SUBJECT: Green Cart and Leaf and Yard Waste Program Changes (PW08126) - (City Wide)

RECOMMENDATION:

(a) That the City discontinue the weekly collection of the two additional containers of leaf and yard waste with the green cart;

(b) That the City continue to provide separate bi-weekly collection of unlimited leaf and yard waste during peak periods in the spring and fall;

(c) That the City’s waste management communications for 2009 be amended to reflect the changes noted in this report;

(d) That the Leaf and Yard Waste Program change resulting in a net operational cost savings of approximately $5,000 be reflected in the Waste Management Division 2009 budget submission.

Scott Stewart, C.E.T.
General Manager
Public Works Department

EXECUTIVE SUMMARY:

The City has made several changes to its curbside leaf and yard waste collection program over the past two years in conjunction with the City’s green cart program. The City’s green cart program currently allows residents to top up their green cart with leaf and yard waste plus set out two (2) additional containers of leaf and yard waste on a weekly basis. This change took effect in April 2007 as a result of requests from residents and Councillors’ feedback. As a result of this change, a large portion of the materials currently collected in the green cart organics stream is leaf and yard waste. Many residents use their green carts for yard waste rather than food waste or other...
types of acceptable source-separated organic waste. In particular, many residents use their green carts to collect grass clippings which poses a challenge with green cart collection, consumes valuable processing capacity at the City’s Central Composting Facility (CCF), and causes operational impacts at the facility.

Staff are recommending that the collection of additional containers of leaf and yard waste with the green cart be discontinued to improve processing efficiency of the City’s Central Composting Facility and Glanbrook Landfill composting facility. Reducing the amount of leaf and yard waste collected with the green cart provides the opportunity for the City to generate approximately $290,000 in revenues from the sale of merchant capacity at the Central Composting Facility with the recent contract between the City and the County of Simcoe. Presently 50% of merchant capacity revenues are directed into Reserves for capital replacement. The City would only have the opportunity to generate this revenue if leaf and yard waste is processed at the Glanbrook Landfill composting facility rather than at the CCF.

The proposed change in services would begin on March 30, 2009 with the introduction of the 2009/2010 waste collection calendar. The change would be communicated to residents primarily through the waste collection calendar as well as through the City’s website and the City’s customer service staff.

**BACKGROUND:**

The information and recommendations in this report have City Wide implications.

City Council approved Report PW04114 in September 2004 recommending the preferred waste collection service strategy for the City starting in April 2006 with the main change being the collection of organic waste through the green cart program.

The leaf and yard waste collection program was altered in 2006 with the introduction of the green cart program. Prior to 2006, leaf and yard waste was collected on a bi-weekly schedule from May to the end of November in urban, suburban, and rural settlement areas. With the launch of the green cart program, separate bi-weekly collection of leaf and yard waste was offered during peak periods in spring (May to June) and fall (October to early December). During the remainder of the year residents were permitted to place one additional container of leaf and yard waste with the green cart on a weekly basis as well as topping up the green cart. The service levels were adjusted in 2007 as a result of requests from Councillors. The bi-weekly leaf and yard waste collection was increased from 18 weeks to 28 weeks, from mid-April to mid-July and mid-September to early December. Residents were also allowed to place two (2) leaf and yard waste containers rather than one (1) leaf and yard waste container with their green cart.

The service level changes were negotiated with the City’s waste collection contractor, National Waste Services Inc. (NWSI) and approved by Council through Report PW08010. NWSI provides curbside garbage/organics, bulk and leaf and yard waste collection service in the ‘B’ zones. The changes required negotiation since they deviated from what was specified in Request for Proposal C11-11-05 and the City’s contract with NWSI.

The recommended changes discussed in this report are to improve collection efficiencies and to improve the composting process at the Central Composting Facility.
By removing the additional leaf and yard material from the CCF, the opportunity to market the remaining capacity can be maintained.

**ANALYSIS/RATIONALE:**

There has been a significant decrease in the quantity of leaf and yard waste collected through the curbside leaf and yard waste program since the launch of the green cart program. This is illustrated in Table 1, which provides a summary of the quantity of leaf and yard waste collected through the curbside program and at the Community Recycling Centres/Transfer Stations in comparison to materials collected through the green cart program.

**Table 1 - Tonnage Summary**

<table>
<thead>
<tr>
<th>Year</th>
<th>Leaf and Yard Waste Curbside (Tonnes)</th>
<th>Leaf and Yard Waste Drop-off at Community Recycling Centres &amp; Transfer Stations (Tonnes)</th>
<th>Total Leaf and Yard Waste (Tonnes)</th>
<th>Green Cart Curbside (Tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>12,804</td>
<td>5,097</td>
<td>17,901</td>
<td>N/A</td>
</tr>
<tr>
<td>2005</td>
<td>13,771</td>
<td>5,444</td>
<td>19,215</td>
<td>N/A</td>
</tr>
<tr>
<td>2006¹</td>
<td>5,139</td>
<td>8,138</td>
<td>13,277</td>
<td>24,032</td>
</tr>
<tr>
<td>2007</td>
<td>4,735</td>
<td>5,841</td>
<td>10,576</td>
<td>28,479</td>
</tr>
<tr>
<td>2008 Jan - Aug</td>
<td>3,326</td>
<td>4,563</td>
<td>7,889</td>
<td>21,814</td>
</tr>
</tbody>
</table>

Note: ¹ Green cart launch in April 2006

The City has incurred additional costs as a result of the increased quantity of leaf and yard waste collected with the green cart program. Many residents use their green cart to set out leaf and yard waste, particularly grass clippings, when the primary purpose of the green cart program is to divert source separated organic waste from landfill. The City’s waste collection and processing system was initially designed to handle a smaller portion of leaf and yard waste in the green cart organics stream. The quantity of leaf and yard waste collected with the green cart has posed some challenges with the collections and processing system. These issues include:

- the vehicles that are used to co-collect garbage and organics need to spend additional time per stop to collect leaf and yard waste;
- the capacity of the organic side of the co-collection vehicles is reduced and the vehicles need to make additional trips to unload their organic materials;
- the excessive weight of green carts filled with leaf and yard waste is considered by operators to be a leading factor in breakage of green carts and spillage of organic materials onto streets;
- a large portion of the materials being processed at the CCF is leaf and yard waste rather than source separated organic waste, which does not reflect its intended design or purpose;
- compost give-aways have been affected with reduced quantities of compost being available from the leaf and yard waste composting facility;
- lost revenue by selling merchant capacity to other municipalities if leaf and yard waste continues to be processed at the CCF.

The proposed change being recommended is to discontinue the practice of collecting two containers of leaf and yard waste with the green cart. Residents would be encouraged to use their green carts for source separated organic waste such as food waste, and if there is room, they can top it up with leaf and yard waste. Leaf and yard waste collection would continue to be provided on a bi-weekly schedule in the Spring and Fall. During this period, residents would be allowed to set out an unlimited quantity of leaf and yard waste. Exact collection dates will be determined through the annual waste collection calendar. For the remainder of the year, residents have other options for dealing with extra leaf and yard waste from their properties including grass-cycling, using a backyard composter, or taking these materials to one of the City's Community Recycling Centres at no cost.

The compensation agreement with NWSI for seasonal bi-weekly leaf and yard collection is based on a collection cost per week instead of cost per tonne. This arrangement provides fair compensation to NWSI for driving each street in the ‘B’ zones during the unlimited leaf and yard waste collection period and minimizes the risk associated with dry summers generating lower tonnage of leaf and yard waste. The City would face increased costs if additional weeks of leaf and yard waste collection are provided. The proposed change in the number of leaf and yard waste containers collected in the organics stream will not have cost implications in the publicly serviced A zones. The increased tonnage in the leaf and yard program will be offset by improved efficiencies in the co-collection of green carts and garbage in both the publicly serviced ‘A’ zones and contracted ‘B’ zones.

Collecting additional leaf and yard waste with the green cart program results in reduced processing efficiency at the CCF. Collecting leaf and yard waste separately from source separated organic waste allows yard waste to be composted in the open-windrow leaf and yard waste composting facility at the Glanbrook Landfill, which is more efficient than the processing requirements for other types of organic waste. Additionally the CCF was designed to handle Source Separated Organics and a small percentage of leaf and yard waste. The volumes of leaf and yard waste that is being delivered to the CCF is resulting in processing difficulties and the operator has indicated it may require additional compensation if the City continues to deliver a disproportionate amount of leaf and yard waste.

One of the goals of the Solid Waste Management Master Plan is to consider inter-regional waste diversion facilities. The processing capacity of the CCF is 60,000 tonnes/year. The operator of the City’s CCF has been successful in selling, with the City’s approval, processing capacity to other municipalities including Halton Region and recently Simcoe County. The addition of the tonnages from external sources provides revenue to the City but also provides a unit cost per tonne reduction since the processing rate per tonne that the City pays to the CCF contractor decreases as tonnage processed increases. Any reduction in the quantity of leaf and yard waste collected with the green cart would allow the City to increase the merchant capacity of the Central Composting Facility providing the excess merchant capacity could be sold. Revenues from external sources help offset the City’s Waste Management budget. If the City continues to accept the volume of leaf and yard currently being delivered to the
CCF and not the leaf and yard facility, the City may have to cancel contracts that are already in place.

The service change will be communicated to residents through the annual waste collection calendar which is mailed to residents in March each year in advance of the April start date for the spring leaf and yard waste collection period. The calendar is produced within the existing Waste Management Community Outreach budget. The change concerning the number of leaf and yard waste containers collected with the green cart will require some additional communications at a minimum in the first year of the program changes. This would be done in the form of advertising, website updates and Public Service Announcements at strategic times in the year including July as part of the end of the spring leaf and yard waste collection period, the beginning of the autumn leaf and yard waste collection in September, and then the end of leaf and yard waste collection in December. It is expected that the additional cost of these communications will be $15,000. Through the existing advertising budget staff will continue to encourage residents to use their green cart for source separated organic waste, as opposed to leaf and yard waste.

**ALTERNATIVES FOR CONSIDERATION:**

There are three (3) alternatives for consideration and the costs are summarized in Table 2.

(a) Status Quo - An alternative is to continue the existing collection of two (2) containers of leaf and yard waste with the green cart. With this alternative the City would face reduced collection efficiency and the large volume of leaf and yard waste would continue to be processed at the CCF. This option would reduce the quantity of merchant capacity at the CCF which has been sold and is currently being used as a source of revenue. The new agreement with the County of Simcoe will need to be cancelled should the leaf and yard waste continue to be delivered to the CCF. Additionally, the CCF operator may request an increase to the processing rate due to operational difficulties caused by the disproportionate volume of leaf and yard waste.

(b) Option 1 - Reduce the number of leaf and yard waste containers collected with the green cart

Another alternative is to collect one (1) container of leaf and yard waste with the green cart similarly to what was in place with the launch of the green cart program in 2006. This option would see only limited additional merchant capacity made available at the CCF which would result in the City having to cancel the processing contract with the County of Simcoe. The proposed change would be communicated with the public through the waste collection calendar and through seasonal prompts. The budget implications include additional collection cost, communication costs, the loss of revenue from County of Simcoe as a result of reduced merchant capacity at the CCF.

(c) Option 2 - Discontinue collection of all extra containers of leaf and yard waste and include an additional leaf and yard waste collection circuit

With this option, the spring leaf and yard waste collection period would be extended for an additional two weeks in July. The City would discontinue the collection of two
additional containers of leaf and yard waste with the green cart. The City would face increased collection costs as a result of the additional collection circuit.

(d) Recommended Option - Discontinue collection of all extra containers of leaf and yard waste

The report recommends that the collection of two additional containers of leaf and yard waste be discontinued as a result of operational concerns and possible loss of revenue through the sale of merchant capacity.

Table 2 - Operations Cost Summary (2009 Summary)

<table>
<thead>
<tr>
<th>Waste Management Activity</th>
<th>Status Quo Costs</th>
<th>Option 1</th>
<th>Option 2</th>
<th>Recommended Option</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Increase or (Decrease)</td>
<td>Increase or (Decrease)</td>
<td>Increase or (Decrease)</td>
<td>Increase or (Decrease)</td>
</tr>
<tr>
<td>Collection</td>
<td>$0</td>
<td>$0</td>
<td>$61,500</td>
<td>$0</td>
</tr>
<tr>
<td>Disposal Revenue</td>
<td>$145,000*</td>
<td>$145,000*</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Disposal Processing Cost</td>
<td>$0</td>
<td>($16,000)</td>
<td>($19,000)</td>
<td>($20,000)</td>
</tr>
<tr>
<td>Community Outreach</td>
<td>$0</td>
<td>$15,000</td>
<td>$15,000</td>
<td>$15,000</td>
</tr>
<tr>
<td>Operating Budget Impact</td>
<td>$145,000</td>
<td>$144,000</td>
<td>$57,500</td>
<td>($5,000)</td>
</tr>
<tr>
<td>Reserve Contribution</td>
<td>$145,000*</td>
<td>$145,000*</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Net Cost to City</td>
<td>$290,000</td>
<td>$289,000</td>
<td>$57,500</td>
<td>($5,000)</td>
</tr>
</tbody>
</table>

* loss of revenue from cancelled processing contract
** net benefit to City by sale of processing capacity = $295,000 (difference in net operating costs between Status Quo and Recommended Option)

**FINANCIAL/STAFFING/LEGAL IMPLICATIONS:**

Financial - The recommended option is expected to result in savings of approximately $5,000. Maintaining the present contract with County of Simcoe, the City avoids additional costs of $295,000 through the sale of merchant capacity at the CCF.

Eliminating the collection of two containers of yard waste with the green cart will result in operating efficiencies at the CCF and Glanbrook Landfill composting facility at a saving of approximately $20,000. Without approval of the recommended option, the City would have to cancel the contract with the County of Simcoe or potentially pay additional costs to the operator to process leaf and yard waste from the City. Should the City wish to extend its curbside leaf and yard waste collection at the end of July, the City would incur a cost of approximately $61,500 on an annual basis. No savings have been considered by the associated two week reduction of bulk collection service as it has been considered that residents will hold onto items until the call-in bulk collection service is resumed. The City would incur communications costs of $15,000 to inform the public about the change to the collection program.

Staffing - No additional staff would be required for the proposed change. Staffing for the operation of the Glanbrook composting facility and Central Composting Facility are provided under contract. There are no staffing implications for waste collection services since this change can be accommodated through existing routes. The Customer...
Contact Centre or Councillors Office may initially receive calls from residents enquiring about the change.

Legal - There are no legal implications with the recommendations.

**POLICIES AFFECTING PROPOSAL:**

(a) Solid Waste Management Master Plan (SWMMP)

The recommendations in this report are guided by the Solid Waste Management Master Plan (SWMMP) and support the following recommendations of the SWMMP:

- **Recommendation #1** - *The City of Hamilton must maintain responsibility for the residual wastes generated within its boundaries. Inter-regional diversion facilities will be considered.* The Central Composting Facility is a resource, and the City of Hamilton can optimize the use of its processing capacity to generate revenue for the City.

- **Recommendation #2** - *Contributing to the optimization of the Glanbrook landfill by removing leaf and yard waste from the waste stream.*

- **Recommendation #3** - *Contributing to the 65% diversion target.*

- **Recommendation #13** - *Supporting continuous improvement to the waste management system.*

(b) Public Works Strategic Plan

Reviewing costs associated with the collection and processing of leaf and yard waste is fiscally responsible and environmentally sustainable. The Public Works Strategic Plan also strives to make Public Works a leader in the "greening" and stewardship of the City. Maximizing landfill space is environmentally and fiscally responsible.

(c) Corporate Strategic Plan

The proposed changes support the Corporate Strategic Plan desired end results to increase diversion from landfill and maximize non tax revenue funding sources.

**RELEVANT CONSULTATION:**

The recommendations in this report were reviewed by the Solid Waste Management Master Plan Steering Committee.

Staff from Finance and Administration Section and Customer Services Section were consulted for input on the recommendations contained in this report.

The recommendations were discussed with the City’s collection contractor, National Waste Services Inc. and they are in support of the recommendations as the change would allow them to improve collection efficiency. The change was also reviewed by Maple Reinders Contractors Ltd. / Aim Environmental Group, the Central Composting Facility operator since it has an impact on the CCF processing requirements. Excessive quantities of leaf and yard waste at the CCF has lead to mechanical and processing difficulties and increased costs to the contractor.
CITY STRATEGIC COMMITMENT:

By evaluating the “Triple Bottom Line”, (community, environment, and economic implications) we can make choices that create value across all three bottom lines, moving us closer to our vision for a sustainable community, and Provincial interests.

Community Well-Being is enhanced. ☑ Yes ☐ No
By reviewing best practices and examining actual costs the community can be assured that their tax dollars are being used effectively. Public services and programs are delivered in an equitable manner, coordinated, efficient, effective and easily accessible to all citizens.

Environmental Well-Being is enhanced. ☑ Yes ☐ No
Waste is reduced and recycled - Leaf and yard waste is diverted from landfill.

Economic Well-Being is enhanced. ☑ Yes ☐ No
Hamilton's high-quality environmental amenities are maintained and enhanced. The City will be able to optimize the use of its composting facilities, particularly the Central Composting Facility by processing additional source-separated organic waste rather than leaf and yard waste.

Does the option you are recommending create value across all three bottom lines? ☑ Yes ☐ No

This report supports the following elements of the City's strategic plan:

- Sustainability - to contribute to a balanced community, economy and environment: to minimize the footprint of our activities and reduce environmental impact.

- A Healthy, Safe, and Green City – Reducing Waste going to Landfill. Council will commit to an aggressive waste diversion rate to increase the lifespan of our landfill and ultimately reduce costs, both financial and environmental, for taxpayers.

Do the options you are recommending make Hamilton a City of choice for high performance public servants? ☐ Yes ☑ No

The proposed change has no staffing implications.