

**DATE:** April 12, 2018**FILE:** 5380-02**TO:** Chair and Directors  
Comox Valley Regional District (Comox Strathcona Waste Management Board)**FROM:** Russell Dyson  
Chief Administrative OfficerSupported by James Warren  
Acting/ Chief Administrative  
Officer*J. Warren***RE: Mattress Diversion Pilot Program****Purpose**

The purpose of this report is to receive approval from the board to proceed with a five month mattress diversion pilot program at the Comox Valley Waste Management Centre (CVWMC). Also, to evaluate the efficiency and effectiveness for including mattress diversion at the Campbell River Waste Management Centre (CRWMC), to ensure consistent service delivery.

**Recommendation from the Chief Administrative Officer:**

THAT the board approve the implementation of a mattress diversion pilot program, facilitated internally, utilizing staff at the Comox Valley Waste Management Center.

**Executive Summary**

The Solid Waste Management plan (SWMP) targets 70 per cent diversion rate by 2022. In order to reach this target, the Comox Strathcona Waste Management (CSWM) service must implement various diversion programs at both the CVWMC and CRWMC. The mattress diversion pilot program initiative is a manageable project with the current resources in place and can be undertaken at the CVWMC. The key benefits associated with the trial:

- The mattress diversion pilot program will be undertaken for minimal cost (initial review)
- Process can be run safely with equipment and crew in place
- An extended trial will enable staff to review the challenges
- Ensure the cost to process is feasible over the long term
- Increase diversion of a difficult to landfill material
- Provide diversion of up to 90 per cent of mattress materials currently being landfilled

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Concurrence:

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### Background/Current Situation

The SWMP identifies diversion as one of the goals of the CSWM service. Implementing diversion programs to reduce the amount of landfilled waste is key to achieving our targets. In 2008, the CSWM ran a brief pilot for mattress diversion, due to budget, space, equipment available and staffing limitations, the program was abandoned and mattresses were once again landfilled.

In 2014, the Comox Valley Regional District (CVRD) was approached by Mattress Recycling, one of the first private sector mattress diversion companies in Western Canada. A proposal was submitted to the CVRD to collect and divert mattresses for a per unit surcharge of \$15. This would cover any costs, such as labour, transportation and processing at a Vancouver based recycling facility. At that time, the CSWM could not pursue the program.

In 2016, the Salvation Army approached the CVRD with a proposal for a mattress diversion pilot program. The Salvation Army, after testing several methods, determined that 90 per cent of the materials in mattresses, box springs and bulky upholstered furniture are recyclable. The Salvation Army provided the cost to the CSWM service at \$18.00 for each mattress and box spring and \$22.00 for each piece of upholstered furniture.

Historically, mattresses have always been classified as regular municipal solid waste and are charged accordingly. The minimum charge of \$10 allows for up to 100kg to be disposed of. After further discussion with the Salvation Army and a review of the proposed cost, it was decided to not proceed with the diversion pilot and explore the internal processing.

Table 1 below, provides an average weight for various sized mattress and box springs. All estimated total weights are below the 100 kg minimum charge. Customers can currently dispose of a set (box spring and mattress) of any size or multiple mattresses and/or box springs, for under \$10.

Size	Weight of Mattress (kg)	Weight of Box Spring (kg)	Total weight (kg)
Single / Twin	22 - 31	20 - 25	45 - 55
Double / Full	27 - 34	25 - 30	55 - 65
Queen	34 - 45	30 - 35	65 - 80
King	40 - 63	34 - 40	80 - 100

The CVWMC staff completed an experiment to understand what is required to break apart a box spring and mattress to divert all the recyclable materials. Utilizing the excavator, it was determined that staff could dismantle an average of 28 mattresses per hour. Processing would be undertaken as the mattresses accumulate and will be completed in an efficient and effective manner.

Staff propose a five month mattress diversion pilot program in order to collect data on the costs and time requirements to implement a full mattress diversion program at CSWM regional landfills. This assists in the management of our landfill space and placement as we transition to the new cell. Staff will present the data to the board in September 2018, if supported, an amendment to *Bylaw no. 170* would be presented to include mattresses and box springs with a separate fee structure within bylaws in *Schedule A*, effective January 2019. Staff will also bring forward a rate structure that reflects the cost of disposing of a complete set, box spring and mattress for recycling based on information gathered during the pilot.

### **Options**

The board has several options:

- 1) Allow staff to proceed with a mattress diversion pilot program and collect data for further consideration;
- 2) Proceed further investigations with the Salvation Army's proposal to collect and divert mattresses, box springs and upholstered furniture;
- 3) Direct staff to continue to landfill mattresses, box springs and large upholstered furniture.

At this time, given the SWMP diversion targets, staff are supportive of option 1.

### **Legal Factors**

If the board chooses to proceed with a mattress diversion program, then an amendment to Bylaw No. 170 is required to update the tipping fees and add mattresses and box springs to the divertible material item list.

### **Financial Factors**

The pilot program will be conducted with staff already processing and diverting waste on site. In order to evaluate the efficiency of this additional step to ensure no additional costs would be incurred, with the exception of machine operation costs while conducting the break down process. If there are any changes in staff's assessment the board will be updated at the September meeting