



City of  
**Peterborough**

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**To: Members of the Committee of the Whole**

**From: W. H. Jackson, Director of Utility Services**

**Meeting Date: March 31, 2014**

**Subject: Report USWM14-001  
Proposed Mattress and Box Spring Recycling Program**

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## **Purpose**

A report to recommend the implementation of a full-scale mattress and box spring recycling program at the Peterborough County/City Waste Management Facility (PCCWMF).

## **Recommendations**

That Council approve the recommendations outlined in Report USWM14-001 dated March 31, 2014 of the Director of Utility Services as follows:

- a) That the implementation of a mattress and box spring recycling program commence September 2, 2014 at the Peterborough County/City Waste Management Facility (PCCWMF);
- b) That By-Law No. 07-027 (Waste Management By-law) be amended to add clean mattresses and box springs as banned items at the County/City Waste Management Facility and to eliminate Schedule B which identifies fees, as it is provided for in the annual user fee by-law;
- c) That Appendix A of User Fee By-law 13-179 be amended to incorporate a \$10.00 fee per mattress and a \$10.00 fee per box spring for each item delivered to the County/City Waste Management Facility effective September 2, 2014.

## **Budget and Financial Implications**

It is anticipated recycling mattresses and box springs (“mattresses”) at the PCCWMF will cost about \$180,000 annually shared equally by the City and County.

Similar to the fee-per-unit charge for Freon containing appliances, a fee-per-unit charge for mattresses and box springs would help offset the cost of recycling. With a charge of \$10.00 per unit the net annual cost is estimated at around \$75,000. The 2015 PCCWMP budget will be increased to account for this additional expense.

The prorated 2014 net cost is estimated to be in the order of \$25,000. The year end “true-up” will include this additional cost.

Off-setting these operating costs are the significant savings in air space that would be realized by this program. Each mattress or box spring is on average  $\frac{3}{4}$  of a cubic meter in size with the potential to compact to 40% of their original size once land filled, depending upon the weight and height of material land filled above it. Recent estimates have established the value of a cubic meter of landfill space at almost \$35.00. Accordingly, while the net cost to recycle each mattress would be \$6.70, it costs almost \$12.00 to land fill that same mattress.

## **Background**

### **Rationale for Proposal**

The City’s 2013 Waste Management Master Plan included as its second highest priority, the recommendation that a diversion program for bulky goods, including mattresses, be implemented at the PCCWMF. Acting on this recommendation, staff initiated a six-week study in the fall of 2013 at the PCCWMF to determine actual numbers of mattresses coming to the facility and to identify any operational issues associated with a recycling program. With the average mattress weighing 27 kilograms and consuming up to  $\frac{3}{4}$  of a cubic meter of space, these items are quickly eating up valuable landfill space.

### **The Pilot**

The PCCWMF operator, Tomlinson, agreed to coordinate all aspects of a pilot program, and proposed a set fee of \$16.70 per unit to do this work. This covered loading, storage, transportation and recycling. The six-week pilot ran well, and no operational issues were identified by the contractor. During that time, 939 mattresses (five trailer loads) were diverted for recycling. An additional 310 mattresses went direct to the tip face from large commercial haulers and were not retrieved. Commercial sources contributed 57.5% of the recycled mattresses, and of those, approximately 20% were from larger retailers, including Leons, Heritage Furniture, and The Clearing House Outlet. Most commercial materials came in smaller loads, with 1-5 mattresses per load.

The portion contributed by residential sources came from County transfer stations (5.5%), City operations (1%), and individual residential customers (36%). Extrapolating these results, approximately 11,000 mattresses and box springs go into the landfill each year. If the majority of those were diverted into recycling, a savings of at least 3000 cubic meters of landfill space (almost 0.75 years of additional landfill life) could be realized.

### **Feedback to Notifications**

Before proceeding any further on this proposal, it was determined through the City/County Waste Management Steering Committee that information should be sent out to gauge public reaction to the idea. Notices describing a proposed mattress recycling program were sent to all local generators of this waste stream in December 2013 and again in January, 2014. A total of sixty-two different retailers, institutions, waste haulers and community housing corporations were contacted. Advertisements were also placed in both local newspapers each time. A total of three responses were received back: one from a waste hauler which objected to the idea of being fined if they brought in banned materials (i.e. mattresses); another from a mattress retailer, which confirmed that they planned to continue bringing us their mattresses and would pay the \$10 fee; and a third from a non-profit agency which suggested the \$10 fee would be challenging for them as non-profits.

Based on the number and nature of responses, there appears to be minimal resistance to the proposed program from the commercial sector. No comments were received from the general public.

A number of potential issues were highlighted by six County townships, including:

- Limited space at some transfer stations for an additional bin.
- Need for Environmental Compliance Approvals from the MOE for separating mattresses.
- Concerns about increases in roadside dumping in the County.
- Additional costs to implement (proper storage, recycling charge).
- Adequate time needed for Townships to advise politicians, investigate options and potential costs, review operational impacts, implement ECA amendments, as well as adjust budgets, send notifications, and develop resident education systems.

### **Implementation Plan**

In consideration of the responses received and the success of the pilot project, it is proposed that:

- I. A full-scale mattress and recycling program begin on September 2, 2014
- II. The Township transfer stations be allowed until September 7, 2015 to implement the mattress and box-spring recycling program due to the significant issues some of them need to work through;
- III. The PCCWMF Disposal By-Law (07-027) be amended to include 'clean and dry mattresses and box springs' as banned materials at the facility;

- IV. A charge of \$10 per unit be levied for each mattress and/or box spring at the PCCWMF with the User Fee By-law being amended accordingly; and
- V. Haulers found to have mattresses or box springs in mixed loads going to the tip face be issued warnings and fines, as is done for all other banned materials.

The proposed implementation schedule is as follows:

<b>Mattress and Box Spring Recycling - Implementation Schedule</b>		
1.	Establish Formal Agreement with Tomlinson	April 15 – June 15, 2014
2.	Promotion and Education Campaign	May 1 – September 30, 2014
3.	Send Written Notifications to Affected Parties	May 1, 2014
4.	Make Necessary Changes to Tracker Software	May 1, 2014
5.	Implement Program and Begin Charging Fees	September 2, 2014
6.	Township Compliance Date	September 7, 2015

Once the promotion and education campaign begins, it is possible that some people may wish to “do the right thing” and recycle their mattresses along with paying the \$10 per unit fee. Although there will be no enforcement protocol in place until September 2, 2014, staff will be receptive to this situation.

The Implementation Plan and Schedule were endorsed by the City-County Waste Management Steering Committee on March 3, 2014.

### **By-Law Amendments**

If approved as recommended, a Mattress Recycling program will require an amendment to the Waste Management By-Law #07-027, effective September 2, 2014. Within By-law #07-027, “Schedule A - Recyclable Materials” shall have the following additional items listed as being banned from general disposal:

- n) mattresses of all sizes, including futons. Excessively soiled, wet or infested mattresses excluded.
- o) box springs/bed springs of all sizes.

At the same time, it would be prudent to eliminate “Schedule B – Waste Management Tipping Fees” from this by-law. User Fees are amended annually as part of the budget approval and having a second by-law with the same information (although not always up-to-date) is confusing for both users and staff.

## Summary

Results of a 6-week pilot indicated there would be significant value in implementing a full-scale mattress recycling program. The City's Waste Management Master Plan also identified this initiative as having the potential to divert 5% to 8% of the waste stream (by weight). More important than weight is the savings in landfill space that could be achieved. If approximately 11,000 mattresses can be diverted each year from the tip face, this equates to at least 3000 cubic meters of landfill space saved, or about 0.75 years of additional landfill life at our current location. There appears to be minimal resistance to the proposed program based on the number and nature of responses to notifications and advertisements.

Submitted by,

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