyclable materials such as wood, metal and tires, as well as construction and demolition materials.



2017	0.83	0.83	0.91	0.94	0.80	0.86	0.92	1.12	0.54	0.91	0.80	0.78	0.90	0.91	0.92	0.90
2018	0.80	0.81	0.92	0.94	0.79	0.85	0.90	1.15	0.54	0.92	0.81	0.79	0.90	0.92	0.91	0.90
2019	0.81	0.79	0.89	0.94	0.80	0.83	0.90	1.17	0.54	0.90	0.81	0.78	0.99	0.91	0.90	0.89

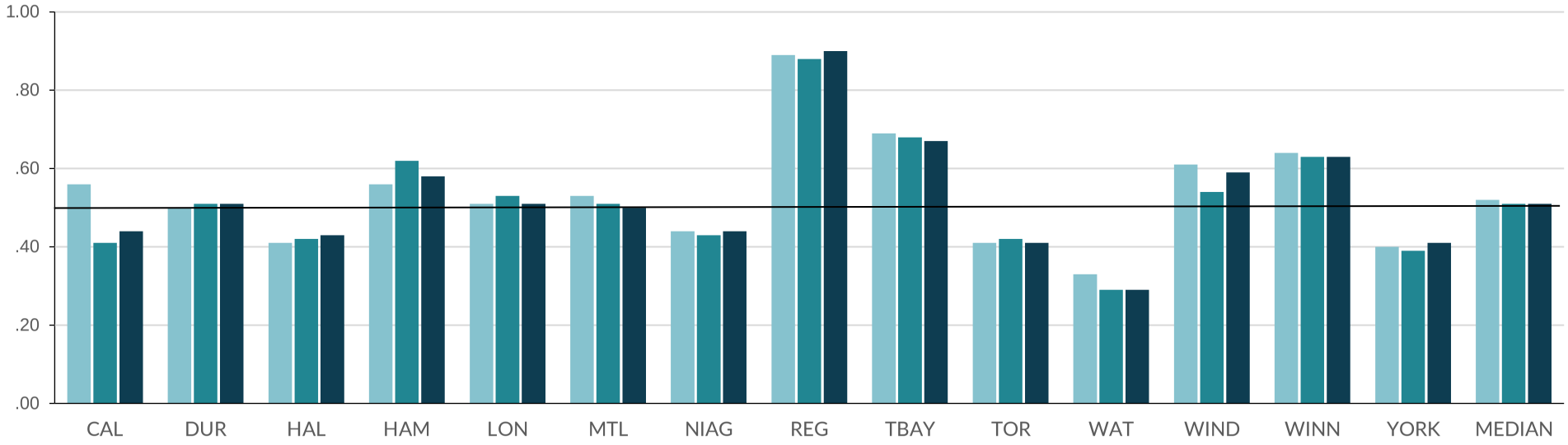
Source: SWST205 (Service Level)

Windsor: An increase in bulk collection frequency as well as waste tonnage from local construction projects contributed to the 2019 increase.

Waste Management

Figure 34.2 Tonnes of Residential Solid Waste Disposed per Household

This measure indicates the amount of solid waste (or garbage) that is sent to landfills.



2017	0.56	0.50	0.41	0.56	0.51	0.53	0.44	0.89	0.69	0.41	0.33	0.61	0.64	0.40	0.52
2018	0.41	0.51	0.42	0.62	0.53	0.51	0.43	0.88	0.68	0.42	0.29	0.54	0.63	0.39	0.51
2019	0.44	0.51	0.43	0.58	0.51	0.50	0.44	0.90	0.67	0.41	0.29	0.59	0.63	0.41	0.51

Source: SWST220 (Service Level)

Hamilton: The increase in 2018 was primarily due to the temporary shutdown of the Central Composting Facility.

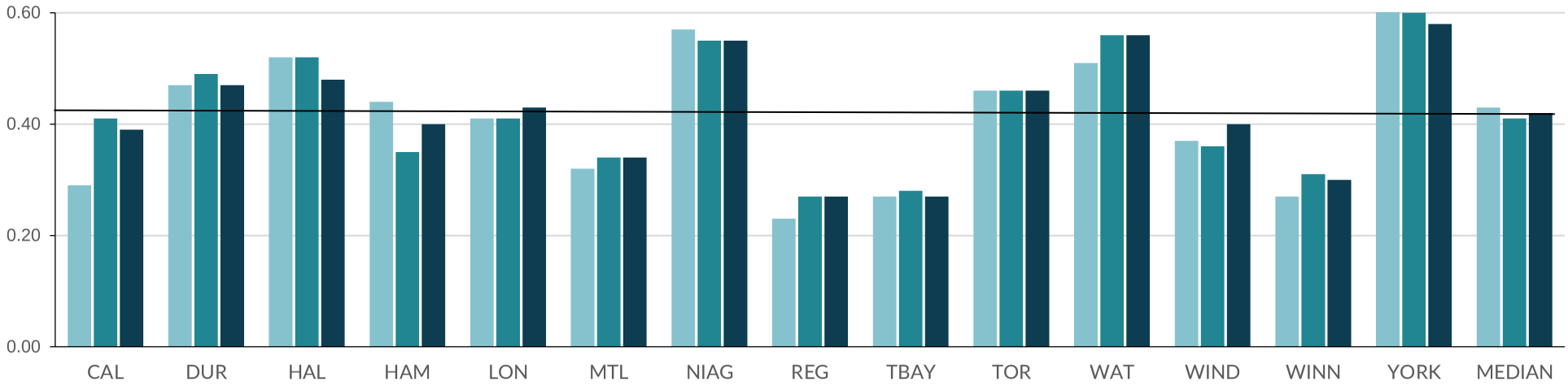
Sudbury: Does not report - unable to separate residential tonnage.

Windsor: 2017 results are high due to a catastrophic flooding that occurred in 2017. Additionally, 2019 saw an increase in bulk collection frequency as well as an increase in waste tonnage from local construction projects.

Waste Management

Figure 34.3 Tonnes of Residential Solid Waste Diverted per Household

This measure demonstrates the tonnes of residential waste diverted away from landfills and incineration through programs such as organics, blue box, leaf and yard, municipal hazardous or special waste and other recyclable materials.



2017	0.29	0.47	0.52	0.44	0.41	0.32	0.57	0.23	0.27	0.46	0.51	0.37	0.27	0.61	0.43
2018	0.41	0.49	0.52	0.35	0.41	0.34	0.55	0.27	0.28	0.46	0.56	0.36	0.31	0.60	0.41
2019	0.39	0.47	0.48	0.40	0.43	0.34	0.55	0.27	0.27	0.46	0.56	0.40	0.30	0.58	0.42

Source: SWST235 (Service Level)

Calgary: The large increase in diversion in 2018 was due to the implementation of the Green Cart Program and change to every other week garbage collection, which was completed in the second half of 2017. 2018 was the first full year of program results.

Hamilton: The decrease in 2018 was primarily due to the temporary shutdown of the Central Composting Facility.

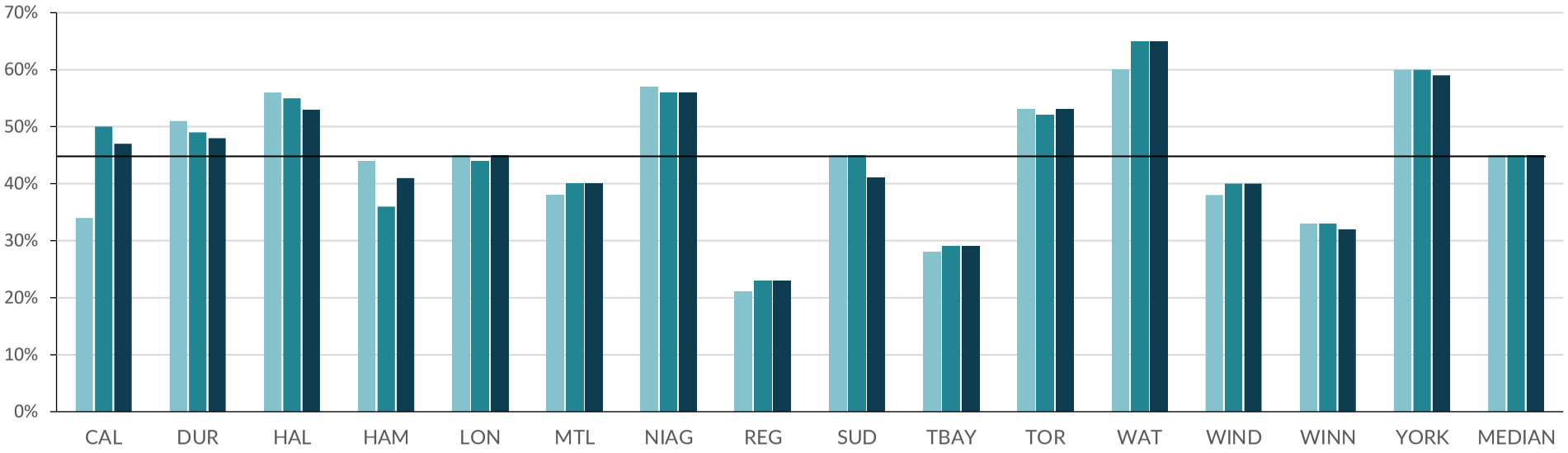
Sudbury: Does not report - unable to separate residential tonnage.

Windsor: Increase in diversion in 2019 is the result of higher than normal yard waste tonnages.

Waste Management

Figure 34.4 Percent of Residential Solid Waste Diverted

This measure demonstrates the percent of residential waste diverted away from landfills and incineration through programs such as organics, blue box, leaf and yard, municipal hazardous or special waste and other recyclable materials, e.g. wood, metal, tires.



2017	34%	51%	56%	44%	45%	38%	57%	21%	45%	28%	53%	60%	38%	33%	60%	45%
2018	50%	49%	55%	36%	44%	40%	56%	23%	45%	29%	52%	65%	40%	33%	60%	45%
2019	47%	48%	53%	41%	45%	40%	56%	23%	41%	29%	53%	65%	40%	32%	59%	45%

Source: SWST105 (Community Impact)

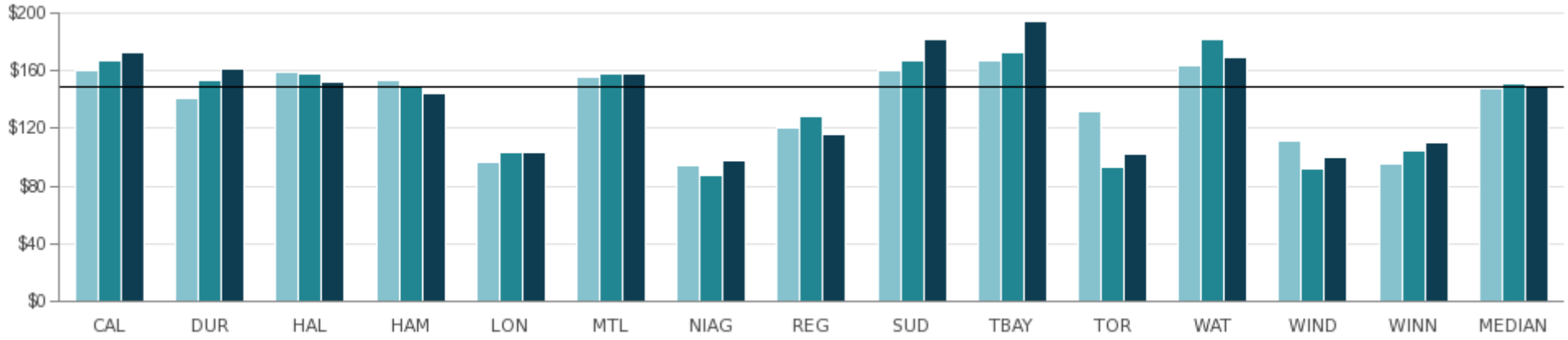
Calgary: The large increase in diversion in 2018 was due to the implementation of the Green Cart Program and change to every other week garbage collection, which was completed in the second half of 2017. 2018 was the first full year of program results.

Hamilton: The fluctuation in diversion rate is due to the temporary shut-down of the Central Composting Facility in 2018.

Waste Management

Figure 34.5 Total Cost for Garbage Collection per Tonne - All Property Classes

This measure reflects the total cost for garbage collection for all property classes which includes residential, and industrial, commercial and institutional (ICI) locations on a per tonne basis.



2017	$160	$141	$159	$154	$96	$156	$94	$120	$160	$167	$132	$164	$111	$95	$148
2018	$167	$154	$158	$149	$103	$158	$87	$129	$167	$173	$93	$182	$92	$104	$152
2019	$173	$161	$153	$144	$103	$158	$98	$116	$182	$195	$102	$169	$100	$110	$149

Source: SWST311T (Efficiency)

Thunder Bay: The increase in 2019 is due to a change in unfunded liabilities, including WSIB. Also, the tonnage of waste collected in 2019 went down, while the fixed costs of delivering the service increased. It should be noted the City of Thunder Bay uses municipal forces to provide this service.

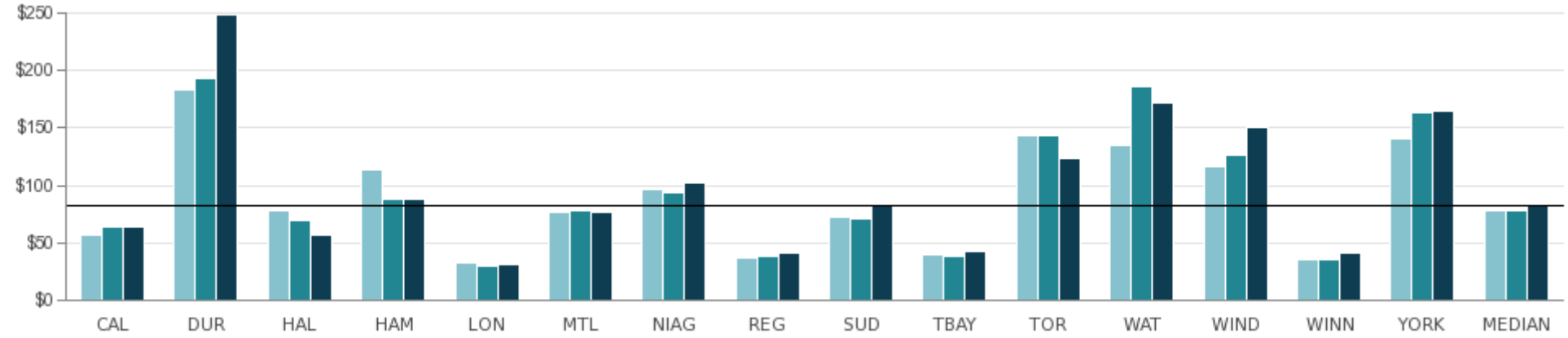
Windsor: Cost increase in 2017 due to a storm event that caused catastrophic flooding in the City.

York: Does not report - The Region operates a two-tier system. It is not responsible for curbside collection; however, the Region is responsible for all processing. York reports the total tonnes collected (see Fig 34.1 – SWST205) but is unable to report the total cost.

Waste Management

Figure 34.6 Total Cost for Solid Waste (All Streams) Disposal per Tonne - All Property Classes

This measure reflects the total cost for solid waste disposal for all Property Classes which includes residential, and industrial, commercial and institutional (ICI) locations on a per tonne basis. Additional costs such as transporting waste outside a community, aging infrastructure, capital costs, and the cost associated with the incineration of garbage, service agreements, increase in leachate treatment and fluctuating fuel costs can impact the results. In addition, declining landfill capacities typically result in increased landfill rates.



2017	$56	$184	$78	$113	$33	$77	$96	$36	$72	$40	$144	$135	$116	$35	$141	$78
2018	$63	$194	$70	$88	$29	$78	$93	$38	$71	$38	$143	$186	$126	$35	$164	$78
2019	$63	$249	$56	$88	$31	$77	$102	$41	$82	$42	$124	$172	$151	$41	$165	$82

Source: SWST325T (Efficiency)

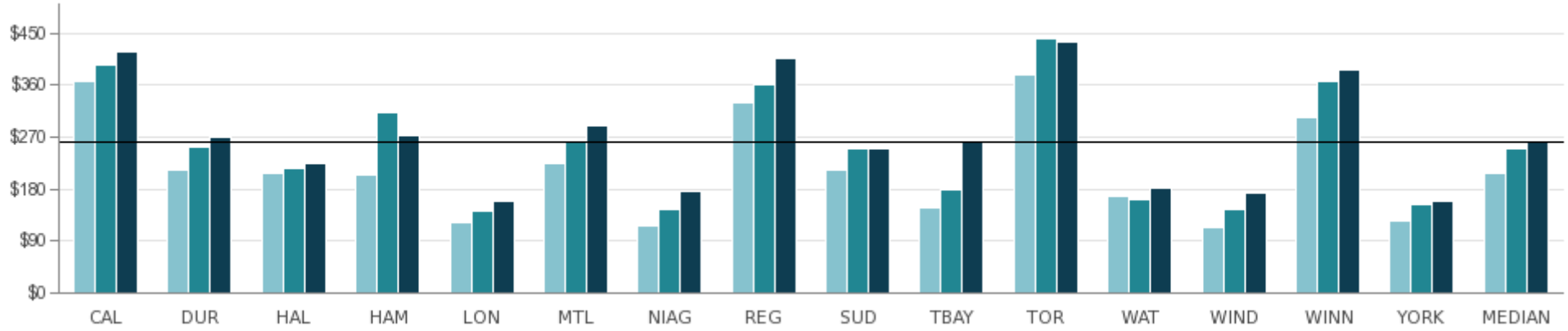
Halton: Decrease in 2019 due to increased Blue Box residue disposed and reduced amortization cost associated with the compression landfill.

Windsor: Increase in tipping fee, increase in tonnages, high leachate from new open cell as well as an increase in post closure costs have contributed to the overall increase in this measure.

Waste Management

Figure 34.7 Total Cost for Solid Waste Diversion per Tonne - All Property Classes

This measure reflects the total cost for solid waste diversion for all Property Classes which includes residential, and industrial, commercial and institutional (ICI) locations, on a per tonne basis.



2017	$368	$213	$208	$204	$122	$224	$116	$329	$212	$147	$378	$166	$114	$303	$125	$208
2018	$396	$254	$216	$312	$141	$261	$144	$360	$250	$180	$441	$161	$145	$368	$152	$250
2019	$419	$269	$225	$273	$159	$290	$175	$408	$250	$262	$435	$181	$174	$388	$159	$262

Source: SWST330T (Efficiency)

Hamilton: The increase in 2018 was primarily due to the temporary shut down of the Central Composting Facility.

Niagara: Increase in 2019 net operating cost was the result of decrease in end market revenues.

Thunder Bay: 2019 increase is due to a new service provider contract for recycling services and increased processing costs.

Interoffice Memorandum

The Regional Municipality of Durham

Works Department

Date: June 15, 2020

To: Regional Chair Henry and Members of Works Committee

From: Susan Siopis, P.Eng., Commissioner, Works

Copy: Elaine Baxter-Trahair, Chief Administrative Officer
Gioseph Anello, Acting Director, Waste Management Services

Subject: 2018 Municipal Benchmarking Data – Waste Management

This memo has been prepared in response to a question raised at Works Committee regarding the 2018 municipal benchmarking data (MBD). Committee requested that staff analyze the 2018 data and provide comments.

The MBD is compiled from information provided by participating municipalities that collect data related to standard service areas. The data can be used to assess trends and is most valuable when used by an individual municipality to compare year-over-year performance. The MBD for 2018 was posted and the full report is available at the following website:
http://mbncanada.ca/app/uploads/2019/11/2018_FINAL_Performance_Report_OCT-30-2019.pdf

As directed, staff reviewed the data and provide the following observations:

With the exception of Regina, all the municipalities are fairly close in tonnes collected per household (Figures 34.1 and 34.2 in the MBD). Regina does not have an organics program; Halifax and Sudbury are significantly lower but there isn't enough information available to determine if they reported the same categories of waste as the other municipalities.

Tonnes of residential solid waste disposed for most municipalities has been consistent over the last three years. There was no significant tonnage increase or decrease.

The data on the costs per tonne for disposal, collection and diversion does not give a consistent comparison as each municipalities' calculation may include different metrics for measurement (Figures 34.6 and 34.7). The Durham cost per tonne for disposal includes the DYEC capital and operating, bypass waste, the landfill perpetual care and the associated support programs.

The diversion rates are based on data which reflect the municipalities programs (Figures 34.4 and 34.5). There is some variation in what measurement each municipality includes in their calculations. The comparison of diversion rates indicate that they remain steady over the years listed in the report.

The municipalities with larger changes in their measurements have either introduced changes to existing programs, introduced new programs or had to deal with external events as listed below:

- Calgary – introduced a curbside green bin in 2017 and saw diversion rate increase from 36% (2017) to 52% (2018)
- Hamilton – compost facility was shut down temporarily in 2018; diversion rate dropped from 44% (2017) to 36% (2018)
- Regina – introduced bi-weekly garbage collection during winter Nov – May; tonne per household dropped from 0.92 (2016) to 0.81 (2018)
- Waterloo – introduced garbage bag limits and every other week garbage collection in 2017; diversion increased from 60% (2017) to 65% (2018)

The information in the Municipal Benchmarking Data is available to the public on the internet at http://mbncanada.ca/app/uploads.

Staff will review the data each year and report if trends are observed that may be of strategic importance or could be useful in the management of our integrated waste management system.

End of Memo