CITY OF HAMILTON

PUBLIC WORKS DEPARTMENT
Waste Management Division

SUBJECT: Multi-Residential Green Cart Program Implementation (PW08106) - (City Wide)

RECOMMENDATION:

(a) That the City purchase three (3) hybrid, semi-automated, co-collection, rear-load waste vehicles with a specialized hydraulic launch system to reduce vehicles emissions through a single-source as per Policy #11 of the City’s Purchasing Policy;

(b) That the City retrofit three (3) existing rear-load co-collection vehicles with cart tippers to be used for its multi-residential green cart program;

(c) That two (2) permanent full time equivalent (FTE) Waste Collection Operator positions be added to the Waste Management Division staff complement as of March 2009, in the amount of $141,500 including wages and benefits, to support the multi-residential green cart program;

(d) That the funding of $900,000 for the vehicles and equipment identified in recommendation (a) and (b) be funded from Capital Budget Account 5120594528 (Green Cart Program);

(e) That funding for the positions identified in recommendation (c) of Report PW08106 be considered as part of the 2009 Operating Budget process.

John Mater, C.E.T.
Acting General Manager
Public Works Department
EXECUTIVE SUMMARY:

In November 2007, Council approved the accelerated implementation of the multi-residential waste diversion program in 2008 for completion in 2009 as part of Report PW07151. The new multi-residential waste diversion strategy will be rolled out to over 1000 buildings across the City with approximately 45,800 dwelling units. The multi-residential green cart program is currently being implemented in small and medium sized buildings that can be served by existing collection vehicles. This report addresses the vehicle and staffing requirements to implement the program in large multi-residential buildings. The expansion of the green cart program to multi-residential dwellings will provide all residents with the means to participate in the full range of waste diversion programs offered by the City and will help the City move towards its 65% waste diversion target.

To promote the City’s green fleet initiatives, staff proposes to purchase three (3) hybrid co-collection vehicles with an innovative hydraulic launch assist powertrain system for its green cart organics collection program. This new technology will help to provide better fuel economy as well as reduced maintenance costs. The technology is better suited to curbside collection rather than less frequent stops in multi-residential collection. These new vehicles will be used for the City’s curbside garbage/organics collection program to maximize their operating and cost saving potential. The City plans to retrofit three (3) of its existing curbside garbage/organics co-collection vehicles with new cart tippers so that these vehicles can be used for the City’s expanded multi-residential green cart program. Two of these vehicles would be used for regular service and the third vehicle would act as a spare vehicle to be used when other vehicles are being serviced or to be used during peak periods. The capital costs of approximately $900,000 for the hybrid co-collection vehicles and cart tippers are budgeted as part of the overall Green Cart implementation and funded from the Capital Budget Account 5120594528 (Green Cart Program). The hybrid technology is available through a single source purchase.

The multi-residential green cart program will require two (2) additional Collection Operators to service large apartment buildings. The Collection Section of the Waste Management Division currently has fifty-four (54) full time Waste Collection Operators to provide the existing level of service. It is recommended that the complement be increased by two (2) permanent full-time FTE’s to a total of 56 FTE’s to support the multi-residential green cart program starting March 2009. Funding for these two (2) positions will be included into the Waste Management Division’s 2009 Operating Budget submission.

The additional fleet and associated staffing will also help with the expansion of organics collection among other eligible properties such as municipal facilities.

BACKGROUND:

The information provided in this report has City wide implications and relate to the roll-out of the green cart program to multi-residential properties.

Report PW07151 “Status of Solid Waste Management Master Plan, Options for Increasing Diversion and Landfill Capacity” was presented and approved by Council November 28, 2007 which included the recommendation that the implementation of the
multi-residential diversion program be accelerated in 2008 for completion in 2009. One of the main components of the multi-residential diversion program is the introduction of the green cart program to help divert organic waste from landfill. The green cart program is being phased in among multi-residential properties between 2007 and 2009. The launch of the green cart program to small sized multi-residential properties began in September 2007. The report also indicated the intention was to service the multi-residential green cart program with in-house staff and equipment. Report PW07151 included details pertaining to capital required for full rollout of the Green Cart program to multi-residential facilities. This capital included up to three (3) additional waste collection vehicles for the publicly serviced A zones. There are approximately four-hundred (400) large multi-residential properties in the City which will be serviced by in-house staff and equipment. Approximately five-hundred (500) buildings have been added to the green cart program to date.

ANALYSIS/RATIONALE:

Since the approval of Report PW07151, the Waste Management Division has been implementing the multi-residential organics collection program among small and medium sized buildings that receive curbside collection across the City. Staff has been able to analyze alternatives to provide organics collection for larger sized buildings including staffing needs and vehicle requirements. Information in Report PW07151 indicated that staff would review opportunities to obtain fully-automated collection vehicles for the multi-residential green cart program which could be operated by employees who are on work accommodation to help reduce the City’s work accommodation costs.

Staff reviewed various types of collection vehicles that could be used for the multi-residential organics collection program. The City’s recycling contractor, National Waste Services Inc., currently uses fully automated collection vehicles to collect blue carts from multi-residential buildings. Fully automated collection is not feasible for a number of buildings because of space constraints. Carts need to be lined up and spaced in a particular manner to be collected with the fully automated cart tipper. Most site superintendents are not versed in spacing the carts for the collection vehicle. As a result the vehicle operator must manually manoeuvre the full carts to facilitate collection service. Staff is therefore not recommending fully-automated collection vehicles.

In the effort to support the City’s green fleet initiative, staff from the Waste Management Division and Energy, Fleet and Facilities Division reviewed options to include environmental technologies for the acquisition of vehicles for the organics collection program. Peterbilt of Canada is a sole supplier of innovative hybrid vehicles, including Hydraulic Launch Assi$t™ waste collection vehicles. The technology captures a portion of the vehicle’s kinetic energy in the form of hydraulic pressure when applying the vehicle’s brakes, and releases that energy to supplement the vehicle’s engine for launch assistance. These hybrid vehicles provide 15 to 30% better fuel economy, reduced greenhouse gas emissions by 30 to 40%, and provides a 50% reduction in brake wear. To maximize the potential environmental and economic benefits of these vehicles, these vehicles would be assigned to the City’s curbside garbage/organics collection program. In turn, three (3) existing co-collection vehicles would be retrofitted with a second cart tipper and be assigned to the multi-residential green cart collection program; two
(2) vehicles would be used for regular collection and one (1) vehicle would be used as a spare vehicle.

Hybrid vehicles often carry a price premium of up to 30% compared to a similar conventional vehicle due to the additional components required for a powertrain system. With rising fuel and maintenance costs, the savings from fuel and maintenance costs from the hybrid technology would help reduce the vehicles operating costs.

The roll-out of the Green Cart Program will require additional staff resources within the Waste Collection Section of the Waste Management Division to support the program changes and ensure high participation and waste diversion.

The green cart organics collection service for large multi-residential properties will be provided by public service providers. Smaller multi-residential properties will be serviced by both public and private service providers as part of the curbside collection routes. The type of service to be provided will be made on a site by site basis. Having National Waste Services Inc. service the smaller multi-residential facilities in the ‘B’ zones, will allow City forces to provide service to the large facilities across the City with the addition of the three (3) collection trucks and the two (2) Waste Collection Operators. Staff will determine if there are opportunities for the Waste Collection Operator positions to be filled with staff on work accommodation.

ALTERNATIVES FOR CONSIDERATION:

An alternative is to purchase three (3) non-hybrid rear-load co-collection vehicles for the multi-residential green cart program. This option would be implemented through the City’s competitive purchasing policy. The City may not be able to obtain the same type of green fleet technology and associated cost savings available through the proposed single source purchase.

FINANCIAL/STAFFING/LEGAL IMPLICATIONS:

Financial – The capital costs for the proposed hybrid co-collection vehicles and cart tippers are part of the overall budget approved for Green Cart implementation. The vehicles would be obtained through a single source following Policy #11 (f) of the City’s purchasing policy. The potential increased capital costs for the hybrid technology would be offset by reduced operating costs through fuel savings and maintenance savings. Staff is also investigating the opportunity for a municipal co-operative purchase for these hybrid vehicles to help reduce the capital costs and minimize the risk associated with adopting new technology.

Staffing – The roll-out of the multi-residential diversion program will require two (2) FTEs in 2009 for green cart collection services for large multi-residential buildings. Although vehicles with fully automated tipping equipment are being explored, they are not being recommended at this time. Staff is investigating the opportunity to staff the two (2) new FTE positions with employees who are on work accommodation. The two (2) additional FTE positions being recommended in this report are funded positions that would help to reduce the City’s work accommodation costs should work accommodated staff fill these two positions. Funds in the amount of $141,500 including wages and benefits will be part of the 2009 waste collection budget.

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 #2 - Contributing to the optimization of the Glanbrook landfill by promoting waste diversion from multi-residential properties.

 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 of organic waste from multi-residential buildings 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.

(c) City’s Purchasing Policy

The recommended hybrid co-collection vehicles would be purchased following Policy #11, Section 5.11 (f) – Single Source. The single source is for the manufacturer of the unit (i.e. Peterbilt of Canada). As there is more than one local Peterbilt dealer in southern Ontario, competitive prices would still be solicited from local dealerships. The single source is being recommended for consideration since it is cost effective for the City since the proposed hybrid vehicles would reduce the vehicles operating costs. The capital costs for the co-collection vehicles are greater than $250,000 which requires Council approval prior to initiating the negotiation process.

(d) City’s Green Fleet Implementation Plan

The purchase of hybrid waste collection vehicles support’s the City’s Green Fleet Implementation Plan as a method to implement affordable and sustainable vehicle technology that demonstrates the City’s leadership role toward reducing its environmental impact. The hybrid vehicles will reduce emissions of greenhouse gases and air contaminants that have the potential to harm the environment and human health.

RELEVANT CONSULTATION:

Staff from the Public Works Department Energy, Fleet & Facilities Division (Central Fleet Section) and the Corporate Services Department (Purchasing Section) were consulted for input on the recommendations contained in this report.

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 - Organic waste from multi-residential properties is being diverted from landfill.

Economic Well-Being is enhanced. ☑ Yes □ No
Hamilton’s high-quality environmental amenities are maintained and enhanced.

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 staffing implications for the City’s Waste Collections Section.