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**Subject:** Base and Enhanced Services for Next Collection Contract

**Report to:** Public Works Committee

**Report date:** Tuesday, March 19, 2019

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## Recommendations

1. That, based on the results of consultations with the various stakeholder groups, including the Local Area Municipalities (LAMs), the Request for Proposal (RFP) for Niagara Region's next garbage, recycling and organics collection contract **BE APPROVED** to include the following base collection options:
  - a) Obtain pricing for the following garbage collection frequency options:
    - i) Every-other-week (EOW) garbage collection for all residential properties and for those Industrial, Commercial & Institutional (IC&I) and Mixed-Use (MU) properties located outside Designated Business Areas (DBAs), as a base service (weekly recycling and organics to continue, and current garbage container (bag/can) limits would double for affected sectors, on an EOW basis), and
    - ii) Status quo – weekly base garbage collection service for all residential, IC&I and MU properties. Current garbage container limits would not change.
  - b) Establish a four (4) item limit per residential unit, per collection, for large item collection at Low-Density Residential (LDR) properties, as a base service.
  - c) Obtain pricing to discontinue and continue appliances and scrap metal curbside collection at LDR properties, as a base service.
  - d) Change the weekly garbage container (bag/can) limits for Industrial, Commercial & Institutional (IC&I) and Mixed-Use (MU) properties located inside Designated Business Areas (DBAs) from seven (7) containers to four (4) containers per property, as a base service.
  - e) Change the weekly garbage container (bag/can) limit for MU properties located outside DBAs from six (6) containers to four (4) containers per property, as a base service.
2. That mandatory use of clear garbage bags, with the option of allowing an opaque privacy bag to be placed inside the clear bag, **NOT BE IMPLEMENTED** for all sectors, as a base service, at this time;

3. That the enhanced collection services requested by the LAMs and identified in this report **BE INCLUDED** in Niagara Region's next garbage, recycling and organics collection contract RFP;
4. That a follow-up report **BE SUBMITTED** to Public Works Committee with recommendations for weekly versus EOW garbage collection and continuing versus discontinuing appliances and scrap metal curbside collection following receipt of pricing for these options in next collection contract RFP submissions; and
5. That Report PW 20-2019 and Council's resolutions **BE CIRCULATED** to the LAMs for their information.

### **Key Facts**

- The purpose of this report is to seek Council's approval of the base collection services and identification of the enhanced services to be included in Niagara Region's next collection contract RFP.
- In addition to the stakeholder consultation and engagement process undertaken in Q3/4 2018, Niagara Region made presentations to each of the twelve (12) LAM Committees or Councils on the proposed base collection options and their enhanced collection services in Q1 2019.
- The majority of LAMs supported the proposed base collection options (see summary of the LAM positions in Appendix 1 and LAM resolutions in Appendix 2 of this report).
- Niagara Region also consulted with the Region's Accessibility Advisory Committee (AAC) representative to obtain input with respect to how these service delivery changes might impact communities of people who live with various disabilities (see Appendix 3 of this report for AAC's resolution).

### **Financial Considerations**

It is estimated that without any changes to the existing collection service levels to be provided in Niagara Region's next contract, the annual contract cost could be greater than \$25 million in 2021. This is based on an average of the bids received for the current collection contract, plus annual escalation of 1.9%. Factors such as, but not limited to, the increase in minimum wage and driver shortages will more than likely impact pricing.

The primary financial implications of implementing the proposed recommendations include:

- Final consideration of inclusion of EOW garbage collection in the next collection contract would occur after pricing is received for this option. As a point of reference:
  - In response to Niagara Region's last collection contract RFP, excluding one submission anomaly, on average bidders priced a cost reduction of approximately \$1.2 million annually for EOW garbage collection.

- Region of Waterloo's implementation of EOW garbage collection in their 2017 contract resulted in an annual contract savings of approximately \$1.5 million.
- Elimination of Niagara Region's annual contract cost to provide appliance and scrap metal curbside collection, which currently is approximately \$130,000, should Niagara Region decide to discontinue this service.
- Incremental cost avoidance for the proposed weekly large item and garbage container limit changes, which would likely be offset by incremental increases in the organics and recycling collection costs, based on anticipated increased participation in diversion programs.
- Extended site life for open Regional landfills, and more revenue generating capacity from the reduction of divertible materials being landfilled by residents and other service users who are participating in the curbside recycling and organics collection programs.
- Cost avoidance/cost reduction in the landfill contract with Walker Environmental due to an increase in the diversion of waste from disposal. This may be offset by increased tonnages of food and organic waste collected at the curb from improved participation and capture rates, which would result in increased processing contract costs, unless the tonnages are reduced through food waste avoidance and other reduction initiatives.
- Reduction of organics being landfilled will result in three financial and environmental benefits:
  - Less methane emission, which reduces the landfill carbon footprint for climate change reduction.
  - Improved leachate quality, which lessens the potential for environmental impact.
  - Overall, there will be a long-term cost reduction with care and control of these landfill sites. Based on the Region's Landfill Liability Model, the contaminating life and monitoring would be reduced by approximately five (5) years, and thus produce an estimated annual savings for the two Regional landfill sites of \$1.3 million.

## **Analysis**

### **A) BACKGROUND**

At its January 17, 2019 meeting, Regional Council approved Report PW 3-2019 – Proposed Base Services for Next Collection Contract. All of the recommendations contained within this report were approved, with the following two (2) amendments, and the additional request that staff obtain input from Niagara Region's AAC:

- i) Mandatory Use of Clear Garbage Bags – Staff recommended to not include clear garbage bags in the RFP, but instead it was added as an option for consideration.
- ii) Discontinuation of Appliances and Scrap Metal Collection - Staff recommended to discontinue appliances and scrap metal collection, but instead it was decided to include, for pricing, in the next collection RFP.

A copy of Report PW 3-2019 and Council's resolutions were circulated to the LAMs on January 22, 2019, for their review and comments. A copy of Metroline's stakeholder consultation report was circulated to the LAMs on February 8, 2019, for their information.

Niagara Region made presentations to each of the twelve (12) LAM Committees or Councils on the proposed base collection options and their enhanced collection services, between December 17, 2018 and February 13, 2019. Formal LAM comments were requested by February 20, 2019.

Appendix 1 includes a summary of the LAM positions on the proposed base collection options. Appendix 2 includes the detailed LAM Council resolutions, which were received by Niagara Region, as of February 26, 2019.

Niagara Region also consulted with the Region's AAC representative to obtain input with respect to how these service delivery changes might impact communities of people who live with various disabilities. Appendix 3 includes the resolution that was passed at the AAC meeting, on January 22, 2019.

## **B) PROPOSED BASE COLLECTION SERVICES**

The proposed base collection options were circulated to the LAMs and the AAC, for their review and comments. Based on input received and the benefits and other implications associated with each proposed service option, which are outlined below, all options are recommended for inclusion in the Niagara Region's next collection contract RFP, with the exception of mandatory clear bags for garbage.

- i) Obtain pricing for the following garbage collection frequency options:
  - a) Every-other-week (EOW) garbage collection for all residential properties and for those Industrial, Commercial & Institutional (IC&I) and Mixed-Use (MU) properties located outside Designated Business Areas (DBAs), as a base service (weekly recycling and organics to continue, and current garbage container (bag/can) limits would double for affected sectors, on an EOW basis).
    - Key Rationale:
      - Extend existing landfill site capacity
      - Contract cost avoidance
      - Increase participation and capture rates in Region's diversion programs:
        - Nearly 50% of Niagara's LDR garbage bag contains organic waste and only 48% of Niagara's LDR households use the Green Bin program.
        - IC&I and MU audits show the recycling and organics diversion programs are underutilized. Only 34% of IC&I and 61% of MU properties outside DBA participate in the recycling program. Only 11% of IC&I and 20% of MU properties outside DBA participate in the organics program.
    - Summary of LAM Positions:
      - Seven (7) LAM Councils (Fort Erie, Grimsby, Lincoln, Pelham, Port Colborne, Thorold, Welland) voted to support EOW garbage collection.

- Four (4) LAM Councils (Niagara Falls, Niagara-on-the-Lake (NotL), Wainfleet, West Lincoln) voted to not support EOW garbage collection.
- One (1) LAM Council (St. Catharines) voted only to receive the proposed option for EOW garbage collection.
- Summary of AAC Position:
  - The AAC identified a number of odour/health and safety concerns related to EOW garbage collection for those individuals living with various disabilities, some of which may be managed through the special set-out service. These are included, in more detail, in Appendix 3 of this report and staff will be following up with suggestions to AAC to help mitigate concerns.
- Other Municipality Experiences:
  - Approximately 70% of Niagara Region's thirteen (13) municipal comparators (Barrie, Durham, Halton, Markham, Ottawa, Toronto, Vaughan, Peel and Waterloo) provide EOW garbage collection service. Their residents have adapted to this change.
  - Municipalities reported waste diversion rate increases between 6% (Peel) and 16% (Durham). This diversion rate increase depended on whether the municipality introduced other diversion programs (i.e. organics) at the same time as EOW garbage.
  - Municipalities reported annual contract savings between \$200,000 (Barrie), Waterloo (\$1.5 million), and \$12 million (Peel), depending on size of the contract and any other contract changes that were implemented (i.e. EOW, carts, etc.)
    - However, Peel staff reported a one-time initial cost to implement three-stream cart collection of \$35 million (based on 325,000 single-family homes), with an estimated annual maintenance and replacement cost of \$1 to 3 million.
  - Experiences in other municipalities (i.e. Barrie, Durham, Halton, Markham, Ottawa, Peel, Toronto and Waterloo) have found that, generally speaking, switching over to EOW garbage collection did not contribute to any significant increases in illegal dumping, or increases in rodents, provided residents use their Green Bin and store their waste properly. Additional observations from Peel include:
    - A decrease in rodent complaints occurred after switching to EOW garbage collection. Participation in the organics program increased and the organic material that attracts the rodents is usually found in that cart, which is collected weekly. If residents did call in about rodents, the first question asked was if they were using their organics cart; 9 of 10 times they were not, and those calls are rarely received anymore.
    - A high number of illegal dumping calls do not occur, and it did not increase after the new EOW program.
  - Municipalities reported that some residents/businesses initially complained about the reduction in garbage collection frequency, but these complaints did not persist more than a few months.

- Telephone and Online Survey Results:
  - Based on the results of these surveys (refer to Figure 1 below), 48% (telephone) and 58% (online) of LDR households feel there would be at least “some” impact if Niagara Region switched to EOW garbage collection.
  - 45% (telephone) and 33% (online) of LDR households feel there would little to no impact to their household, if Niagara Region switched to EOW garbage collection.
  - *Conclusion: Residents are fairly evenly split on how EOW garbage collection would impact their household.*

**Figure 1: Impact of Implementing Every Other Week Garbage Collection at LDR Households, by Survey Type**

<b>Low Density Residential Households</b>	<b>Telephone (n=1,253)</b>	<b>Online (n=6,639)</b>
A big impact	27%	37%
Some impact	21%	21%
Might or might not be an impact	7%	9%
Not much of an impact	19%	17%
No impact	26%	16%
<b>Impact Ratio (big/some vs. not much/no impact)</b>	<b>+3%</b>	<b>+25%</b>

- Based on the results of the online survey (refer to Figure 2 below), 74% of businesses (i.e. IC&I and MU properties) outside DBAs feel there would be at least “some” impact if Niagara Region switched to EOW garbage collection.
- 17% of businesses outside DBAs feel there would little to no impact, if Niagara Region switched to EOW garbage collection.
- 72% of IC&I and 55% of MU properties outside DBAs put out four (4) garbage containers per week or less.
- 94% of IC&I and 100% of MU properties outside DBAs indicate that they are participating in the recycling program.
- Only 20% of IC&I and 43% of MU properties outside DBAs indicate that they are participating in organics program.
- *Conclusion: Businesses outside the DBAs have a perceived need to continue having weekly garbage collection, however they are not fully utilizing their diversion programs.*

**Figure 2: Impact of Implementing Every Other Week Garbage Collection at IC&I and MU Properties Outside DBAs, by Survey Type**

IC&I and MU Properties Outside DBAs	Total Online (n=86)	IC&I Online (n=35)	MU Online (n=51)
A big impact	52%	43%	66%
Some impact	22%	26%	17%
Might or might not be an impact	8%	10%	6%
Not much of an impact	8%	10%	6%
No impact	9%	12%	6%
<b>Impact Ratio (big/some vs. not much/no impact)</b>	<b>+57%</b>	<b>+47%</b>	<b>+71%</b>

- b) Status quo – weekly base garbage collection service for all residential, IC&I and MU properties. Current garbage container limits would not change.
  
- ii) Mandatory use of clear bags for garbage, with the option of allowing an opaque privacy bag to be placed inside the clear bag, for all sectors (both inside and outside DBAs).
  - Key Rationale:
    - Extends existing landfill site capacity
    - Increases waste diversion
  - Summary of LAM Positions:
    - Six (6) LAM Councils (Fort Erie, Grimsby, Pelham, Thorold, Welland, Wainfleet) voted to support mandatory use of clear garbage bags.
    - Five (5) LAM Councils (Lincoln, Niagara Falls, NotL, Port Colborne, West Lincoln) voted to not support mandatory use of clear garbage bags.
    - One (1) LAM Council (St. Catharines) voted only to receive the proposed option for mandatory use of clear garbage bags.
  - Summary of AAC Position:
    - The AAC identified a number of privacy and safety concerns related to the mandatory use of clear garbage bags for those individuals living with various disabilities. These are included, in more detail, in Appendix 3 of this report.
    - As a result, the AAC passed the motion to recommend to Waste Management staff that the mandatory use of clear garbage bags not be included as part of the waste collection service delivery changes for the next collection contract.
  - Other Municipality Experiences:
    - Implementing clear bags resulted in a 6% increase in Markham’s 2014 diversion rate, for a total diversion rate of 81%.
    - Markham reported that due to the clear bag program:
      - Residents are motivated to recycle due to social pressure.
      - Awareness is increased of what is placed in their garbage, due to visibility of bag contents.

- Eliminates (or minimizes) the option of residents concealing hazardous or non-acceptable materials (e.g. Recyclables, organics) in the garbage.
- Existing landfill disposal capacity is preserved.
- Markham reported that:
  - Some residents using clear bags initially complained that using clear bags was an invasion of their privacy. Markham addressed this concern by allowing residents to place up to four small opaque bags inside the clear bag for sensitive items. Markham reported this is not an issue with residents.
  - Staff did not detect any instances of illegal dumping in their public parks or boulevards.
  - Clear garbage bags do not lead to more issues with rodents, provided residents are properly diverting organic waste into the Green Bin.
- Markham confirmed that clear garbage bags do not cost any more than opaque garbage bags and are available in various sizes at stores.
- Telephone and Online Survey Results:
  - Based on the results of these surveys (refer to Figure 3 below), 48% (telephone) and 27% (online) of LDR households indicated “some” support if Niagara Region switched to mandatory use of clear garbage bags.
  - 38% (telephone) and 62% (online) of LDR households indicated little to no support, if Niagara Region switched to mandatory use of clear garbage bags.
  - *Conclusion: While there is some support for mandatory use of clear garbage bags, those residents opposed were quite vocal about their concerns (i.e. invasion of privacy, garbage police, etc.).*

**Figure 3: Support for Implementing Mandatory Clear Garbage Bags at LDR Households, by Survey Type**

<b>Low Density Residential Households</b>	<b>Telephone (n=1,253)</b>	<b>Online (n=6,639)</b>
Definitely would support	26%	13%
Probably would support	22%	14%
Might or might not support	14%	11%
Probably would not support	14%	16%
Definitely would not support	24%	46%
<b>Support Ratio (definitely/probably vs. probably would not/definitely would not support)</b>	<b>+10%</b>	<b>-35%</b>

- Based on the results of the online survey (refer to Figure 4 below), 40% of businesses (i.e. IC&I and MU properties) indicated “some” support if Niagara Region switched to mandatory use of clear garbage bags.
- 47% of businesses indicated little to no support, if Niagara Region switched to mandatory use of clear garbage bags.

- *While there is some support for mandatory use of clear garbage bags, those businesses opposed were quite vocal about their concerns (i.e. invasion of privacy, garbage police, etc.).*

**Figure 4: Support for Implementing Mandatory Clear Garbage Bags at IC&I and MU Properties Inside and Outside DBAs, by Survey Type**

IC&I and MU Properties	Total Online (n=166)	IC&I Properties		MU Properties	
		Inside DBA (n=37)	Outside DBA (n=51)	Inside DBA (n=43)	Outside DBA (n=35)
Definitely would support	21%	14%	28%	23%	17%
Probably would support	19%	22%	22%	19%	14%
Might or might not support	13%	18%	12%	9%	6%
Probably would not support	16%	16%	14%	16%	20%
Definitely would not support	31%	30%	24%	33%	43%
<b>Support Ratio (definitely/probably support vs. would not support)</b>	<b>-7%</b>	<b>-10%</b>	<b>+2%</b>	<b>-3%</b>	<b>-32%</b>

- iii) Establish a four (4) item limit per residential unit, per collection, for large item collection at LDR properties.
  - Key Rationale:
    - Contract cost avoidance for services with limited usage:
      - 93% of properties using the large item service set out four (4) items or less and 92% of the total bookings were for four (4) or less items.
      - The proposed four (4) item limit will meet the set-out needs, as most Niagara residents set-out an average of less than two (2) items per collection.
  - Summary of LAM Positions:
    - Eleven (11) LAM Councils (Fort Erie, Grimsby, Lincoln, Niagara Falls, NotL, Pelham, Port Colborne, Thorold, Wainfleet, Welland, West Lincoln) voted to support the establishment of a four (4) item limit, per collection, for large items
    - There weren't any LAM Councils that voted to not support the establishment of a four (4) item limit, per collection, for large items.
    - One (1) LAM Council (St. Catharines) voted only to receive the proposed option for the establishment of a four (4) item limit, per collection, for large items.
  - Other Municipality Experiences:
    - Average large item limit is three (3) per residential unit for those municipalities with weekly collection (i.e. Essex-Windsor, Hamilton, Simcoe), and four (4) per residential unit with bi-weekly collection (i.e. Durham, Halton, Markham, Toronto, Peel, Ottawa, Vaughan, Waterloo).

- Municipalities that implemented collection limits on the number of large items reported contract savings. These savings could not be isolated.
- No municipalities identified any resident challenges or concerns with having limits on their large item collection.
- Telephone and Online Survey Results:
  - Based on the results of these surveys (refer to Figure 5 below), 6% (telephone) and 13% (online) of LDR households feel there would be at least “some” impact if Niagara Region established a four (4) large item limit, per collection.
  - 89% (telephone) and 72% (online) of LDR households feel there would little to no impact to their household, if Niagara Region established a four (4) large item limit, per collection.
  - *Conclusion: Implementing a four (4) large item limit, per collection, will not unduly impact Niagara region’s LDR households.*

**Figure 5: Impact of Establishing a Four (4) Large Item Limit, per Collection, at LDR Households, by Survey Type**

<b>Low Density Residential Households</b>	<b>Telephone (n=1,253)</b>	<b>Online (n=6,639)</b>
A big impact	2%	5%
Some impact	4%	8%
Might or might not be an impact	5%	15%
Not much of an impact	25%	27%
No impact	64%	45%
<b>Impact Ratio (big/some vs. not much/no impact)</b>	<b>-83%</b>	<b>-59%</b>

- iv) Obtain Pricing to Discontinue and Continue Curbside Appliances and Scrap Metal Collection at LDR properties.
  - Key Rationale:
    - Contract cost avoidance for services with limited usage:
      - Tonnages have decreased by 94% since 2007.
      - Items can be recycled, at no cost, at the Region’s Drop-off Depots, or by scrap metal haulers/dealers.
      - Only 5% of properties are using this service.
      - Many of these items are scavenged before the Region’s collection contractor is able to collect them.
  - Summary of LAM Positions:
    - Eight (8) LAM Councils (Fort Erie, Grimsby, Lincoln, Pelham, Port Colborne, Thorold, Welland, West Lincoln) voted to support the discontinuation of curbside appliances and scrap metal collection.
    - Three (3) LAM Councils (Niagara Falls, NotL, Wainfleet) voted to not support the discontinuation of curbside appliances and scrap metal collection.
    - One (1) LAM Council (St. Catharines) voted only to receive the proposed option for discontinuing curbside appliances and scrap metal collection.

- Other Municipality Experiences:
  - Approximately 50% of Niagara Region’s thirteen (13) municipal comparators (Barrie, Hamilton, London, Ottawa, Peel and Windsor) do not provide appliance collection service.
  - Municipalities reported that many appliances and scrap metal items were scavenged before their collection contractor could collect them.
  - Municipalities that eliminated this collection service realized a contract savings. In Peel, this was a net annual savings of \$100,000.
  - If residents are not provided with service, there is potential to illegally dump items:
    - Barrie reported an increase in illegal dumping when bulky/white goods collection service was discontinued; however it was not sustained beyond approximately six (6) months.
    - Peel provided its residents with advanced notice of this discontinuation of service and options for collection, so they did not see any significant increase in illegal dumping.
  - Residents may complain about the elimination of this service:
    - Those municipalities that discontinued collection (i.e. Barrie, Hamilton, Ottawa and Peel) reported minimal reaction from their residents. These municipalities provided their residents with other collection options for these items (i.e. drop-off depots, calling a scrap metal hauler, etc.).
- Telephone and Online Survey Results:
  - Based on the results of these surveys (refer to Figure 6 below), 16% (telephone) and 22% (online) of LDR households feel there would be at least “some” impact if Niagara Region discontinued appliance/scrap metal collection.
  - 75% (telephone) and 61% (online) of LDR households feel there would be little to no impact to their household, if Niagara Region discontinued appliance/scrap metal collection.
  - *Conclusion: Discontinuing appliance/scrap metal collection will not unduly impact Niagara region’s LDR households.*

**Figure 6: Impact of Discontinuing Appliance/Scrap Metal Collection at LDR Households, by Survey Type**

LDR Households	Telephone (n=1,253)	Online (n=6,639)
A big impact	7%	8%
Some impact	9%	14%
Might or might not be an impact	9%	17%
Not much of an impact	25%	27%
No impact	50%	34%
<b>Impact Ratio (big/some vs. not much/no impact)</b>	<b>-59%</b>	<b>-39%</b>

- v) Change the weekly garbage container (bag/can) limits for IC&I and MU properties located inside DBAs from seven (7) containers to four (4) containers per property.
- Key Rationale:
    - Standardize base garbage collection limits across similar sectors to improve service delivery and program communication, increase participation and capture rates in diversion programs, potentially avoid contract costs for a service level which is not needed:
      - Average number of garbage containers placed out per week at IC&I and MU properties inside DBAs is two (2).
      - 67% of IC&I and 62% of MU properties inside DBAs are participating in the recycling program. Only 14% of IC&I and 20% of MU properties inside DBAs are participating in organics program.
  - Summary of LAM Positions:
    - Ten (10) LAM Councils (Fort Erie, Grimsby, Lincoln, NotL, Pelham, Port Colborne, Thorold, Wainfleet, Welland, West Lincoln) supported changing the weekly garbage container limits for IC&I and MU properties inside DBAs from seven (7) to four (4).
    - One (1) LAM Council (Niagara Falls) voted to not support changing the weekly garbage container limits for IC&I and MU properties inside DBAs from seven (7) to four (4).
    - One (1) LAM Council (St. Catharines) voted only to receive the proposed option for changing the weekly garbage container limits for IC&I and MU properties inside DBAs from seven (7) to four (4).
  - Online Survey Results:
    - Based on the results of the online survey (refer to Figure 7 below), 44% of businesses (i.e. IC&I and MU properties) inside DBAs feel there would be at least “some” impact if Niagara Region reduced the weekly garbage container limit from seven (7) to four (4).
    - 44% of businesses inside DBAs feel there would be little to no impact if Niagara Region reduced the weekly garbage container limit from seven (7) to four (4).
    - *Conclusion: While the sample size is small, it appears that businesses would be able to manage a reduction from seven (7) to four (4) garbage containers per week.*

**Figure 7: Impact of Reduction to Weekly Garbage Container Limit for IC&I and MU Properties Inside DBAs from Seven (7) to Four (4) Containers, by Survey Type**

IC&I and MU Properties Inside Designated Business Areas	Online (n=43)
A big impact	35%
Some impact	9%
Might or might not be an impact	12%

<b>IC&amp;I and MU Properties Inside Designated Business Areas</b>	<b>Online (n=43)</b>
Not much of an impact	16%
No impact	28%
<b>Impact Ratio (big/some vs. not much/no impact)</b>	<b>0%</b>

- vi) Change the weekly garbage container limit for MU properties located outside DBAs from six (6) containers to four (4) containers per property.
- Key Rationale:
    - Standardize base garbage collection limits across similar sectors to improve service delivery and program communication, increase participation and capture rates in diversion programs, potentially avoid contract costs for a service level which is not needed:
      - Average number of garbage containers placed out per week at MU properties outside DBAs is less than two (2).
      - MU audits show low participation rate in Region’s diversion programs. Only 61% of MU properties participate in the recycling program, and 20% of MU properties participate in the organics program.
  - Summary of LAM Positions:
    - Ten (10) LAM Councils (Fort Erie, Grimsby, Lincoln, NotL, Pelham, Port Colborne, Thorold, Wainfleet, Welland, West Lincoln) voted to support changing the weekly garbage container limits for MU properties outside DBAs from six (6) to four (4).
    - One (1) LAM Council (Niagara Falls) voted to not support changing the weekly garbage container limits for MU properties outside DBAs from six (6) to four (4).
    - One (1) LAM Council (St. Catharines) voted only to receive the proposed option for changing the weekly garbage container limits for MU properties outside DBAs from six (6) to four (4).
  - Online Survey Results:
    - Based on the results of the online survey (refer to Figure 8 below), 60% of MU properties outside DBAs feel there would be at least “some” impact if Niagara Region reduced the weekly garbage container limit from six (6) to four (4).
    - 35% of MU properties outside DBAs feel there would be little to no impact if Niagara Region reduced the weekly garbage container limit from six (6) to four (4).
    - *Conclusion: While the sample size is small, it appears that MU properties outside DBAs would be challenged to manage a reduction from six (6) to four (4) garbage containers per week.*

**Figure 8: Impact of Reduction to Weekly Garbage Container Limit for MU Properties Outside DBAs from Six (6) to Four (4) Containers, by Survey Type**

<b>MU Properties Outside Designated Business Areas</b>	<b>Online (n=35)</b>
A big impact	46%

<b>MU Properties Outside Designated Business Areas</b>	<b>Online (n=35)</b>
Some impact	14%
Might or might not be an impact	6%
Not much of an impact	6%
No impact	29%
<b>Impact Ratio (big/some vs. not much/no impact)</b>	<b>+25%</b>

**C) ENHANCED COLLECTION SERVICES**

The enhanced collection services requested by the LAMs are outlined in Appendix 4 of this report and are summarized below:

- The majority of LAMs (Fort Erie, Grimsby, Lincoln, NotL, Pelham, Port Colborne, St. Catharines, Welland, West Lincoln) support inclusion of provisional pricing for large item collection (parallel to the service approved for LDR properties) to those households in MR buildings with seven (7) or more residential units and MU properties with one (1) or more residential unit, that receive the Region's base curbside or enhanced front-end garbage collection service, subject to their approval.
- Two (2) LAMs (Pelham, St. Catharines) are requesting provisional per-stop pricing for in-ground collection of public space recycling and litter containers at IC&I, MU and/or MR properties, subject to their approval.
- All twelve (12) LAMs are requesting pricing for the continuation of their existing enhanced collection services, subject to their approval.
- Another three (3) LAMs (NotL, St. Catharines, Thorold) are requesting provisional pricing for additional enhanced collection services for their DBAs (i.e. additional waste or organics collection frequency, and changes to the garbage container limits) subject to their approval.

**D) NEXT STEPS**

The milestones for the collection contract RFP development are outlined below:

- i) Council approval of service levels to be included and RFP development initiated (Q1 to Q2 2019);
- ii) RFP issuance (Q4 2019);
- iii) Award of new collection contract (Q1 2020);
- iv) One year for successful bidders to order/receive their fleet of collection vehicles (Q1 2020 to Q1 2021);
- v) Start of new contract (March 8, 2021).

Further detail on the RFP timelines is included in PWC-C 8-2019.

## Alternatives Reviewed

### A) CART-BASED COLLECTION

Motions were received from two (2) LAM councils (Thorold and St. Catharines) requesting consideration of alternative recycling containers to reduce the amount of wind blown litter and use of a wheeled cart collection system, parallel to that implemented in the City of Toronto, in the next RFP. The full motions are documented in Appendix 2.

Niagara Region has been investigating the option of lids for recycling boxes. The results of this research are included in report WMPSC-C 11-2019 – Closed-Top Recycling Containers.

Niagara Region also previously investigated the option of switching over to cart-based collection for the next collection contract, considering the benefits of:

- i) Reduced wind-blown litter
- ii) Improved contractor collection times (i.e. automated cart collection can service up to 180 stops per hour, with one (1) person, compared to approximately 80 stops per hour, manually)
- iii) Convenience (i.e. carts can be easier for some residents to maneuver compared to carrying boxes)
- iv) Storage capacity (i.e. carts can offer additional storage capacity, which can contribute to increased participation in recycling programs)
- v) Reduced worker injuries (i.e. repetitive strain, exposure to traffic risks, physical fatigue, weather-related, etc.)

However, based on the rationale below, this system was not one of the proposed base service collection options approved by Regional Council in April 2018 for inclusion in the stakeholder consultation process.

- i) Review of Cart-based Collection for Current Contract:  
Cart-based collection was investigated for implementation for the current contract (PWP 21-2008). A consultant was engaged to review various collection methods, including cart-based collection for all streams. The impact of this option from a systems perspective was evaluated. This evaluation included collection, processing and revenue implications, in addition to best practices considerations. The conclusion at that time was that this option was not considered cost effective. The estimated ten (10) year cost was approximately \$4.6 million higher than under a system without carts (i.e. Blue/Grey Box, Green Bin, kraft bags for leaves, bags/cans for garbage). This reflects the major cost of \$1 million (2007 estimate) associated with retrofitting Niagara Region's Materials Recycling Facility (MRF) from the current two-stream operation to a single-stream operation, if all recyclables are collected in one (1) cart.

Utilizing 2016 Peel Region's three-stream cart collection implementation costs, which are described in a following section below, based on roughly 170,000 single-family

homes in Niagara Region, the estimated one-time cost would be approximately \$21.7 million (includes 1.9% annual escalation).

ii) Provincial Direction:

Under the Province's Environmental Plan, waste diversion programs, such as the Blue Box Program, may be moving to the producer responsibility model. As a result, Niagara Region would no longer be responsible for providing collection and processing of Blue Box materials. This would be the responsibility of the Blue Box industry stewards. Therefore, at this time, staff do not believe implementing major program changes, such as switching to cart-based collection, is recommended.

iii) Experiences of Other Municipalities:

Based on the experiences of other municipalities that implemented a cart-based collection program, this option is not recommended for further consideration for the following reasons:

- Significant capital costs to purchase and distribute the carts:
  - Peel staff reported a one-time initial cost to implement three-stream cart collection of \$35 million (based on 325,000 single-family homes).
  - Toronto staff reported that the costs of their cart implementation are confidential. In addition, their cart program was implemented over 11 years ago, so their pricing would not be as relevant as that of Peel.
- On-going annual maintenance and replacement costs associated with the carts:
  - Peel staff reported an estimated annual maintenance and replacement cost of between \$1 to \$3 million.
- Higher contamination rates of the recycling and organics streams associated with the use of carts. As a result, there would be a decrease in Niagara Region's MRF revenues and difficulty with marketing its recyclables.
  - Niagara's 2016 residential Blue Box contamination rate was 4.8%.
  - The 2016 Provincial average contamination rate for a multi-stream (i.e. two or more streams) program was 8.9% and for a single-stream program was 14.1%.
- According to a 2018 York University study, "*Thinking Beyond the Box*":
  - Municipalities are grappling with meeting increasingly stringent standards from China, which buys around two-thirds of North America's recycling.
  - Under its National Sword Policy, China is refusing to accept recyclables with more than 0.5% contaminated materials (i.e. food residue, non-recyclables, or recyclable products ending up in the wrong stream).
  - To put it in contrast, cities like Toronto, Edmonton and Halifax have reported upwards of 20% contamination.
  - Peel Region is a prime example of the potential cost of contamination. After China turned away 13,000 tonnes of product from the Region's paper recycler, Canada Fibres, Peel Region will likely be saddled with a \$1.7 million bill for the loss.
  - "And the trend towards cart-based automation systems could be exacerbating the problem", says Calvin Lakhan, a postdoctoral Fellow in the Faculty of

- Environmental Studies at York University. Lakhan is the co-investigator of the “Waste Wiki” project at York University and corresponding author of the report.
- “From a municipal perspective, the contamination rate more than doubled if not tripled after switching to a cart-based collection system,” he says. As a result, revenue from post-recyclable materials – the same revenue expected to offset the cost of these programs – has fallen.
  - “Under the current system, municipalities using only cart-based systems aren’t getting the returns they should be,” says Mike Pilato, general manager for Clorox Canada.
  - Contamination was eight (8) per cent lower in bag-based or bag and box-based systems when contrasted with cart or box-based systems.
  - According to CIF Project 888 report “*Automated Cart Recycling: A Study of Municipal Collection and Operations in Ontario*” from 2016, additional concerns with a cart-based program are related to:
    - Storage space and capacity - While carts can offer additional storage capacity, which can contribute to increased participation in recycling programs, there may be potential issues for residents with limited space to store carts.
    - Street parking - Parked cars can be problematic for cart collection. Some municipalities have areas that cannot be serviced by fully automated cart collection vehicles. The City of Toronto employs a semi-automated cart collection program in the city core to enable the collection crew to manually move the bins around parked cars.
    - Narrow streets and lanes – Narrow streets impact the ability of automated collection vehicles to access carts.
    - Weather – Snow and ice can create difficulty for wheeling carts as well as create issues with cart placement.
    - Long driveways – May pose a challenge for some residents.

## **B) PROVISION OF IN-HOUSE WASTE COLLECTION**

As part of the LAM consultations, motions were passed by three (3) LAM councils (Fort Erie, St. Catharines and Thorold) requesting consideration of the provision of in-house waste collection by Niagara Region (see Appendix 2 for the full resolutions).

Niagara Region completed research into providing in-house waste collection services. The results of this research are included in PW 22-2019 – Managed Competition and Fair Wage Considerations for Collection Contract and PWC-C 8-2019.

## **Relationship to Council Strategic Priorities**

The recommendation to approve the proposed base collection and enhanced collection services to be included in Niagara Region’s next collection contract RFP supports Council’s Strategic Priority of Investment, Innovation and Entrepreneurship.

## **Other Pertinent Reports**

- PW 22-2019 Managed Competition and Fair Wage Considerations for Collection Contract
- WMPSC-C 11-2019 Closed-Top Recycling Containers
- WMPSC-C 5-2019 Public Stakeholder Engagement Results on Proposed Collection Service Options
- PW 3-2019 Proposed Base Services for Next Collection Contract
- CWCD 357-2018 Let's Talk Waste Niagara – Stakeholder Consultation and Engagement Activities for the Proposed Waste Collection Options
- CWCD 216-2018 Fact Sheet – Consultation and Engagement Strategy for Proposed Service Level Collection Options Under Consultation
- WMPSC-C 9-2018 Stakeholder Consultation and Engagement on Proposed Collection Service Changes for Next Collection Contract
- WMPSC-C 34-2017 Schedule for the Next Regional Waste, Recycling and Organics Collection Contract
- PW 42-2014 A Matter of the Security of the Property of the Municipality – Bulky/ White Goods Collection Service for Multi-Residential and Mixed-Use Properties
- WMPSC-C 44-2013 Bulky/White Goods Collection Service for Multi-Residential and Mixed-Use Properties
- WMPSC-C 2-2013 Large Item Collection Service for Multi-Residential Buildings and Mixed-Use Properties
- PW 47-2012 Consultation Results on Proposed Clear Bag Pilot for Industrial, Commercial and Institutional Properties
- WMPSC 24-2011 Clear Bag for Garbage Pilot for Industrial, Commercial and Institutional Properties

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**Prepared by:**

Brad Whitelaw, BA, CIM, P.Mgr, CAPM  
Program Manager, Policy & Planning  
Waste Management Services

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**Recommended by:**

Catherine Habermebl  
Acting Commissioner  
Public Works Department

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**Submitted by:**

Ron Tripp, P.Eng.  
Acting Chief Administrative Officer

*This report was prepared in consultation with Susan McPetrie, Waste Management Services Advisor and reviewed by Sara Mota, Program Financial Specialist, and Catherine Habermebl, Director, Waste Management Services.*

**Appendices**

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