SUBJECT: Evaluation of Alternatives for the Delivery of the Recycling Program Services and Award of Relevant Contracts (PW07057/FCS07052) - (City Wide)

RECOMMENDATION:

(a) That the recycling program commencing March 31, 2008 be approved, consisting of:
   i) The continued operation of the existing two (2) stream processing system;
   ii) Two (2) stream collection of the recyclable materials by contracted service for the curbside collection in all waste collection zones, blue carts and at festivals;
   iii) A five (5) day waste collection week.

(b) That National Waste Services Inc. be selected as the Successful Proponent for Project B of Request for Proposals Contract C11-127-06, being the two (2) stream collection of recyclable materials from all waste collection zones, and for the semi-automated collection of blue carts and festivals for a contract period of five (5) years commencing March 31, 2008 with the potential for two (2) one (1) year extensions;

(c) That the cost of a new container line, estimated to be $2.7 million, be funded from the 2007 Materials Recycling Facility (MRF) New Processing Equipment account #5120594527;

(d) That Request for Proposals C11-128-06 for Design, Build Operate of a Single Stream Processing System, Contract C11-128-06 not be awarded and be cancelled;
(e) That Tender No. C11-62-06 Supply and Delivery of Waste Collection/Recycling Vehicles Various Configurations not be awarded and be cancelled;

(f) That the General Managers of Public Works and Finance and Corporate Services be authorized and directed to negotiate the final terms and conditions of the contract with National Waste Services Inc. in accordance with the provisions of the Request for Proposals Contract No. C11-127-06 for Project B for the Collection of Recyclable Materials in all zones and blue carts and festivals;

(g) That the Mayor and City Clerk be authorized and directed to execute any contract successfully negotiated with National Waste Services Inc., together with any necessary ancillary documents, all in a form satisfactory to the City Solicitor;

(h) That staff be given the authority to further investigate the regionalization of the Materials Recycling Facility including discussions of potentially sharing the facility with other municipalities, operational and funding options and potential markets and report back to Public Works Committee by the end of 2007.

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

Joseph L. Rinaldo  
General Manager  
Finance & Corporate Services Department

**EXECUTIVE SUMMARY:**

The recycling program is an important component to the Solid Waste Management Master Plan and the City’s goal of 65% diversion from landfill.

The current collection contract expires in March of 2008 and it is necessary that service providers be determined so that the required equipment can be put in place.

This report evaluates the options for service delivery including:

- Public or contracted service provision
- Two (2) stream (existing program) and single stream (no sort) collection and processing
- Four (4) day or five (5) day collection

A summary of the fourteen (14) options considered is provided in Table 6.

It was intended that the evaluation be based on the benefits for the waste management system options for a ten (10) year period. The goal of the analysis was to find a balance between economic, environmental and social benefits as well as minimizing the risk of service disruption.
To conduct the analysis, the following Requests for Proposals/Tenders were issued:

- Request for Proposals for the contracted collection of recyclable material (100% of the City or the waste collection B Zones, and the semi-automated collection of blue carts and festivals)
- Request for Proposals for the design, build and operation of a single stream processing system at the Materials Recycling Facility
- Tender for collection vehicles for the possible public service delivery (for 100% of the City and for the waste collection A Zones, but excluding the semi-automated collection of blue carts and festivals)
- Tender for the four (4) day collection of White Goods and Scrap Metal

Each RFP/Tender was evaluated and the preferred proponent was identified for each of the components and included in the analysis. Internal costing for the public service options was also completed.

Four (4) day collection options were analysed and are not being recommended at this time. There would be significant changes to collection days and an agreement could not be reached with the work group as required by the CUPE 5167 collective bargaining agreement.

Table 1 shows the ten (10) year cost comparison for the five (5) day scenarios that remain after removing the four (4) day collection options.

<table>
<thead>
<tr>
<th>System</th>
<th>Total Ten (10) Year System Costs ($ million)</th>
<th>Ten (10) Year Net Present Value (NPV) ($ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline (status quo)</td>
<td>537.9</td>
<td>406.7</td>
</tr>
<tr>
<td>1a, two (2) stream, contracted</td>
<td>519.9</td>
<td>393.8</td>
</tr>
<tr>
<td>2a, two (2) stream, public/contracted</td>
<td>535.6</td>
<td>405.8</td>
</tr>
<tr>
<td>3a, two (2) stream, public</td>
<td>553.8</td>
<td>419.6</td>
</tr>
<tr>
<td>4a, single stream, contracted</td>
<td>528.5</td>
<td>400.9</td>
</tr>
<tr>
<td>5a, single stream, public/contracted</td>
<td>548.0</td>
<td>415.8</td>
</tr>
<tr>
<td>6a, single stream, public</td>
<td>559.9</td>
<td>424.9</td>
</tr>
<tr>
<td>5c, single stream, public (integrated)/contract</td>
<td>529.7</td>
<td>401.9</td>
</tr>
</tbody>
</table>

System 1a is being recommended in this report as not only is it the least costly system but the ten (10) year system costs are significantly lower than the system costs for the baseline (status quo) system. This system involves:

- Maintaining the current two (2) stream recycling program, fully contracted service over a five (5) day collection week;
- The award of the recycling collection contract for the curbside program in all waste collection zones, blue carts and festivals to National Waste Services Inc., lowest of the three (3) acceptable bids;
- Replacement of the container processing line at the Materials Recycling Facility at an estimated cost of $2.7 million to be funded from the 2007 Capital Budget Project account #5120594527;
Exploring the option of regionalization of the MRF and for operation of the MRF from January 2011 to March 2013, as the current contract with Canada Fibers Limited will expire no later than December 31, 2010.

The recommendations in this report will implement this system.

The key benefit to system 1a is that it reduces operating and capital requirements over the next three (3) years and at the same time continues to provide a good recycling program for the City. Options to change the collection system can be reviewed for potential implementation in April 2013.

The second lowest cost system is system 5c which would provide for the blended collection of public and contracted service. This system could provide more flexibility for the City's recycling system and a greater potential for diversion. System 5c has been evaluated in detail as the most reasonable alternative. System 5c also has the potential to offset costs by pursuing opportunities to function as a regional MRF and receive and process materials from other municipalities to generate revenue to offset the City's carrying costs on the capital.

A comparison of the financial impacts of Options 1a and 5c is provided in Table 2 and non-financial comparison of the options in Table 3.

<table>
<thead>
<tr>
<th>Table 2 - Cost Comparison of Systems 1a and 5c</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ten (10) Year System Costs ($ millions)</td>
</tr>
<tr>
<td>Ten (10) Year Cash Flow Difference from Baseline (Status Quo)</td>
</tr>
<tr>
<td>Ten (10) Year Net Present Value ($ millions)</td>
</tr>
<tr>
<td>NPV Variance from Baseline (Status Quo)</td>
</tr>
<tr>
<td>Three (3) Year Budget Increase</td>
</tr>
<tr>
<td>Three (3) Year Capital Requirements</td>
</tr>
</tbody>
</table>
Table 3 - Comparison of Non-Financial Considerations for Options 1a & 5c

<table>
<thead>
<tr>
<th></th>
<th>1a - Two (2) Stream 100% Contracted Recycling Collection, five (5) day collection week</th>
<th>5c - Single Stream, 50% City/50% Contracted Recycling Collection, integrated organics &amp; recycling for City Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operational Flexibility</td>
<td>• Continued 100% contracted for recycling collection&lt;br&gt;• No changes to collection system until 2013 when all collection contracts will be aligned so full flexibility of system choices will be available</td>
<td>• Encourages competition &amp; continuous improvement&lt;br&gt;• Enables changes to A zones to try alternate collection approaches (e.g. bi-weekly garbage collection)&lt;br&gt;• Reduced vehicle &amp; fuel requirements and greenhouse gas emissions</td>
</tr>
<tr>
<td>Simplicity For Residents</td>
<td>• Requires sorting of recyclables at the curb into fibers &amp; containers (continuation of status quo)</td>
<td>• All recycling goes into one blue box and makes sorting of waste more convenient (garbage, Green Cart, Blue Box)&lt;br&gt;• Helps to address diverse community</td>
</tr>
<tr>
<td>Diversion Potential</td>
<td>• Good diversion potential for curbside collection&lt;br&gt;• Makes multi-residential diversion &amp; organics collection more challenging</td>
<td>• Expect ~5% increase in diversion with simplified system&lt;br&gt;• Best solution for multi-residential diversion and simplifies organics collection (3 separations)</td>
</tr>
<tr>
<td>Regional MRF Opportunities</td>
<td>• Limited possibilities to process materials from other municipalities as trend is to single stream for larger centres without upgrades to equipment</td>
<td>• Can provide processing to any recycling program - both single stream and two stream materials can be processed&lt;br&gt;• FCM financing available&lt;br&gt;• Stewardship Ontario funding potential</td>
</tr>
</tbody>
</table>

Given that the City’s MRF will still require upgrading in 2011/2012 and the current operating contract expires at the end of 2010, staff recommends that the regional opportunities be explored to determine the potential for shared facilities to reduce costs.

**BACKGROUND:**

The information and recommendations provided in this report have City wide implications.

In August of 2006, Council agreed that the current recycling collection contract with Halton Recycling Ltd. (HRL) would end on March 29, 2008, and directed staff to undertake a review of options for the delivery of the recycling program commencing March 31, 2008. Consideration was to be given to the service delivery (public versus contracted collection), single stream collection and processing of recyclable materials (no sort blue boxes and carts) and four (4) day week collection services.

A more detailed background is included in Appendix A to this report.

The purpose of this report is to present the options and recommendations for the delivery of the recycling program commencing in March 2008. The report includes a number of appendices that support the analysis and recommendations.

**ANALYSIS/RATIONALE:**

This section will present the recommended recycling system, the components of the
system and the rationale for both the system and components.

**Recommended System**

The option being recommended is system 1a which represents the status quo for residents. The only differences are the collection service provider and the upgrades to the Materials Recycling Facility. In this system, collection of the curbside blue boxes, blue carts and festivals across the City would be provided by contracted service. The recyclable materials would continue to be collected and processed in two (2) streams, fibres and containers, however the processing efficiency would be improved with the installation of a new containers processing line at the MRF. The collection week would continue to be five (5) days.

The specific components of the recommended system include:

- Award of a contract for collection of all recyclable materials for the entire City;
- The installation of a new container line at the MRF; and
- Operation of the MRF from 2008 to 2013.

The estimated cost of this system is $519.9 million over ten (10) years. The detailed costing is presented in the section on Financial/Staffing/Legal Implications.

**Description of Recommended System**

The key advantage of this system is that it reduces the capital and operating costs over the next three (3) years by making a small capital investment at the Materials Recycling Facility and reducing collection costs compared with current costs. The collection contractor will change, however there will be no service changes for residents.

The existing MRF would continue to be used with an upgrade to the container processing line. This upgrade is necessary for the facility to operate to 2013. The existing line needs this upgrade to handle the volume of materials being processed and to avoid materials ending up as residual waste and going to landfill. The cost associated with this processing line is approximately $2.7 million. The fibre line was replaced in 2006 and is owned by Canada Fibers Limited.

The current contract with Canada Fibers Limited expires in December 2010. It will be necessary to review the options for processing recyclable materials beyond that time and it is proposed that staff undertake this review and report back to Council by the end of 2007. Part of this review will consider the option of a regional MRF operation.

No change in the five (5) day collection week is recommended at this time. Discussions with CUPE 5167 were not successful although alternatives were presented. Additional information is provided below.

**Four (4) Day Collection Week Review**

Consideration of the four (4) day collection week review is presented here as it is a fundamental decision affecting half of the system alternatives and collection scenarios. A detailed evaluation was undertaken by a staff team from Waste Management, Finance, Purchasing, Human Resources and the Customer Contact Centre. The results of the evaluation are contained in Appendix F.
The collective bargaining agreement with CUPE Local 5167 requires that a change in the work schedule must have the unanimous agreement of the work group, in this case the Waste Collection staff.

Several discussions with the Human Resources Labour Relations staff, union representatives and the work group were held. Informal polling indicated that CUPE 5167 employees in the collection work group were not in favour of moving to a four (4) day work week. Formal polling of the four (4) day work week and other alternatives also indicated that staff was not in favour.

Four (4) day week alternatives could be an item for consideration during future contract negotiations.

Other findings of the four (4) day collection week review indicate:

- Cost savings vary depending on the option
- There would be lost revenues if transfer stations closed
- There are conditional potential costs related to operating facilities
- Start-up costs (communication and customer service) would be significant

**Award of Contract C11-127-06 for the Contracted Collection - All Zones, Blue Carts and Festivals (Project B)**

Implementation of the recommended system requires the award of contract for the collection of recyclables in all zones and blue carts and festivals.

A Request for Proposals was issued for collection services for twelve (12) collection scenarios. The results of the RFP evaluation are provided in Appendix C.

It is recommended that Contract C11-127-06 for Project B, City wide collection of blue boxes, blue carts and festivals be awarded to National Waste Services Inc. This is the lowest of the three (3) proposals received with a cost of $39.4 million over a five (5) year contract.

NWSI proposes to service the City with twenty-seven (27) trucks for the curbside portion of the program and four (4) trucks for the blue carts and festivals.

**Processing of Recyclable Materials**

The processing of recyclable materials would continue to be done by Canada Fibers Limited (CFL) who has operated the MRF since 2003. The current contract with CFL runs to the end of 2010 on an annual basis. Options for the processing of recyclable materials beyond that time will need to be considered for 2011 to 2013.

**Financial Analysis**

The recommended system is projected to cost $519.9 million over ten (10) years from 2008 to 2017. This represents a lower ten (10) year cash flow of $18 million and lower Net Present Value (NPV) costs of $12.9 million compared to current costs. It is noted that these are total waste management system costs.

The detailed costing and financial implications are included in the Financial/Staffing/Legal Implications section of this report. The following table shows a
summary of the total system costs and net present value costs for the recommended system as provided in Table 4.

<table>
<thead>
<tr>
<th>Cost Consideration</th>
<th>System Costs ($ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Ten (10) Year System Costs</td>
<td>519.9</td>
</tr>
<tr>
<td>Total NPV Costs</td>
<td>393.8</td>
</tr>
<tr>
<td>NPV Variance from Status Quo</td>
<td>12.9</td>
</tr>
</tbody>
</table>

**Capital Funding**

Capital funding associated with the recommended system is required for the new containers processing line at approximately $2.7 million. The 2007 capital budget submission should be revised to reduce the requested amount from $8.45 million to $2.7 million, with the balance being reallocated to 2011 for new equipment required to be operational in the spring of 2013.

The 2007/2008 capital requirements are summarized in Table 5.

<table>
<thead>
<tr>
<th>Project ID</th>
<th>Project Name</th>
<th>2007 Requested Capital</th>
<th>2007 Revised Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>5120594527</td>
<td>SWMMP - MRF</td>
<td>8,950</td>
<td>3,100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12,050</td>
<td>3,200</td>
</tr>
<tr>
<td>5120790100</td>
<td>Recycling Program - Vehicle Acquisition</td>
<td>4,920</td>
<td>4,920</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Recommendations**

Based on the evaluation undertaken for the total waste management system cost, it is recommended that the recycling program commencing March 31, 2008 be approved, consisting of:

- Two (2) stream collection and processing of recyclable materials;
- Contracted collection of recyclable materials in all waste collection zones and blue carts and at festivals;
- Replacement of the container processing line at the MRF; and
- A five (5) day waste collection week.

It is recommended that the two (2) stream collection of recyclable materials in all waste management collection zones and blue carts and festivals be awarded to National Waste Services Inc. at a cost of $39.4 million for five (5) years.

It is recommended that the following contracts not be awarded and be cancelled:

- Design, Build, Operate of a Single Stream Processing System at the City of Hamilton’s Materials Recycling Facility, 1579 Burlington Street East, Contract C11-128-06; and

It is recommended that capital costs, estimated at $2.7 million, be allocated for the supply and installation of a container processing line from 2007 capital account 5120594527.
It is recommended that staff be authorized to further investigate the regionalization of the Materials Recycling Facility including discussions of potentially sharing the facility with other municipalities, operational and funding options and potential markets and report back to Public Works Committee by the end of 2007.

It is recommended that the 2008 operating budget reflect the new collection costs as of March 31, 2008.

**ALTERNATIVES FOR CONSIDERATION:**

The analysis of options for the delivery of recycling collection services involved an evaluation of the advantages and disadvantages of the service delivery model and both the financial and non-financial implications. The analysis was also undertaken in context with impacts on the total waste management system. A full financial analysis is included in the section on Financial/Staffing/Legal Implications. The goal of the analysis was to find a balance between economic, environmental and social benefits as well as minimizing the risk of service disruption.

The non-financial implications and descriptions of each system are contained in Appendices G and H.

In this section, alternative systems to the recommended system will be considered as well as the collection and processing components. Following the discussion of alternative systems and components are sections on the disposition of the White Goods/Scrap Metal Program and regionalization of the Materials Recycling Facility.

**Waste Management System Alternatives**

An overview of all of the systems that were analysed is presented in Table 6.

<table>
<thead>
<tr>
<th>Two (2) Stream Collection and Processing Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Option</strong></td>
</tr>
<tr>
<td>1a</td>
</tr>
<tr>
<td>1b</td>
</tr>
<tr>
<td>2a</td>
</tr>
<tr>
<td>2b</td>
</tr>
<tr>
<td>3a</td>
</tr>
<tr>
<td>3b</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Single Stream Collection and Processing Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Option</strong></td>
</tr>
<tr>
<td>4a</td>
</tr>
<tr>
<td>4b</td>
</tr>
<tr>
<td>5a</td>
</tr>
<tr>
<td>5b</td>
</tr>
<tr>
<td>6a</td>
</tr>
<tr>
<td>6b</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Integrated Single Stream Collection Options*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Option</strong></td>
</tr>
<tr>
<td>5c</td>
</tr>
<tr>
<td>5d</td>
</tr>
</tbody>
</table>

*Collection systems 5c and 5d appear the same as 5a and 5b, the difference being in the co-collection by City forces of the organic and recyclable waste streams with separate garbage collection in 5c and 5d.
The systems were evaluated based on a number of financial and non-financial considerations.

When it became apparent that moving to a four (4) day collection week was not achievable at this time, systems 1b, 2b, 3b, 4b, 5b and 5d were removed from further evaluation.

The remaining systems, total system costs and net present values are presented in Table 1.

The remaining systems were compared relative to cost and financial implications and a number of non-financial considerations including:

- Impact on waste diversion (participation, contamination, residue factors)
- Efficiencies (collection time, routing, no sort)
- Comparativeness (Activity Based Costing)
- Municipal service control (continuous improvement, contractor performance)
- Staffing requirements
- Fleet accommodation (to service A zones, whole City)
- Flexibility for possible regionalization of single stream processing
- Environmental benefit
- Cost - relative costs and total waste management system costs (refer to Financial Analysis)

Based on the financial analysis, system 1a is not only the least costly but the ten (10) year system costs are significantly lower than the system costs for the baseline (status quo) system.

The next least costly system would be 5c which would also be lower than the baseline system costs although less significantly than system 1a. System 5c would be the preferred system should Council wish to have a portion of the collection done by the public collection staff, however it can only be achieved with a single stream collection and processing system. Since this system is significantly different from the recommended system the following information is provided.

**System 5c - Single Stream, Integrated Public/Contract, Five (5) Day**

System 5c involves single stream collection and processing, with collection partly by an integrated public service delivery and partly by contracted service and processing in a new single stream processing system.

Single stream collection has the advantage of making recycling easier for residents, encouraging participation and generating the capture of more materials. Along with the capture of more materials is the possibility of more contamination resulting in higher residues going to landfill. However the residues are not expected to be high enough to offset the benefit and the potential net increase in diversion may be 5 to 7%.

Single stream collection of recyclable materials is expected to make diversion easier for multi-residential residents where additional diversion is needed to contribute to the 65% diversion target.
In the event that Committee and Council wish to consider system 5c, the relevant recommendations are included in Appendix K.

a) **Collection Services in System 5c**

Collection in system 5c would be partly done by public collection staff and partly by contracted staff.

The Request for Proposals for Recycling Collection Services for the City of Hamilton, C11-127-06 required proponents to price twelve (12) collection scenarios, being 1a through 6b. Internal costing was based on the activity based costing model to include all of the costs attributable to collection services by public forces. City staff did not submit a proposal in response to the RFP, but did follow the specifications of the RFP in developing the costs as provided in Appendix D. CUPE 5167 was requested to review the internal costing and has indicated their support for the approach.

System 5c would see the collection of recyclable materials in the waste collection A Zones done by public forces while the collection in the B Zones and of blue carts and festivals city wide would be done by contracted service.

The City portion of the service is made more efficient by shifting collection of the waste stream to co-collect organics and recyclables with the separate collection of garbage. The co-collected materials go to the same site at 1579 Burlington Street East, where the MRF and Central Composting Facility (CCF) are located. The efficiencies from the integrated collection reduce travel time and fuel consumption which result in lower maintenance and the environmental benefit of reducing GreenHouse Gas emissions. The City would require forty-seven (47) collection vehicles to provide recycling, organics and garbage collection, however only eleven (11) new single stream rear packer trucks would be required. Most of the recycling/organics collection would be done with the existing fleet of co-collection vehicles. The City’s costs to collect for the five (5) years would be approximately $2.6 million. The capital associated with the purchase of vehicles would be $1.9 million.

Halton Recycling Ltd. would be the preferred proponent for the contracted portion of the service. In this system Contract C11-127-06, Project E would be awarded to HRL. Their cost for this project is $21.7 million for a five (5) year contract and is the lowest compliant proposal.

Although the integrated collection in the A Zones would no longer provide for direct cost comparisons with the private sector through the Activity Based Costing model, the split collection service would continue to promote a competitive environment between public and private sectors that fosters continuous improvement and customer satisfaction.

The system would allow the City to maintain some control for a portion of the City and the blended collection system provides some assurance that potential impacts would be reduced in the event of a work stoppage.

This system would also facilitate the future consideration of bi-weekly garbage collection, which could be tried through a pilot project, to further increase efficiencies and environmental benefits.

b) **Single Stream Processing System**

The preferred proponent for Contract C11-128-06, the Design, Build and Operation of
the Single Stream Processing System would be the current service provider, Canada Fibers Limited.

The recommended proposal for Contract C11-128-06 would be the lowest cost of the three (3) acceptable proposals received. The results of the RFP evaluation are in Appendix E.

The cost of the construction is $15.1 million and the cost of operation would be approximately (varies with tonnage) $29.4 million over a ten (10) year contract.

The equipment required to process recyclables collected in single stream consists of conveyors and screens at the front end of the process to separate the fibres and containers arriving at the MRF mixed together. The other components of the system are the same as a two (2) stream process.

The facility would be capable of processing more than Hamilton’s requirements for recyclable materials and has the potential to bring in additional revenue to offset the City’s costs. This has not been included in the analysis.

c) Regionalization of Materials Recycling Facility

Regionalization of materials recycling facilities has come to be considered a better practice in the provincial realm of municipal recycling building on economies of scale. There is a particular benefit in regionalized single stream processing operations, in that single stream facilities can accept two (2) stream materials by by-passing the in-feed conveyor, whereas two (2) stream facilities cannot accept single stream materials.

In the area surrounding Hamilton, there are a number of municipalities in varying states of need for recycling processing capacity. Staff has had preliminary discussions with the Regional Municipality of Halton and City of Toronto who will both be seeking processing capacity in the next year or so.

With this in mind, the Request for Proposals was issued with a request for information on the option of providing flexibility in the processing equipment and operations and associated costs for a MRF that could process 120,000 tonnes of recyclable materials annually. Canada Fibers Limited has indicated that this tonnage could be accommodated with the same equipment as the 70,000 tonne facility by adding a shift.

The concept of MRF regionalization is supported by the Federation of Canadian Municipalities (FCM) and Stewardship Ontario, the industry funding organization for the blue box program. Both of these organizations make funding available for MRF regionalization. FCM has the Green Municipal Funds program which provides low interest loans up to $3 million per project for waste diversion. The interest rate is the Government of Canada bond rate minus 1.5%, fixed for at least ten (10) years. Staff submitted an “intent to apply” for funding to FCM and it was accepted the week of March 19, 2007. The next step would be to proceed with the full application by May 1, 2007. Stewardship Ontario has a fund known as the Effectiveness and Efficiency Fund, which assists municipalities in funding the regionalization of MRFs. Staff has submitted an intent to apply to Stewardship Ontario and discussions with the Municipal Industry Program Committee of Waste Diversion Ontario. Stewardship Ontario has indicated that funding may be available to assist in the preparation of the detailed application and marketing the merchant capacity or to offset carrying costs on capital.
It is recommended that regardless of the system chosen at this time that staff be authorized to continue to explore funding opportunities and the option of operating the MRF as a regional facility.

d) Processing Contingency

In the event that the construction is not complete and the facility operational March 31, 2008, it would be necessary for the City to seek alternative processing capacity for the single stream material. The material could no longer be received and sorted in the existing two (2) stream system.

Recycled Materials Marketing (ReMM) assisted the City in determining options for processing the materials. It is expected that processing contingency would be required for a maximum of six (6) months at an estimated cost of $400,000. As one-time costs, processing contingency would be funded from capital.

e) Capital Financing

The capital financing requirements for option 5c are shown in Table 7.

<table>
<thead>
<tr>
<th>Project ID</th>
<th>Project Name</th>
<th>2007 Requested Capital</th>
<th>2007 Revised Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>5120594527</td>
<td>SWMMP - MRF</td>
<td>8,950</td>
<td>12,050</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8,950</td>
<td>7,900</td>
</tr>
<tr>
<td>5120790100</td>
<td>Recycling Program - Vehicle Acquisition</td>
<td>4,920</td>
<td>4,920</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1,900</td>
<td>0</td>
</tr>
</tbody>
</table>

White Goods/Scrap Metal Program

In conjunction with the possibility of moving to a four (4) day collection week, Tender C11-126-06 was issued for the collection of white goods and scrap metal. The pricing was significantly higher than the current contract. With the determination that four (4) day collection is not feasible at this time, the need for the tender is eliminated. The current five (5) day program is valid until the end of 2008. However in the 2007 budget deliberations, Committee of the Whole dealt with Report PW07029 and recommended that the white goods and scrap metal program be terminated on March 29, 2008, in item 5.2.1(d)(i). Committee also recommended that Tender C11-126-06 be cancelled.

**FINANCIAL/STAFFING/LEGAL IMPLICATIONS:**

**Financial**

The recommended recycling program contained in this report will have no impact on the 2007 Operating Budget.

With the awarding of the Recycling Collection RFP and assuming all else remained the same, (i.e. revenues and material quantities) the 2008 Waste Operating Budget would decrease in the amount of approximately $150,000 in Appendix J.

The ten (10) year analysis (Appendix K) shows potential impacts on future operating budgets using projected quantities of waste materials and revenue estimates for Recyclable material prices. Based on estimates supplied by our consultants, the 2008 Waste Operating Budget could increase by approximately $2 million or 5.8%.
The 2007 Capital Budget was submitted prior to the evaluation of the recycling options. In order to cover for all possible options the amounts of $8.950 million (2007) and $3.1 million (2008) for the re-construction of the MRF were provided for. The approval of the recommendations of this report will result in a $3.2 million in Capital expenditures for 2007 which is basically the replacement of the container processing line which requires immediate attention, and a further $17.7 million between 2011 and 2013 for the complete upgrading of the facility and installation of a new tipping area.

The 2007 Waste Capital Budget amount of $8.950 million for the MRF upgrades was to be funded as follows: $1.6 million from the Hamilton Future Fund (HFF) and $7.35 million from the Federal Gas Tax. Staff is proposing that the HFF funds be returned and that other, yet to be determined tax levy capital projects, be substituted for eligible gas tax funded capital. Due to federal gas tax funding eligibility rules and the timing involved in specific project funding allocation, staff cannot determine the original funding sources of the substituted eligible capital within the projected 2007 capital budget process time period. Therefore, staff is recommending that the resulting tax levy implications be carried forward into the 2008 capital budget process and be used as a source of funding for Council's Strategic Capital.

The cost assumptions applied to all systems are in Appendix I.

**Staffing**

There are no staffing implications of implementing Option 1a.

**Legal**

**Contract Finalization and Execution**

The recommendations contained in this report will result in a contract being finalized with National Waste Services Inc. for the collection of recyclable materials. The Recycling Collection Services RFP C11-127-06 states that the Contract shall be in the form issued as part of the RFP and will incorporate the Successful Proponent’s Proposal and all applicable clarifications accepted by the City, and shall otherwise contain terms as are consistent with the RFP. Further, the RFP provides that upon the selection of the Successful Proponent, the City will enter into discussions to finalize and execute the Contract within twenty (20) business days of the City’s notice of Council’s selection of the Successful Proponent. Part of the finalization process may include the negotiation of changes, amendments or modifications to the Contract that are consistent with the RFP.

If the Successful Proponent fails to enter into the Contract and provide all security, insurance and other ancillary documents required under the RFP and the Contract, then the City reserves the right to take one or more of the following actions:

- Terminate discussions with the Successful Proponent;
- Select another Proponent as the Successful Proponent and enter into discussions to finalize and execute the Contract;
- Revise and reissue the RFP or cancel the RFP;
- Pursue any other rights or remedies available under the RFP or otherwise at law, including but not limited to calling on the Proposal Security, the value of which security is $100,000.
Performance Security

The purpose of performance security is to provide some protection to the City in the event that the contractor defaults in its obligations under the contract. However, it is not a guarantee that the contractor will not default on a contract nor will it necessarily cover all of the owner's costs incurred as a result of a contractor's default. The most common form of performance security used for construction contracts is a performance bond. For operations contracts such as for recycling collection services, municipalities have generally accepted performance bonds or in some cases, a combination of a performance bond and a letter of credit.

With the Recycling Collection Services RFP, the City initially requested a combination of a performance bond and a letter of credit. As a result of significant concerns being raised by potential Proponents, the performance security requirements were changed by addendum to require solely a performance bond in an amount equal to 100% of the Total Annual Contract Cost for each Service Period. The performance bond renewal will be provided by the contractor on an annual basis. If the renewal security is not provided, the City has the ability to holdback payment due or to become due to the contractor until such time as replacement performance security acceptable to the City is provided. In addition, as an added protection to the City, the RFP also states that the City has the ability to deduct monies due to, or to become due to, the contractor so as to offset any and all costs incurred or to be incurred by the City as a result of a default by the contractor.

Waste Management staff are of the view that the performance security provisions contained in the RFP offer sufficient protection to the City in the event of a default by the contractor which would require the City to incur transition costs and/or to hire a replacement contractor.

POLICIES AFFECTING PROPOSAL:

The proposal is affected by the Solid Waste Management Master Plan. It more particularly relates to Recommendations 1, 2, 3, 4, 12 and 15.

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 option of developing the Materials Recycling Facility as a regional diversion facility is available to offset the City's cost and will be explored further as a result of the recommendations in this report.

Recommendation #2 - “The Glanbrook landfill is a valuable resource, and the City of Hamilton must optimize the use of its disposal capacity to ensure that there is a disposal site for Hamilton’s residual materials that cannot be otherwise diverted.”

The recycling program is a key component of reducing waste going to landfill and optimizing the capacity at Glanbrook.
Recommendation #3 - “The City of Hamilton must set an aggressive objective of 65% waste diversion by the end of 2008, based upon 2000 waste generation rates.” Recyclable materials account for approximately 42% of waste generated. To achieve our target of 65% diversion, it is imperative that a successful recycling program be in place.

Recommendation #4 - “The City of Hamilton must develop a waste management system that contains the following waste diversion components:

- State-of-the-art Materials Recycling Facility (MRF) to divert conventional “dry” recyclable materials
- A centralized composting facility capable of managing household organic and leaf and yard wastes
- Community Recycling and Reuse Centres.”

In 2004, when a Request for Proposals was issued for the MRF and composting facility, a decision was made to proceed only with the composting facility at that time. The City had and continues to have an operating MRF although the life of the equipment is limited.

Recommendation #12 - “The City should seek opportunities to share waste diversion (recycling or organics) facilities with neighbouring municipalities.” As previously indicated, the opportunity is available to develop a MRF that can accommodate the processing of recyclable materials from other municipalities.

Recommendation #15 - “The City of Hamilton should enter any Public-Private partnerships with caution. If pursued, the City should ensure it retains sufficient control and financial protection, to allow the City to continue to deliver the service should the private partner be unable or unwilling to fulfil its obligations.”

The contracts with the private sector will provide the protection to the City against risk associated with non-performance by the contractors.

**RELEVANT CONSULTATION:**

A great deal of internal and external consultation has taken place in the preparation of this report. A flow chart in Appendix B shows the complex nature of the recycling review and the parties involved.

The Solid Waste Management Master Plan Steering Committee was consulted several times to seek their support and direction in the system review and presentation.

Corporate Management Team supported the direction on the new system and suggested that the recommendations be clearly presented.

The Core Team met weekly and involved representation from Finance and Administration and Legal Services. Human Resources and the General Managers of Public Works and Finance and Corporate Services were consulted periodically as required.
Other parties consulted in this process were CUPE, current waste management contractors, other municipalities and Stewardship Ontario.

**CITY STRATEGIC COMMITMENT:**

By evaluating the “Triple Bottom Line”, (community, environment, 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
There would be no impact on the residents however the continuation of the recycling program contributes to community well-being.

**Environmental Well-Being is enhanced.** ☑ Yes  ☐ No
The reduction and diversion of waste contributes to environmental well-being.

**Economic Well-Being is enhanced.** ☑ Yes  ☐ No
The proposed recycling program will provide value for money.

**Does the option you are recommending create value across all three bottom lines?**
☑ Yes  ☐ No
The changes to the recycling program represent value across triple bottom line.

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

The background information is organized around the current need to address the review of the recycling program for 2008, the Solid Waste Management Master Plan and Provincial Waste Management Strategies.

a) 2008 Recycling Program Review

Previous reports related to this report include:

- PW04113 - Activity Based Costing/Waste Collection Services - November 2004
- PW04114a - Collection Services Strategy - November 2004
- PW06033a - Four (4) Day Waste Collection Week Review - October 2006
- PW06064 - Halton Recycling Ltd. Contract Negotiations
- PW06064c - Recycling Program Update - October 2006

Report PW06064a/FCS06080 - Halton Recycling Ltd. Contract Extension Negotiations, August 9, 2006 Committee of the Whole and Council recommended:

a) That the City of Hamilton ("City") enter into an amending contract to Contract C11-74-02 with Halton Recycling Ltd. ("HRL") until March 29, 2008, for the provision of recycling collection services for the entire City, and as otherwise described in Report PW06064a/FCS06080.

b) That the one-time payments to HRL in the amount of $825,000 be funded from the Waste Management Recycling Reserve Number 112270.

c) That the Mayor and Clerk be authorized and directed to execute all necessary documents to implement subsection a) above, with content acceptable to the General Manager of Public Works and in a form acceptable to the City Solicitor.

d) That Report PW06064a/FCS06080 be released following the severing of information which is subject to the Municipal Freedom of Information and Protection Act.

Report PW06064a/FCS06080 also indicated that staff was in the process of reviewing the options for the recycling collection service beyond March 2008 and the purpose of this report is to report in detail on the service delivery options. These options include:

Option 1: 100% Public (In-House) Collection

Option 2: 50/50 Public (In-House)/Private (Contracted) Collection

Option 3: 100% Private (Contracted) Collection

Other items that staff was to report back on included single stream recycling collection and processing and four (4) day collection service and these matters are also integral parts of this report. Discussions with the General Managers of Public Works and Finance and Community Services determined that the most accurate way to cost the recycling system would be to go to the marketplace for the service and equipment components required for the evaluation.

Currently the City’s recyclables are collected and processed in two (2) streams:

- fibres (paper, newspaper, cardboard, boxboard)
• containers (metal, plastic, glass, aseptic, juice cartons)

Single stream recycling refers to a “no sort” system for recyclable materials - fibres and containers can be placed in the same blue box/cart. Garbage and organics continue to be collected separately in co-collection vehicles.

The existing container processing equipment at the MRF is reaching the end of its useful life. The launch of a new program heightens awareness of all waste management programs.

It is imperative that a collection system for recyclable materials be in place for March 31, 2008. To achieve this implementation date, decisions are required to facilitate the necessary purchasing processes involved in the public and/or private delivery of the service.

b) Solid Waste Management Master Plan

The Solid Waste Management Master Plan (SWMMP) was approved by Council on December 10, 2001. The SWMMP proposes that the City develop a new waste management system to achieve a goal of 65% waste diversion from landfill by 2008. Recommendation 4 of the SWMMP states that:

“The City of Hamilton must develop a waste management system that contains the following waste diversion components:

• State-of-the-art Material Recycling Facility (MRF) to divert conventional “dry recyclable materials;
• a centralized composting facility capable of managing household organics and leaf and yard wastes; and
• Community Recycling and Reuse Centres.”

A request for proposals was issued in November, 2003 for design, build and operation of a new Materials Recycling Facility and Central Composting Facility. The pricing received was higher than budgeted and Council decided to proceed with the construction of the Central Composting Facility and not construct a new MRF to reduce capital costs. The existing MRF, albeit old and lacking some efficiencies, did exist and with some upgrades could continue to operate.

Two (2) of three (3) Community Recycling Centres (CRCs) are operational at the Mountain and Dundas Transfer Stations locations, and the Kenora CRC is scheduled to open in the spring of 2007.

The container fibre lines at the existing two (2) stream MRF have continued to operate with upgrades and replacement of equipment. However, the increase in materials associated with renewed awareness as a result of the Green Cart Program has placed a great deal of stress on the facility. Although the next significant updates to the processing system at the MRF were scheduled for 2011, the review of the collection triggered an opportunity to revisit the processing aspect of the recycling system for 2008 and consider moving to single stream processing and collection.

A single stream processing system would complete the implementation of the components in SWMMP Recommendation 4, and further contribute to the development of an integrated waste management system for Hamilton.

c) Provincial Waste Management Strategy

In April 2004, the Provincial government released a waste management strategy for Ontario to improve the management of waste and to reduce reliance on landfills. The strategy
included a diversion target of 60%, with the intent being to find a sustainable solution for managing waste in Ontario.

A discussion paper was released on June 10, 2004, on a number of issues related to waste diversion, including the following that relate to recycling programs:

- setting provincial diversion objectives;
- setting residential diversion targets to be achieved predominantly through blue box and composting programs;
- consideration of banning of recyclables and organics from landfills;
- new diversion technologies; and
- education and awareness programs.

The Provincial Waste Management Strategy sets the stage upon which municipal performance will be judged in the future. It confirms that the City’s SWMMP is the appropriate path for the City to fulfil its contribution to the provincial strategy and waste diversion target.
SUMMARY OF RESULTS - RFP C11-127-06 RECYCLING COLLECTION SERVICE

In August 2006, Hamilton City Council decided to end the current contract for recycling collection services effective March 28, 2008. Council directed staff to review options for the City’s recycling collection service including recycling collection services totally by public sector collection staff, totally by private sector (contracted) collection and 50/50 public sector/private sector collection. Other items being reviewed included single stream recycling collection, two (2) stream recycling collection, four (4) day collection week, and five (5) day collection week.

Staff prepared a Request for Proposals document for the provision of recycling collection services to begin on March 31, 2008. The RFP included the projects outlined in Table 1 in order to obtain pricing on various options being investigated.

<table>
<thead>
<tr>
<th>Table 1 - RFP C11-127-06 Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>A</td>
</tr>
<tr>
<td>B</td>
</tr>
<tr>
<td>C</td>
</tr>
<tr>
<td>D</td>
</tr>
<tr>
<td>E</td>
</tr>
<tr>
<td>F</td>
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<tr>
<td>G</td>
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<tr>
<td>H</td>
</tr>
<tr>
<td>I</td>
</tr>
<tr>
<td>J</td>
</tr>
<tr>
<td>K</td>
</tr>
<tr>
<td>L</td>
</tr>
</tbody>
</table>

Note* - Curbside/Roadside collection to be completed by public sector staff.

The RFP was issued on November 17, 2006 and closed on December 21, 2006. Five (5) addenda were issued to address revisions to the RFP document as well as questions from Proponents. A copy of the draft Contract was included in Addendum #3. A mandatory Proponent’s meeting was held on November 24, 2006 at the City’s Central Composting Facility and was attended by eighteen (18) representatives from fifteen (15) companies. Three (3) proposals were submitted. The companies that submitted proposals include Halton Recycling Ltd., National Waste Services Inc., and Miller Waste Systems. All of the proposals submitted were in compliance with the City’s requirements as determined by the Purchasing Section.

A two (2) step evaluation process was used, which required the technical and financial submissions to be reviewed and evaluated separately. Step 1 involved the evaluation of the technical submission and Step 2 was the financial evaluation. Proponents who achieved at least the minimum score of two-hundred and forty (240) out of three-hundred (300) points for the vehicle portion of the submission and overall score of eight-hundred (800) out of one-thousand (1,000) points for their technical submission proceeded to Step 2.
Table 2 provides a summary of the total estimated contract price for the five (5) year contract for each of the projects in the RFP from the proponents:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$24,944,693</td>
<td>$21,902,099</td>
<td>$32,449,198</td>
</tr>
<tr>
<td>B</td>
<td>$41,133,035</td>
<td>$38,990,190</td>
<td>$53,775,478</td>
</tr>
<tr>
<td>C</td>
<td>$26,266,423</td>
<td>$24,309,162</td>
<td>$33,530,081</td>
</tr>
<tr>
<td>D</td>
<td>$43,386,086</td>
<td>$43,429,678</td>
<td>$55,337,986</td>
</tr>
<tr>
<td>E</td>
<td>$21,479,870</td>
<td>$21,563,171</td>
<td>$29,592,093</td>
</tr>
<tr>
<td>F</td>
<td>$34,642,146</td>
<td>$38,293,870</td>
<td>$48,026,568</td>
</tr>
<tr>
<td>G</td>
<td>$23,074,420</td>
<td>$23,970,999</td>
<td>$30,473,657</td>
</tr>
<tr>
<td>H</td>
<td>$38,408,430</td>
<td>$42,691,279</td>
<td>$50,388,560</td>
</tr>
<tr>
<td>I</td>
<td>$4,091,312</td>
<td>$2,762,125</td>
<td>$7,760,406</td>
</tr>
<tr>
<td>J</td>
<td>$4,108,354</td>
<td>$3,531,803</td>
<td>$7,921,431</td>
</tr>
<tr>
<td>K</td>
<td>$4,087,768</td>
<td>$2,720,046</td>
<td>$7,760,406</td>
</tr>
<tr>
<td>L</td>
<td>$4,108,354</td>
<td>$3,467,535</td>
<td>$7,921,431</td>
</tr>
</tbody>
</table>

The main highlights of the RFP C11-127-06 financial results:

- On average, five (5) day collection costs approximately 7% less than four (4) day collection;
- On average, single-stream collection costs approximately 9% less than two (2) stream collection for the various projects.

The lowest cost proposal for each project from RFP C11-127-06 has been incorporated into the City’s recycling services financial model to establish the total system costs for the proposed recycling systems.
The public service review included the evaluation of vehicle requirements and staffing costs for each of the scenarios that the public sector might deliver. The review did not consider the scenarios involving the collection of semi-automated blue carts and festivals.

It was decided that the team would calculate costing on each scenario assuming provision of curbside recycling collection service only and in addition would cost out the scenario if single stream recycling collection service were integrated with its existing curbside service of garbage and organics. A total of eight (8) collection scenarios were costed with different truck requirements for each option.

Supply and Delivery of Waste Collection/Recycling Vehicles in Various Configurations - C11-62-06

Tender C11-62-06 was issued on Friday, November 10, 2006 and asked for quotes on four (4) different truck styles (25 cubic yard dual stream 60/40 split rear packer, 25 cubic yard single stream rear packer, 33 cubic yard dual stream 60/40 side loader, 33 cubic yard single stream, side loader) based on the requirements for the eight (8) scenarios.

The tender closed on Friday, December 1, 2006. A total of five (5) submissions were received from Altruck International Truck Centre, Eastgate Truck Centre, Fanotech Enviro Inc., Joe Johnson Equipment Inc., and, Shu-Pak Equipment Inc. The tender from Fanotech was rejected as non-compliant.

During the evaluation it was determined that there was a clarity concern in the specifications and a post closure addendum needed to be issued. Shu-Pak did not bid on the post closure addendum.

The tender results are shown in Table 1.

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Joe Johnson Equipment Inc.</th>
<th>Altruck International Truck Centre</th>
<th>Eastgate Truck Centre</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 cy dual stream, 60/40 split rear packer</td>
<td>NB*</td>
<td>$195,781</td>
<td>$193,988</td>
</tr>
<tr>
<td>25 cy single stream rear packer</td>
<td>$152,579</td>
<td>$153,300</td>
<td>$154,258</td>
</tr>
<tr>
<td>33 cy dual stream, 60/40 split rear packer</td>
<td>$225,540</td>
<td>$225,690</td>
<td>$225,147</td>
</tr>
<tr>
<td>33 cy single stream side loader</td>
<td>$205,682</td>
<td>$205,832</td>
<td>NB</td>
</tr>
</tbody>
</table>

NB* - means the particular truck configuration was not bid.

The low bidders are shown in bold. These are the costs that are used in the public service delivery costing, based on the type and number of trucks required for each option.

The 25 cubic yard dual stream truck would be used in two (2) stream collection of the waste collection A Zones. The 25 cubic yard single stream vehicle would be used for the collection of garbage in the A Zones in the integrated scenario. The 33 cubic yard trucks would be required in either single or two (2) stream scenarios where public sector forces would collect the curbside recyclables in all of the waste collection A and B Zones, where large expanses of rural area would be involved.
Public Service Delivery Costing

The internal costing was completed for each of the options involving City staff as outlined in Table 2. The costing includes the results of the truck tender, carrying charges and all staffing costs (collection operators, foremen, lead hands, mechanics and financial assistant).

<table>
<thead>
<tr>
<th>Project</th>
<th>Annual Cost (millions)</th>
<th>No. of Trucks to Be Purchased</th>
<th>No. of Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>2a</td>
<td>$4.6</td>
<td>25+3*</td>
<td>40</td>
</tr>
<tr>
<td>2b</td>
<td>$4.31</td>
<td>22+3*</td>
<td>36</td>
</tr>
<tr>
<td>3a</td>
<td>$9.9</td>
<td>53+6*</td>
<td>88</td>
</tr>
<tr>
<td>3b</td>
<td>$9.5</td>
<td>48+6*</td>
<td>81</td>
</tr>
<tr>
<td>5a</td>
<td>$4.3</td>
<td>23+3*</td>
<td>38</td>
</tr>
<tr>
<td>5b</td>
<td>$4.1</td>
<td>21+3*</td>
<td>34</td>
</tr>
<tr>
<td>6a</td>
<td>$9.0</td>
<td>47+6*</td>
<td>80</td>
</tr>
<tr>
<td>6b</td>
<td>$8.6</td>
<td>43+6*</td>
<td>73</td>
</tr>
<tr>
<td>5c</td>
<td>$2.6</td>
<td>11+2*</td>
<td>26</td>
</tr>
<tr>
<td>5d</td>
<td>$1.4</td>
<td>4+2*</td>
<td>12</td>
</tr>
</tbody>
</table>

* Number of pick-up trucks required

Projects that involve the collection of the entire City by public forces (3a, 3b, 6a and 6b) have significantly more capital investment in collection vehicles. It would not be possible to accommodate all of the fleet at Wentworth Street. Consideration has been given to the possibility of modifying the east portion of the Materials Recycling Facility to accommodate the fleet. It was estimated that the cost associated with this is $900,000 and it is part of the MRF retrofit capital. All fleet accommodation is being reviewed in the Yards Rationalization Study.

The ability to co-collect organics and recyclable materials in Projects 5c and 5d significantly reduces the public sector cost as only eleven (11) new collection vehicles are required in these integrated systems. These vehicles could be accommodated with the existing fleet at Wentworth Street.

The costs for each of the options were incorporated into the financial analysis.
SUMMARY OF RESULTS - SINGLE STREAM PROCESSING DESIGN, BUILD & OPERATE REQUEST FOR PROPOSALS - C11-128-06

In August 2006, Hamilton City Council decided to end the current contract for recycling collection services effective March 28, 2008. Council directed staff to review various options for the recycling program including single stream collection. The City’s existing two (2) stream processing system would need to be replaced with a single stream processing system in order to accommodate single stream recycling collection.

Staff prepared a Request for Proposals (RFP) document for the design, construction and operation of a Single Stream Processing System at the City’s Materials Recycling Facility (MRF). The RFP allowed Proponents the opportunity to submit a base proposal as well as a maximum of two (2) alternative proposals. The base proposal required a processing capacity of 70,000 tonnes per year (on a two [2] shift basis, eight [8] hours per shift, with a maximum of fourteen [14] operating hours per day). The system must be capable of processing at a minimum rate of twenty (20) tonnes per hour. The RFP also requested that the single stream processing system be designed in a manner so that it can be readily expanded to process 120,000 tonnes per year if the facility is converted to a regional MRF in the future. Proponents were asked to provide optional pricing for the 120,000 tonnes single stream processing system; however, the optional pricing was not evaluated as part of the RFP process.

The RFP was issued on December 4, 2006 and closed on February 21, 2007. A mandatory Proponent’s meeting was held on December 11, 2006 at the City’s Central Composting Facility and was attended by eighteen (18) representatives from eighteen (18) companies.

Nine (9) addenda were issued to address revisions to the RFP document as well as questions from Proponents. A draft contract was included as part of the RFP process.

The City received proposals from Canada Fibers Limited, Halton Recycling Ltd., and Miller Waste Systems. All of the proposals submitted were in compliance with the City’s requirements as determined by the Purchasing Section. The City used a two (2) step evaluation process, which required the technical submission and financial submission to be reviewed and evaluated separately. Step 1 involved the evaluation of the technical submission and Step 2 was the financial evaluation. Proponents who achieved at least the minimum score of seven-hundred (700) points for their technical submission proceeded to Step 2.
Table 1 provides a summary of the capital costs and the total contract price for each proposal:

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Proposal Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada Fibers Limited - Base Proposal</td>
<td>Capital = $15,109,011 Operating = $29,360,302</td>
</tr>
<tr>
<td>Halton Recycling Ltd. - Base Proposal</td>
<td>Capital = $16,909,427 Operating = $47,961,538</td>
</tr>
<tr>
<td>Halton Recycling Ltd. - Alternative Proposal No. 1</td>
<td>Did not meet minimum score in the Technical Evaluation</td>
</tr>
<tr>
<td>Halton Recycling Ltd. - Alternative Proposal No. 2</td>
<td>Did not meet minimum score in the Technical Evaluation</td>
</tr>
<tr>
<td>Miller Waste Systems - Base Proposal</td>
<td>Capital = $20,026,019 Operating = $65,818,420</td>
</tr>
<tr>
<td>Miller Waste Systems - Alternative Proposal No. 1</td>
<td>Did not meet minimum score in the Technical Evaluation</td>
</tr>
</tbody>
</table>

Proposal cost includes the following:

(a) Capital costs for the design and construction of the Single-Stream Processing Facility and supplemental costs for optical sorting equipment for plastic tubs and polycarbonate containers; and

(b) Operating costs include the base processing fee (from October 2008 to December 2017), plus or minus the incremental processing fee for optical sorting of plastic tubs and polycarbonate containers, and the premium for fibre.

Based on the evaluation process, Canada Fibers Limited is the Preferred Proponent for this RFP as the lowest acceptable proposal. The costs from the Canada Fibers Limited proposal were incorporated into all of the single stream collection systems (4a, 4b, 5a, 5b, 5c, 5d, 6a, 6b) for the financial analysis. If the decision is to proceed with single stream processing, the City would enter into discussions with Canada Fibers Limited to finalize the contract that was part of the RFP.
FOUR (4) DAY COLLECTION WEEK REVIEW

The Four (4) Day Collection Week Review Team commenced their task in October 2006. The review was undertaken in response to the direction from Council relative to Report PW06033a.

Consideration was given to the following aspects in the review of a potential change from the present five (5) day to a four (4) day collection week:

1) Operations
   a) Collections
   b) Facilities
   c) Communications
2) Labour Relations
   • CUPE Local 5167
3) Costing
4) Other Municipal Information
5) Conclusion

The benefits of a four (4) day collection week are considered to be:

• Facilitation of route optimization
• Reduction in vehicle use, wear and tear, maintenance
• Reduction in fuel consumption and therefore Greenhouse Gas emissions
• Provision of three (3) day weekends for collection staff to rest with a goal of a healthier workforce and fewer WSIB claims
• Elimination of need for overtime on the Saturday following statutory holiday Mondays

1) Operations
   a) Collections

Moving to a four (4) day collection week would result in a work week of four (4) ten (10) hour days, Tuesday to Friday. The key reason for Tuesday to Friday, as opposed to Monday to Thursday, is to eliminate collection and associated overtime costs of collection work on Saturdays following a Monday statutory holiday (approximately four [4] per year) without changing collection days in those weeks.

For the services provided by the public sector collection staff, consideration is required in association with the collective bargaining agreements with CUPE Locals 5167 and 1041. This will be discussed under the Labour Relations section.

For services provided by National Waste Services Inc., discussions have been undertaken and the company has agreed that a change from five (5) day to four (4) day collection is within the terms of their contract and could be accommodated with no additional cost to the City provided that there is flexibility in the hours of collection and Transfer Station operations and flexibility to interchange Transfer Station destination. This has the potential to impact on the operating costs for the Transfer Stations, unless the flexibility could be addressed on an as required basis as the exception and not the norm. However the frequency of this cannot be predicted.

The four (4) day or five (5) day collection week for recyclable materials was addressed through Contract C11-127-06, and the resulting costs. The RFP results are provided in
Appendix C and show that there would be additional costs to change to a four (4) day collection week.

Internal costing was completed for the four (4) day options for both waste and recycling collection by City forces and the results are provided in Appendix D. Cost savings ranged from $200,000 to $1.2 million per year in moving to a four (4) day collection week.

The White Goods & Scrap metal program was also reviewed. Tender C11-126-06 was issued to obtain pricing for both five (5) and four (4) day collection schedules. The pricing was significantly higher than the current costs and as such it was recommended in report PW07029 that the program be ended and the tender cancelled. This was approved by Committee of the Whole as Item 5.2.1(d)(i) on March 29, 2007 as part of the 2007 budget process.

b) Facilities

There are two (2) areas of potential impact for facilities, the Transfer Stations and the Resource Recovery Centre. Consideration was given to closing the Community Recycling Centres on Monday to coincide with the collection schedule however a Monday closing would have a significant impact on the public, particularly with no collection service on Monday following the weekend. Some savings may be achieved in not having some contracted staff on-site however revenues may be reduced as well.

A review of the Transfer Station capacity was undertaken with the assistance of Jacques Whitford Limited and in consultation with Waste Management of Canada Corporation (WMCC), the operator of the Transfer Stations. It was determined that the tipping floors can accommodate the daily increases of receiving five (5) days’ material in four (4) days, however that the tipping floors would remain open six (6) days per week for purposes of receiving waste from the Community Recycling Centres and shipping waste to the landfill. There may be a need to increase loading equipment and transfer vehicles. WMCC indicated that contract costs would only increase if the decreased tonnages projected for garbage were realized. These cost increases are based on a sliding formula and although there is not expected to be an impact early in the implementation, tonnages would be monitored and operating cost impact determined in annual budget processes beyond 2008.

It is estimated that closing the transfer stations one (1) day per week would result in annual lost revenues of $141,000.

c) Communications

Making the four (4) day collection option as efficient as possible may result in collection day changes for up to 80% of residents. This will require significant one-time communication costs and transitional customer service costs of approximately $362,000.

The one-time communication activities would include a direct mail piece to be sent to residents impacted by the change (approximately $50,000), similar to the approach taken during the waste collection harmonization that followed amalgamation. Additional print and radio advertising would cost approximately $135,000. Customer service staffing of two (2) FTEs would be required at the Customer Contact Centre for a period of six (6) months at a cost of $177,000.
2) **Labour Relations**

The collective bargaining agreement with CUPE Local 5167 (Article 5.1) requires that a change in the work schedule must have the unanimous agreement of the work group, in this case the Waste Collection staff.

Several discussions with the Human Resources Labour Relations staff, union representatives and the work group were held. Informal polling indicated that CUPE Local 5167 employees in the collection work group were not in favour of moving to a four (4) day work week. Formal polling of the four (4) day work week and other alternatives also indicated that staff was not in favour.

Four (4) day week alternatives could be an item for consideration during future contract negotiations.

3) **Costing**

The costs relating to a four (4) day collection week operation were incorporated into the financial analysis. The ten (10) year costs for both the five (5) day and four (4) day options are presented in Table 1. Four (4) day options are bolded.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Total Ten (10) Year Costs ($ Millions)</th>
<th>Difference from Five (5) Day Cost (NPV in $millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Cash Flow</td>
<td>Net Present Value</td>
</tr>
<tr>
<td><strong>Two Stream Recycling Collection &amp; Processing Options</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Status Quo</td>
<td>Current system</td>
<td>$537.9</td>
<td>$406.7</td>
</tr>
<tr>
<td>1a</td>
<td>Five (5) days, 100% Contracted</td>
<td>$519.9</td>
<td>$393.8</td>
</tr>
<tr>
<td>1b</td>
<td>Four (4) days, 100% Contracted</td>
<td><strong>$531.0</strong></td>
<td><strong>$402.3</strong></td>
</tr>
<tr>
<td>2a</td>
<td>Five (5) days, 50/50 split</td>
<td>$535.6</td>
<td>$405.8</td>
</tr>
<tr>
<td>2b</td>
<td>Four (4) days, 50/50 split</td>
<td><strong>$535.9</strong></td>
<td><strong>406.0</strong></td>
</tr>
<tr>
<td>3a</td>
<td>Five (5) days, 100% City</td>
<td>$553.8</td>
<td>$419.6</td>
</tr>
<tr>
<td>3b</td>
<td>Four (4) days, 100% City</td>
<td><strong>$545.9</strong></td>
<td><strong>$413.7</strong></td>
</tr>
<tr>
<td><strong>Single Stream Recycling Collection &amp; Processing Options</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4a</td>
<td>Five (5) days, 100% Contracted</td>
<td>$528.5</td>
<td>$400.9</td>
</tr>
<tr>
<td>4b</td>
<td>Four (4) days, 100% Contracted</td>
<td><strong>$537.9</strong></td>
<td><strong>$408.1</strong></td>
</tr>
<tr>
<td>5a</td>
<td>Five (5) days, 50/50 split</td>
<td>$548.0</td>
<td>$415.8</td>
</tr>
<tr>
<td>5b</td>
<td>Four (4) days, 50/50 split</td>
<td><strong>$548.0</strong></td>
<td><strong>$415.8</strong></td>
</tr>
<tr>
<td>6a</td>
<td>Five (5) days, 100% City</td>
<td>$559.9</td>
<td>$424.9</td>
</tr>
<tr>
<td>6b</td>
<td>Four (4) days. 100% City</td>
<td><strong>$552.9</strong></td>
<td><strong>$419.7</strong></td>
</tr>
<tr>
<td><strong>Single Stream Integrated Options for City Collection (Organics + Recycling)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5c</td>
<td>Five (5) days, 50/50 split</td>
<td>$529.7</td>
<td>$401.9</td>
</tr>
<tr>
<td>5d</td>
<td>Four (4) days, 50/50 split</td>
<td><strong>$519.1</strong></td>
<td><strong>$393.9</strong></td>
</tr>
</tbody>
</table>
4) **Other Municipal Information**

A number of municipalities in Ontario have a four (4) day collection week including Ajax, Peel, Pickering, Richmond Hill, Vaughan, Toronto, Wellington County and Thunder Bay.

Generally the collection week is Tuesday to Friday, and collection is delayed one (1) day for Good Friday, Canada Day, Christmas Day and New Years Day when required.

Cost information and savings is vague and inconclusive as some municipalities do not do costing based on their total systems.

5) **Conclusions**

While operationally feasible to implement, pursuing a four (4) day week at this time is not recommended at this time. While there may be cost savings for some collection options, the labour issue could not be addressed within the current CUPE Local 5167 Collective Agreement.
### SUMMARY OF NON-FINANCIAL IMPLICATIONS OF RECYCLING SYSTEM ALTERNATIVES

<table>
<thead>
<tr>
<th>Implications (over next five [5] years)</th>
<th>Environmental</th>
<th>Social/Operational</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recycling System</strong></td>
<td><strong>Diverion</strong></td>
<td><strong>GHG Emissions</strong></td>
</tr>
<tr>
<td><strong>Two (2) Stream Collection and Processing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>1a</strong></td>
<td>Small increase</td>
<td>Small decrease</td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>1b</strong></td>
<td>Small increase</td>
<td>No reduction</td>
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<td></td>
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</tr>
<tr>
<td><strong>2a</strong></td>
<td>Small increase</td>
<td>No reduction</td>
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<tr>
<td><strong>2b</strong></td>
<td>Small increase</td>
<td>No reduction</td>
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</tr>
<tr>
<td><strong>3a</strong></td>
<td>Small increase</td>
<td>No reduction</td>
</tr>
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<td>Implications (over next five [5] years)</td>
<td>Environmental</td>
<td>Social/Operational</td>
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</tr>
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<td><strong>Recycling System</strong></td>
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<td><strong>GHG Emissions</strong></td>
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<td><strong>Two (2) Stream Collection and Processing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3b</td>
<td>Small increase</td>
<td>No reduction</td>
</tr>
<tr>
<td><strong>Single Stream Collection and Processing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4a</td>
<td>Larger potential increase</td>
<td>Larger decrease due to more diversion</td>
</tr>
<tr>
<td>4b</td>
<td>Larger potential increase</td>
<td>Larger decrease due to more diversion</td>
</tr>
<tr>
<td>5a</td>
<td>Larger potential increase</td>
<td>Larger decrease due to more diversion</td>
</tr>
<tr>
<td>5b</td>
<td>Larger potential increase</td>
<td>Larger decrease due to more diversion</td>
</tr>
</tbody>
</table>
## Implications (over next five [5] years)

<table>
<thead>
<tr>
<th>Recycling System</th>
<th>Diversion</th>
<th>GHG Emissions</th>
<th>Flexibility</th>
<th>Activity Based Costing (ABC)</th>
<th>Municipal Service Control</th>
<th>Staffing</th>
<th>Fleet Accommodation</th>
<th>Public Education/ Acceptance</th>
<th>Potential for Service Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Single Stream Collection and Processing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6a</td>
<td>Larger potential increase</td>
<td>Larger decrease due to more diversion</td>
<td>Regional MRF option, option for future collection</td>
<td>No comparativeness - City collection</td>
<td>Greater, all public fleet</td>
<td>80 FTE</td>
<td>Requires use of area at Burlington Street East for recycling fleet, and additional capital cost</td>
<td>- no sort - education on non-recyclables</td>
<td>Easier to implement / expand recycling to MFD</td>
</tr>
<tr>
<td>6b</td>
<td>Larger potential increase</td>
<td>Larger decrease due to more diversion</td>
<td>Regional MRF option, option for future collection</td>
<td>No comparativeness - City collection</td>
<td>Greater, all public fleet</td>
<td>73 FTE</td>
<td>Requires use of area at Burlington Street East for recycling fleet, and additional capital cost</td>
<td>- no sort - education on change in collection days - education on non-recyclables</td>
<td>Easier to implement / expand recycling to MFD</td>
</tr>
<tr>
<td><strong>Integrated Single Stream Collection and Processing</strong></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5c</td>
<td>Larger potential increase</td>
<td>Largest potential decrease due to fleet rationalization and increased diversion</td>
<td>Co-collection and Regional MRF option</td>
<td>No comparativeness - different collection method at curb (City co-collect SSO and recyclables, Contractor collects just recyclables)</td>
<td>Split 50/50</td>
<td>26 FTE</td>
<td>Can be accommodated at Wentworth Street</td>
<td>- no sort - education on non-recyclables</td>
<td>Easier to implement / expand recycling to MFD</td>
</tr>
<tr>
<td>5d</td>
<td>Larger potential increase</td>
<td>Largest potential decrease due to fleet rationalization and increased diversion</td>
<td>Co-collection and Regional MRF option</td>
<td>No comparativeness - different collection method at curb (City co-collect SSO and recyclables, Contractor collects just recyclables)</td>
<td>Split 50/50</td>
<td>12 FTE</td>
<td>Can be accommodated at Wentworth Street</td>
<td>- no sort - education on change in collection days - education on non-recyclables</td>
<td>Easier to implement / expand recycling to MFD</td>
</tr>
</tbody>
</table>
SYSTEM DESCRIPTIONS AND EVALUATION

System 1a - Two (2) Stream, Contracted, Five (5) Day Collection

Description
- Contracted collection service for curbside/roadside two (2) stream collection of acceptable recyclable materials from eligible units in collection zones A1, A2, A3, B1, B2, B3, recycling collection for festivals and special events city wide, and automated cart collection city wide over a five (5) day collection schedule.
- Five (5) day collection
- Two (2) stream recycling collection and processing
- Existing Materials Recycling Facility (MRF) with improvements (improved fibre line, new container line) would operate until March 2013
- New single stream MRF would operate from April 2013 onwards

Implications

Financial
- Total ten (10) year system cost - $519.9 million
- Impact on Operating Budget from 2008 to 2010 - see Appendix J
- Ten (10) year (2008 to 2013) Net Present Value - $393.8 million

Environmental Impacts/Benefits
- Improvements to container line would result in small increase in diversion rate and reduction of materials sent to landfill. Requires other initiatives (bag limits, etc.) for larger increases in capture and diversion of recyclables.
- Greenhouse Gas (GHG) emission reductions:
  - Fleet - Negligible GHG emission reductions. Total collection fleet decreases from twenty-nine (29) to twenty-seven (27) vehicles, however will drive same kilometre of roadway collecting same materials over longer day for contracted forces.
  - Diversion - Some GHG emission reductions due to increased recovery of recyclables at the MRF.

Social/Operational
- Flexibility in service provision:
  - No easy co-collection option. Can only co-collect if alternate collection of recyclables, one week fibre and the next containers.
  - Current two (2) stream facility has insufficient capacity for Regional MRF option.
- Comparativeness (Activity Based Costing):
  - No ability to compare Activity Based Costing (ABC) for recycling collection by City forces and contract as fully contracted recyclables collection.
- Municipal service control:
  - No change in municipal service control, all recycling collection and processing operations would be contracted. Service control through provisions in service contracts.
- Staffing - No change to current City staffing levels. Collection contractor supervised by existing staff.
- Fleet accommodation - No requirements for fleet accommodation.
- Public education/acceptance:
  - Continued requirement to sort recyclables until 2013.
    - Makes full expansion/participation in recycling for multi-unit dwellings more challenging.
  - No program changes therefore no requirement for additional public education. Public education should focus on reducing contamination of the recyclable materials and improving curbside set-outs.
- Potential for service improvements - No change to service levels, no potential for service changes until 2013 at end of recycling contract.
### System 1b - Two (2) Stream, Contracted, Four (4) Day Collection

**Description**
- Contracted collection service for curbside/roadside two (2) stream collection of acceptable recyclable materials from eligible units in collection zones A1, A2, A3, B1, B2, B3, recycling collection for festivals and special events city wide, and automated cart collection city wide over a four (4) day collection schedule.
- Four (4) day collection
- Existing MRF facility with improvements (improved fibre line, new container line) would operate until March 2013
- New single stream MRF would operate from April 2013 onwards

**Implications**
The implications are the same as System 1a with the following exceptions relating to a four (4) day collection schedule:

**Financial**
- Total ten (10) year system cost - $531 million
- Ten (10) year (2008 to 2013) Net Present Value - $402.3 million

**Environmental Impacts/Benefits**
- Greenhouse Gas (GHG) emission reductions:
  - Fleet - No GHG emission reductions. Total collection fleet increases from twenty-nine (29) to thirty-one (31) vehicles. Will drive same kilometres of roadway collecting same materials just over fewer days.

**Social/Operational**
- Flexibility in service provision:
  - Additional flexibility to address service disruptions as one (1) “extra” day most weeks that could be used to collect materials if delayed by weather, etc. Also allows for vehicle servicing on non-collection days that should minimize service disruption.
- Public education/acceptance:
  - Would change collection days for many areas, requires significant education at start-up of new contract.
System 2a - Two (2) Stream, Public/Contracted, Five (5) Day Collection

Description

- Contracted collection service for curbside/roadside two (2) stream collection of acceptable recyclable materials from eligible units in collection zones B1, B2, B3, recycling collection for festivals and special events city wide, and automated cart collection city wide over a five (5) day collection schedule.
- City recycling collection service for collection zones A1, A2, A3
- Five (5) day collection
- Existing MRF facility with improvements (improved fibre line, new container line) would operate until March 2013
- New single stream MRF would operate from April 2013 onwards

Implications

Financial

- Total ten (10) year system cost - $535.6 million
- Impact on Operating Budget from 2008 to 2010 - see Appendix J
- Ten (10) year (2008-2013) Net Present Value - $405.8 million

Environmental Impacts/Benefits

- Improvements to container line would result in small increase in diversion rate and reduction of materials sent to landfill. Requires other initiatives (bag limits, etc.) for larger increases in capture and diversion of recyclables.
- Greenhouse Gas (GHG) emission reductions:
  - Fleet - No GHG emission reductions. Total collection fleet increases from twenty-nine (29) to thirty-nine (39) vehicles. Will drive same kilometres of roadway collecting same materials.
  - Diversion - Some GHG emission reductions due to increased recovery of recyclables at the MRF.

Social/Operational

- Flexibility in service provision:
  - No easy co-collection option. Can only co-collect if alternate collection of recyclables, one week fibre and the next containers.
  - Current two (2) stream facility has insufficient capacity for Regional MRF option.
- Comparativeness (Activity Based Costing):
  - Ability to compare Activity Based Costing (ABC) for collection by City forces and contracted recyclables collection.
- Municipal service control:
  - More municipal service control then status quo with 50/50 collection operations. In the event of service disruption, municipal forces could service the B zones.
- Staffing - Forty (40) additional staff for collection services in A zones.
- Fleet accommodation - Additional City fleet (twenty-eight [28] vehicles) would require accommodation at 1579 Burlington Street East., additional capital cost to convert area of existing facility.
- Public education/acceptance:
  - Continued requirement to sort recyclables until 2013.
    - Makes full expansion/participation in recycling for multi-unit dwellings more challenging.
  - No program changes therefore no requirement for additional public education. Public education should focus on reducing contamination of the recyclable materials and improving curbside set-outs.
  - Potential for service improvements - No change to service levels, no potential for service improvements or changes until 2013 and end of recycling contract.
System 2b - Two (2) Stream, Public/Contracted, Four (4) Day Collection

Description

- Contracted collection service for two (2) stream collection of acceptable recyclable materials from eligible units in collection zones B1, B2, B3, recycling collection for festivals and special events city wide, and automated cart collection city wide over a four (4) day collection schedule.
- City recycling collection service for collection zones A1, A2, A3
- Four (4) day collection
- Existing MRF facility with improvements (improved fibre line, new container line) would operate until March 2013
- New single stream MRF would operate from April 2013 onwards

Implications

The implications for this system are the same as System 2a with the following exceptions:

Financial

- Total ten (10) year system cost - $535.9 million
- Ten (10) year (2008-2013) Net Present Value - $406 million

Environmental Impacts/Benefits

- Greenhouse Gas (GHG) emission reductions:
  - Fleet - No GHG emission reductions. Total collection fleet increases from twenty-nine (29) to thirty-eight (38) vehicles. Will drive same kilometres of roadway collecting same materials as status quo system.
  - Diversion - Some GHG emission reductions due to increased recovery of recyclables at the MRF.

Social/Operational

- Flexibility in service provision:
  - Additional flexibility to address service disruptions as one (1) “extra” day most weeks that could be used to collect materials if delayed by weather, etc. Also allows for vehicle servicing on non-collection days that should minimize service disruption.
- Staffing - Thirty-six (36) additional staff for collection services in A zones.
- Fleet accommodation - Additional City fleet (twenty-five [25] vehicles) would require accommodation at 1579 Burlington Street East, additional capital cost to convert area of existing facility.
- Public education/acceptance:
  - Would change collection days for many areas, requires significant education at start-up of new contract.
System 3a - Two (2) Stream, Public, Five (5) Day Collection

Description

- Contracted collection service for automated cart collection of two (2) stream acceptable recyclable materials and recycling collection for festivals and special events city wide over a five (5) day collection schedule within the entire City of Hamilton.
- City recycling collection service for curbside/roadside city wide (collection zones A1, A2, A3, B1, B2, B3)
- Five (5) day collection
- Existing MRF facility with improvements (improved fibre line, new container line) would operate until March 2013
- New single stream MRF would operate from April 2013 onwards

Implications

Financial

- Total ten (10) year system cost - $553.8 million
- Impact on Operating Budget from 2008 to 2010 - see Appendix J
- Ten (10) year (2008-2013) Net Present Value - $419.6 million

Environmental Impacts/Benefits

- Improvements to container line would result in small increase in diversion rate and reduction of materials sent to landfill. Requires other initiatives (bag limits, etc.) for larger increases in capture and diversion of recyclables.
- Greenhouse Gas (GHG) emission reductions:
  - Fleet - No GHG emission reductions. Total collection fleet increases from twenty-nine (29) to fifty-four (54) vehicles. Will drive same kilometres of roadway collecting same materials.
  - Diversion - Some GHG emission reductions due to increased recovery of recyclables at the MRF.

Social/Operational

- Flexibility in service provision:
  - No easy co-collection option. Can only co-collect if alternate collection of recyclables, one week fibre and the next containers.
  - Current two (2) stream facility has insufficient capacity for Regional MRF option.
- Comparativeness (Activity Based Costing):
  - No ability to compare services as all recycling collection undertaken with City forces.
- Municipal service control:
  - Highest level of municipal service control compared to status quo as all curbside recycling collection undertaken with City forces.
- Staffing - Eighty-eight (88) additional staff for collection services for all zones.
- Fleet accommodation - Additional City fleet (sixty [60] vehicles in total) would have to be accommodated at 1579 Burlington Street East and capital required to upgrade facility for fleet management.
- Public education/acceptance:
  - Continued requirement to sort recyclables until 2013.
    - Makes full expansion/participation in recycling for multi-unit dwellings more challenging.
  - No program changes therefore no requirement for additional public education. Public education focus to reduce contamination of the recyclable materials and improve curbside set-outs.
  - Potential for service improvements - No change to service levels, no potential for service improvements or changes until 2013 and end of recycling contract.
**System 3b - Two (2) Stream, Public, Four (4) Day Collection**

**Description**
- Contracted collection service for automated cart collection of two (2) stream acceptable recyclable materials and recycling collection for festivals and special events city wide over a four (4) day collection schedule within the entire City of Hamilton.
- City recycling collection service for curbside/roadside city wide (collection zones A1, A2, A3, B1, B2, B3)
- Four (4) day collection
- Existing MRF facility with improvements (improved fibre line, new container line) would operate until March 2013
- New single stream MRF would operate from April 2013 onwards

**Implications**
The implications of this system are the same as System 3a with the following exceptions:

**Financial**
- Total ten (10) year system cost - $545.9 million
- Ten (10) year (2008-2013) Net Present Value - $413.7 million

**Environmental Impacts/Benefits**
- Greenhouse Gas (GHG) emission reductions:
  - Fleet - No GHG emission reductions. Total collection fleet increases from twenty-nine (29) to forty-eight (48) vehicles. Will drive same kilometres of roadway collecting same materials.

**Social/Operational**
- Flexibility in service provision:
  - Additional flexibility to address service disruptions as one (1) “extra” day most weeks that could be used to collect materials if delayed by weather, etc. Also allows for vehicle servicing on non-collection days that should minimize service disruption.
- Municipal service control:
  - Highest level of municipal service control compared to status quo as all curbside collection undertaken with City forces.
- Staffing - Eight-one (81) additional staff for collection services for all zones.
- Fleet accommodation - Additional City fleet (fifty-four [54] vehicles in total) would have to be accommodated at 1579 Burlington Street East and capital required to upgrade facility for fleet management.
- Public education/acceptance:
  - Would change collection days for many areas, requires significant education at start-up of new contract.
System 4a - Single Stream, Contracted, Five (5) Day Collection

Description

- Contracted collection service for curbside/roadside single stream collection of acceptable recyclable materials from eligible units in collection zones A1, A2, A3, B1, B2, B3, recycling collection for festivals and special events city wide and automated cart collection city wide
- Five (5) day collection
- Single stream recycling collection and processing
- New single stream MRF March 2008

Implications

Financial

- Total ten (10) year system cost - $528.5 million
- Impact on Operating Budget from 2008 to 2010 - see Appendix J
- Ten (10) year (2008-2013) Net Present Value - $400.9 million

Environmental Impacts/Benefits

- Diversion:
  - Potential increase in participation in Blue Box program particularly for Multi-family dwellings (MFD), additional tonnages collected.
  - Increase in average non-recyclable residue in Blue Box from 4 to 8%.
  - Potential for increase in diversion by up to 7% if control non-recyclable residue and achieve very high participation and set-out rates.
- Greenhouse Gas (GHG) emission reductions:
  - Fleet - No significant GHG emission reductions. Total collection fleet decreases from twenty-nine (29) to twenty-two (22) vehicles. Will drive same kilometres of roadway collecting same materials over longer day for contracted forces.
  - Diversion - GHG emission reductions due to increased recovery of recyclables at the MRF.

Social/Operational

- Flexibility in service provision:
  - This option allows for the potential to operate a Regionalized MRF, providing greater processing efficiencies and potentially capital funding from Waste Diversion Ontario (WDO) and/or Federation of Canadian Municipalities (FCM) to support this approach.
- Comparativeness (Activity Based Costing):
  - No ability to compare Activity Based Costing (ABC) for collection by City forces and contract as fully contracted recyclables collection.
- Municipal service control:
  - No change in municipal service control, all collection and processing operations would be contracted. Service control only through provisions in service contracts.
- Staffing - No changes to current City staffing levels. Collection contractor supervised by existing staff.
- Fleet accommodation - No requirements for fleet accommodation.
- Public education/acceptance:
  - No sort approach easier for residents, especially those in multi-family unit dwellings.
  - Public education campaign required for single stream, need to focus on getting contaminants out of the blue box.
- Potential for service improvements - Single stream recycling approach is easier to implement in MFD.
System 4b - Single Stream, Contracted, Four (4) Day Collection

**Description**

- Contracted collection service for curbside/roadside single-stream collection of acceptable recyclable materials from eligible units in collection zones A1, A2, A3, B1, B2, B3, recycling collection for festivals and special events city wide and automated cart collection city wide.
- Four (4) day collection
- Single stream recycling collection and processing
- New single stream MRF March 2008

**Implications**

The implications for this system are the same as System 4a with the following exceptions:

**Financial**

- Total ten (10) year system cost - $537.9 million
- Ten (10) year (2008-2013) Net Present Value - $408.1 million

**Environmental Impacts/Benefits**

- Greenhouse Gas (GHG) emission reductions:
  - Fleet - No significant GHG emission reductions. Total collection fleet decreases from twenty-nine (29) to twenty-eight (28) vehicles, however will drive same kilometres of roadway collecting same materials over longer day for contracted forces.

**Social/Operational**

- Flexibility in service provision:
  - Additional flexibility to address service disruptions as one (1) “extra” day most weeks that could be used to collect materials if delayed by weather, etc. Also allows for vehicle servicing on non-collection days that should minimize service disruption.
- Public education/acceptance:
  - Would change collection days for many areas, requires significant education at start-up of new contract.
System 5a - Single Stream, Public/Contracted, Five (5) Day Collection

Description

- Contracted collection service for curbside/roadside single stream collection of acceptable recyclable materials from eligible units in collection zones B1, B2, B3, recycling collection for festivals and special events city wide and automated cart collection city wide.
- City recycling collection service for collection zones A1, A2, A3
- Five (5) day collection
- Single stream recycling collection and processing
- New single stream MRF March 2008

Implications

Financial

- Total ten (10) year system cost - $548.0 million
- Impact on Operating Budget from 2008 to 2010 - see Appendix J
- Ten (10) year (2008-2013) Net Present Value - $415.8 million

Environmental Impacts/Benefits

- Diversion:
  - Potential increase in participation in Blue Box program particularly for Multi-family dwellings (MFD), additional tonnages collected.
  - Increase in average non-recyclable residue in Blue Box from 4 to 8%.
  - Potential for increase in diversion by up to 7% if control non-recyclable residue and achieve very high participation and set-out rates.
- Greenhouse Gas (GHG) emission reductions:
  - Fleet - No significant GHG emission reductions. Total collection fleet increases from twenty-nine (29) to thirty-five (35) vehicles, however will drive same kilometres of roadway collecting same materials over longer day for contracted forces.
  - Diversion - GHG emission reductions due to increased recovery of recyclables at the MRF.

Social/Operational

- Flexibility in service provision:
  - This option allows for the potential to operate a Regionalized MRF, providing greater processing efficiencies and potentially capital funding from the WDO and/or FCM to support this approach.
- Comparativeness (Activity Based Costing):
  - Ability to compare Activity Based Costing (ABC) for collection by City forces and contracted recyclables collection.
- Municipal service control:
  - More municipal service control then status quo with 50/50 collection operations. In the event of service disruption, municipal forces could service the B zones.
- Staffing - Thirty-eight (38) additional collection staff.
- Fleet accommodation - Additional City fleet (twenty-six [26] vehicles) would require accommodation at 1579 Burlington Street East, additional capital cost to convert area of existing facility.
- Public education/acceptance:
  - No sort approach easier for residents, especially those in multi-family unit dwellings.
  - Public education campaign required for single stream, need to focus on getting contaminants out of the blue box.
- Potential for service improvements - Single stream recycling approach is easier to implement in MFD.
System 5b - Single Stream, Public/Contracted, Four (4) Day Collection

Description

- Contracted collection service for curbside/roadside single-stream collection of acceptable recyclable materials from eligible units in collection zones B1, B2, B3, recycling collection for festivals and special events city wide and automated cart collection city wide.
- City recycling collection service for collection zones A1, A2, A3
- Four (4) day collection
- Single stream recycling collection and processing
- New single stream MRF March 2008

Implications

The implications of this system are the same as System 5a with the following exceptions:

Financial

- Total ten (10) year system cost - $548 million
- Ten (10) year (2008-2013) Net Present Value - $415.8 million

Environmental Impacts/Benefits

- Greenhouse Gas (GHG) emission reductions:
  - Fleet - No GHG emission reductions. Total collection fleet increases from twenty-nine (29) to thirty-six (36) vehicles, however will drive same kilometres of roadway collecting same materials over longer day for contracted forces.

Social/Operational

- Flexibility in service provision:
  - Additional flexibility to address service disruptions as one (1) “extra” day most weeks that could be used to collect materials if delayed by weather, etc. Also, allows for vehicle servicing on non-collection days that should minimize service disruption.
- Staffing - Thirty-four (34) additional collection staff.
- Fleet accommodation - Additional City fleet (twenty-four [24] vehicles) would require accommodation at 1579 Burlington Street East, additional capital cost to convert area of existing facility.
- Public education/acceptance:
  - Would change collection days for many areas, requires significant education at start-up of new contract.
System 5c - Single Stream, Integrated, Five (5) Day Collection

Description

- Contracted collection service for curbside/roadside single stream collection of acceptable recyclable materials from eligible units in collection zones B1, B2, B3, recycling collection for festivals and special events city wide and automated cart collection city wide.
- City recycling collection service for collection zones A1, A2, A3, integrated with existing waste/organics collection so that recyclables and organics are co-collected and waste is collected as a separate stream.
- Five (5) day collection
- Single stream recycling collection and processing
- New single stream MRF March 2008

Implications

Financial

- Total ten (10) year system cost - $529.7 million
- Impact on Operating Budget from 2008 to 2010 - see Appendix J
- Ten (10) year (2008-2013) Net Present Value - $401.9 million

Environmental Impacts/Benefits

- Diversion:
  - Potential increase in participation in Blue Box program particularly for Multi-family dwellings (MFD), additional tonnages collected.
  - Increase in average non-recyclable residue in Blue Box from 4 to 8%.
  - Potential for increase in diversion by up to 7% if control non-recyclable residue and achieve very high participation and set-out rates.
- Greenhouse Gas (GHG) emission reductions:
  - Fleet - GHG emission reductions. Total collection fleet decreases from twenty-nine (29) to twenty-three (23) vehicles. City fleet is used more efficiently to co-collect materials reducing the total tonne/km required to collect materials.
  - Diversion - GHG emission reductions due to increased recovery of recyclables at the MRF.

Social/Operational

- Flexibility in service provision:
  - This option allows for co-collection of recyclables and organics, which is more efficient than the current method of collection as both material streams are processed in facilities at the same location.
  - This option allows for the potential to operate a Regionalized MRF, providing greater processing efficiencies and potentially capital funding from the WDO and/or FCM to support this approach.
- Comparativeness (Activity Based Costing):
  - No ability to compare Activity Based Costing (ABC) for collection by City forces and contract as the collection methodology used by City and contracted forces will be different.
- Municipal service control:
  - Greater level of service control as collection will be partially provided by City forces. In the event of strike or other service disruption this can provide greater flexibility.
- Staffing - Twenty-six (26) additional collection staff.
- Public education/acceptance:
  - No sort approach easier for residents, especially those in multi-family unit dwellings.
  - Public education campaign required for single stream, need to focus on getting contaminants out of the blue box.
- Potential for service improvements - Single stream recycling approach is easier to implement in MFD.
System 5d - Single Stream, Integrated, Four (4) Day Collection

Description

- Contracted collection service for curbside/roadside single stream collection of acceptable recyclable materials from eligible units in collection zones B1, B2, B3, recycling collection for festivals and special events city wide and automated cart collection city wide.
- City recycling collection service for collection zones A1, A2, A3, integrated with existing waste/organics collection so that recyclables and organics are co-collected and waste is collected as a separate stream.
- Four (4) day collection
- Single stream recycling collection and processing
- New single stream MRF March 2008

Implications

The implications of this system are the same as System 5c with the following exceptions:

Financial

- Total ten (10) year system cost - $519.1 million
- Ten (10) year (2008-2013) Net Present Value - $393.9 million

Environmental Impacts/Benefits

- Greenhouse Gas (GHG) emission reductions:
  - Fleet - GHG emission reductions. Total collection fleet decreases from twenty-nine (29) to nineteen (19) vehicles. City fleet is used more efficiently to co-collect materials reducing the total tonne/km required to collect materials.

Social/Operational

- Flexibility in service provision:
  - Additional flexibility to address service disruptions as one (1) “extra” day most weeks that could be used to collect materials if delayed by weather, etc. Also allows for vehicle servicing on non-collection days that should minimize service disruption.
- Staffing - Twelve (12) additional collection staff.
- Fleet accommodation - Additional fleet (four [4] vehicles) can be accommodated at 330 Wentworth Street.
- Public education/acceptance:
  - Would change collection days for many areas, requires significant education at start-up of new contract.
- Potential for service improvements - Single stream recycling approach is easier to implement in MFD.
**System 6a - Single Stream, Public, Five (5) Day Collection**

**Description**

- Contracted collection service for automated cart collection of single stream acceptable recyclable materials and recycling collection for festivals and special events city wide over a five (5) day collection schedule within the entire City of Hamilton.
- City recycling collection service for curbside/roadside city wide (collection zones A1, A2, A3, B1, B2, B3)
- Five (5) day collection
- Single stream recycling collection and processing
- New single stream MRF March 2008

**Implications**

**Financial**

- Total ten (10) year system cost - $559.9 million
- Impact on Operating Budget from 2008 to 2010 - see Appendix J
- Ten (10) year (2008-2013) Net Present Value - $424.9 million

**Environmental Impacts/Benefits**

- Diversion:
  - Potential increase in participation in Blue Box program particularly for Multi-family dwellings (MFD), additional tonnages collected.
  - Increase in average non-recyclable residue in Blue Box from 4 to 8%.
  - Potential for increase in diversion by up to 7% if control non-recyclable residue and achieve very high participation and set-out rates.
- Greenhouse Gas (GHG) emission reductions:
  - Fleet - No GHG emission reductions. Total collection fleet increases from twenty-nine (29) to forty-seven (47) vehicles, will drive same kilometres of roadway collecting same materials as current system.
  - Diversion - GHG emission reductions due to increased recovery of recyclables at the MRF.

**Social/Operational**

- Flexibility in service provision:
  - This option allows for the potential to operate a Regionalized MRF, providing greater processing efficiencies and potentially capital funding from the WDO and/or FCM to support this approach.
- Comparativeness (Activity Based Costing):
  - No ability to compare services as all recycling collection undertaken with City forces.
- Municipal service control:
  - Highest level of municipal service control compared to status quo as all curbside recycling collection undertaken with City forces.
- Staffing - Eighty (80) additional collection staff.
- Fleet accommodation - Additional City fleet (fifty-three [53] vehicles) would require accommodation at 1579 Burlington Street East, additional capital cost to convert area of existing facility.
- Public education/acceptance:
  - No sort approach easier for residents, especially those in multi-family unit dwellings.
  - Public education campaign required for single stream, need to focus on getting contaminants out of the blue box.
- Potential for service improvements - Single stream recycling approach is easier to implement in MFD
System 6b - Single Stream, Public, Four (4) Day Collection

Description
- Contracted collection service for automated cart collection of single stream acceptable recyclable materials and recycling collection for festivals and special events city wide over a four (4) day collection schedule within the entire City of Hamilton.
- City recycling collection service for curbside/roadside city wide (collection zones A1, A2, A3, B1, B2, B3)
- Four (4) day collection
- Single stream recycling collection and processing
- New single stream MRF March 2008

Implications
The implications of this system are the same as System 6a with the following exceptions:

Financial
- Total ten (10) year system cost - $552.9 million
- Ten (10) year (2008-2013) Net Present Value - $419.7 million

Environmental Impacts/Benefits
- Greenhouse Gas (GHG) emission reductions:
  - Fleet - No GHG emission reductions. Total collection fleet increases from twenty-nine (29) to forty-three (43) vehicles, will drive same kilometres of roadway collecting same materials as current system.

Social/Operational
- Flexibility in service provision:
  - Additional flexibility to address service disruptions as one (1) “extra” day most weeks that could be used to collect materials if delayed by weather, etc. Also allows for vehicle servicing on non-collection days that should minimize service disruption.
- Staffing - Seventy-three (73) additional collection staff.
- Fleet accommodation - Additional City fleet (forty-nine [49] vehicles) would require accommodation at 1579 Burlington Street East, additional capital cost to convert area of existing facility.
FINANCIAL ANALYSIS – GENERAL ASSUMPTIONS

The following high level assumptions were made to develop the costing for all of the systems analysis:

- General cost and wage increases for 2008 and beyond on average is 3% per year
- Fuel costs will increase in 2008 and beyond @ 14% (source Fleet and Facilities)
- Garbage collection costs will not be affected by any of the scenarios (remain constant)
- Tonnage data will increase by 1% per year after 2013 (Solid Waste Planning projections)
- Two (2) stream and single stream commodity revenue projections from ReMM, February 2007
- Waste Diversion Ontario (WDO) funding levels for 2008 and beyond are unknown, assume funding levels to remain the same as 2007 funding (baseline)
- Glass estimates are based on 2006 actual; no changes have been estimated for glass reduction due to deposit/return system implemented February 5, 2007 for LCBO containers
- The design/build capital for the single-stream processing system requires financing beyond 2007, terms are ten (10) years, 6% interest rate
- Weekly service levels for garbage/organics will not change
- Residue from single-stream processing will be 8-11% for 2008 and beyond
- Escalation for single-stream processing costs is 3% per year in 2009 and beyond
- Net Present Value is calculated based on a 5% interest rate
## 2008 Recycling Review Summary Financial Analysis

### Option Status Quo

<table>
<thead>
<tr>
<th>Option</th>
<th>Status Quo</th>
<th>1a</th>
<th>2a</th>
<th>3a</th>
<th>4a</th>
<th>5a</th>
<th>6a</th>
<th>5c</th>
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<tr>
<td></td>
<td>Dual Stream</td>
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<td></td>
<td>100% Contracted</td>
<td>50 / 50</td>
<td>100% In House</td>
<td>100% Contracted</td>
<td>50 / 50</td>
<td>100% In House</td>
<td>100% Contracted</td>
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<td>Ranking</td>
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<td>4</td>
<td>5</td>
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### 10 Year System Costs (2008-2017)

<table>
<thead>
<tr>
<th>Cost Category</th>
<th>Status Quo</th>
<th>1a</th>
<th>2a</th>
<th>3a</th>
<th>4a</th>
<th>5a</th>
<th>6a</th>
<th>5c</th>
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<tr>
<td>Total Curbside Collection Costs</td>
<td>$101,970,359</td>
<td>$82,562,217</td>
<td>$97,930,626</td>
<td>$116,035,752</td>
<td>$71,150,924</td>
<td>$91,654,114</td>
<td>$105,288,847</td>
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<td>Festivals &amp; Blue Cart Collection Costs</td>
<td>$6,642,418</td>
<td>$5,736,481</td>
<td>$6,079,321</td>
<td>$6,110,456</td>
<td>$7,821,795</td>
<td>$7,821,795</td>
<td>$6,014,788</td>
<td>$7,821,795</td>
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<tr>
<td>Other Costs (operating &amp; capital financing)</td>
<td>$397,238,183</td>
<td>$399,552,025</td>
<td>$399,552,025</td>
<td>$399,552,025</td>
<td>$406,176,987</td>
<td>$405,250,322</td>
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<tr>
<td><strong>Total 10 Year Costs</strong></td>
<td><strong>$537,937,052</strong></td>
<td><strong>$519,936,815</strong></td>
<td><strong>$535,648,063</strong></td>
<td><strong>$553,784,325</strong></td>
<td><strong>$528,469,440</strong></td>
<td><strong>$548,045,965</strong></td>
<td><strong>$559,873,690</strong></td>
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**Net Present Value**

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<th>Cost Category</th>
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<th>4a</th>
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<tbody>
<tr>
<td>Total Curbside Collection Costs</td>
<td>$406,679,387</td>
<td>$393,799,331</td>
<td>$405,777,474</td>
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<td>Festivals &amp; Blue Cart Collection Costs</td>
<td>(12,880,056)</td>
<td>(901,913)</td>
<td>(12,962,029)</td>
<td>(5,774,048)</td>
<td>(912,022)</td>
<td>(18,217,450)</td>
<td>(4,764,901)</td>
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<td><strong>Total 3 Year Budget Increase</strong></td>
<td><strong>$4,149,729</strong></td>
<td><strong>$2,980,964</strong></td>
<td><strong>$4,423,783</strong></td>
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<td><strong>$4,581,585</strong></td>
<td><strong>$5,058,790</strong></td>
<td><strong>$6,690,407</strong></td>
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<td><strong>Total 3 Year Budget Increase %</strong></td>
<td>13.3%</td>
<td>9.5%</td>
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<td>19.9%</td>
<td>11.5%</td>
<td>17.6%</td>
<td>21.4%</td>
<td>12.2%</td>
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The second least costly system would be 5c which would also be lower than the baseline system costs although not significantly. This would be the preferred system should Council wish to have a portion of the collection done by the public collection staff. This system can only be implemented for single stream collection.

Should Council wish to select this option, the following recommendations would implement the system:

a) That the recycling program commencing March 31, 2008 be approved, consisting of:
   i) The design, build and operation of a single stream processing system;
   ii) Single stream recycling collection by public forces in waste collection A Zones;
   iii) Single stream recycling collection by contracted service in waste collection B Zones;
   iv) Single stream recycling collection of blue carts and festivals by contracted service for blue carts city wide and at festivals;
   v) A five (5) day waste collection week.

b) That Canada Fibers Limited be selected as the Successful Proponent for the Design, Build, Operate of a Single Stream Processing System at the City of Hamilton’s Materials Recycling Facility, 1579 Burlington Street East, Contract C11-128-06 for a contract period of ten (10) years commencing March 31, 2008 (lowest of three [3] acceptable proposals);

c) That the General Managers of Public Works and Finance and Corporate Services be authorized and directed to finalize the terms and conditions of the contract with Canada Fibers Limited, all in accordance with the provisions of the Request for Proposals Contract No. C11-128-06 for the Single Stream Processing System;

d) That Halton Recycling Ltd. be selected as the Successful Proponent for Project E of Recycling Collection Services for the City of Hamilton, Contract C11-127-06, for single stream collection of recyclable materials from the B Zones, and for the city wide semi-automated collection of blue carts and festivals for a contract period of five (5) years commencing March 31, 2008 (lowest of three [3] acceptable proposals);

e) That the General Managers of Public Works and Finance and Corporate Services be authorized and directed to finalize the terms and conditions of the contract with Halton Recycling Ltd., all in accordance with the provisions of the Request for Proposals Contract No. C11-127-06 for Project E for the Collection of Recyclable Materials in the B Zones and blue carts and festivals;


g) That the capital funding associated with the recycling program be funded as follows:
   i) The capital funding for the design and build of the single stream processing system and associated contingencies, in the amount of $16.35 million, be funded from the following capital accounts:
      • Account 5120594527 for $8.45 million (2007)
- Account 5120594527 for $4.88 million (2008)
  ii) The capital funding for the eleven (11) collection vehicles, in the amount of $1.9 million, be funded from capital account 5120790100 and that the balance of the funds in this account in the amount of $3.02 million be transferred to account 5120594527.

h) That the 2008 operating budget include:
  i) The operating costs associated with the single stream processing system, commencing on March 31, 2008;
  ii) The collection of recyclable materials; and
  iii) The staffing requirement of twenty-six (26) full-time positions to carry out the work associated with the collection of recyclable materials in the waste collection A Zones including twenty-two (22) collection operators, one (1) lead hand, one (1) foreman, one (1) financial assistant and one (1) mechanic;

i) That the Mayor and City Clerk be authorized and directed to execute any contract successfully negotiated with Canada Fibers Limited and Halton Recycling Ltd., pursuant to recommendations (c) and (e) above, together with any necessary ancillary documents, all in a form satisfactory to the City Solicitor.