

DATE: August 29, 2018**FILE:** 5380-02**TO:** Chair and Directors
Comox Valley Regional District
(Comox Strathcona Waste Management Board)Supported by Russell Dyson
Chief Administrative Officer**FROM:** Russell Dyson
Chief Administrative Officer***R. Dyson*****RE: CSWM Mattress Diversion Pilot program**

Purpose

The purpose of this report is to update the Comox Strathcona Waste Management Board (Board) on the five month mattress diversion pilot program at the Comox Valley Waste Management Center (CVWMC) and to recommend the program roll out at the Campbell River Waste Management Center (CRWMC).

Recommendation from the Chief Administrative Officer:

THAT the Comox Strathcona Waste Management Board approve the implementation of a mattress diversion program at the Comox Valley Waste Management Center and the Campbell River Waste Management Center;

AND FURTHER THAT Bylaw No.170 be amended to exclude mattresses from regular municipal solid waste and include mattresses (weighing less than 100kg) as a diversion item, to be subject to the unit charge of \$6 per set;

AND FURTHER THAT mattresses be placed on the Schedule 'B' "Prohibited Waste" list of Bylaw No. 170, so that they are no longer eligible for landfilling;

AND FINALLY THAT the Comox Strathcona Waste Management Board authorize the Comox Strathcona Waste Management Service investigate an agreement with the Canadian Diabetes Association for textile recycling at the waste management facilities and depots.

Executive Summary

In order for the Comox Strathcona Waste Management (CSWM) service to advance towards achieving its 70 per cent diversion target by 2022, it must implement various diversion programs at regional landfill facilities. The CVWMC has conducted a five month mattress diversion pilot program in accordance with the directives provided in the Solid Waste Management Plan (SWMP) to advance towards a higher rate of diversion.

- Since mid-February 2018 there have been approximately 3000 mattresses processed;
- Each mattress takes a few minutes to process and costs are approximately \$4;
- Pilot has been successful in diverting between 90 to 98 per cent of the mattresses received;
- The average value of the airspace saved by diverting mattress is \$6 per mattress;
- Annually, it is estimated that the average airspace volume saved is 2650 cubic meters;
- The cost and closure of that average airspace is estimated to be \$33,500;
- The overall impact is positive.

Prepared by:

Concurrence:

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Berry and Vale Contracting	✓
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Background/Current Situation

Since 2008, the CSWM service has been approached several times with requests to conduct a mattress diversion program at a rate of approximately \$15-\$18 per mattress. The current cost of disposal for regular municipal waste weighing less than 100kg is \$10. Currently customers can bring multiple mattresses for disposal and still remain within the minimum rate of \$10. In April 2018 the Board approved implementation of a pilot program aimed at diverting mattress material from the landfill.

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

Passed at the April 19, 2018 Board meeting was the following resolution:

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

The mattress diversion pilot program was successful in diverting up to 98 per cent of the mattresses received. Staff stockpile the mattresses in order to efficiently process them in batches when there is opportunity. Staff were able to dismantle approximately 28 mattresses per hour. Calculating the amount of material diverted per mattress is not feasible due to the various composition of mattresses manufactured, however, all of the clean wood waste and metal is recycled, and it is estimated that only 2–10 per cent residuals remain after the mattresses are disassembled.

Currently, residual textile material is being used as a select waste buffer for the new cell 1 landfill. Staff will explore a possible agreement to increase textile recycling with the Canadian Diabetes Association, including materials from mattresses diversion processing. In the future there may be a provincial stewardship program which could include a charge collected at time of purchase.

Using equipment rather than staff to dismantle mattresses reduces the health and safety impact to staff and is an efficient use of existing equipment and resources.

Options

The Board has several options:

- 1) Proceed with the mattress diversion program described, and in addition to the CVWMC, begin collecting mattresses for diversion at the CRWMC, and amend Bylaw 170 to enable a \$6 unit charge per mattress set;
- 2) Complete further investigations of The Salvation Army's proposal to collect and divert mattresses, box springs and upholstered furniture;
- 3) Direct staff to landfill mattresses, box springs and large upholstered furniture.

At this time, given the pilot brings the CSWM service closer to achieving SWMP diversion targets, the low cost and high rate of success of the pilot program, and the positive feedback received from residents, staff recommend proceeding with option 1.

Financial Factors

The mattress diversion pilot program utilizes the existing CSWM equipment on site to dismantle mattresses. The mattresses are stockpiled and the equipment is used when available within normal operations of the CVWMC.

Staff also investigated processing mattresses directly at CRWMC, however found that it would not be feasible, or cost effective, based on additional equipment and staff requirements. Secondly, the CRWMC does not have an area to store and process the mattresses. It is recommended that mattresses from the CRWMC be periodically shipped to the CVWMC for processing. This will incur some additional shipping costs, but only until such time as the Campbell River landfill is closed and all waste is shipped to the Comox Valley. The CRWMC will benefit from the maximization of the remaining airspace.

Some important financial notes:

- Since mid-February 2018 there have been approximately 3000 mattresses processed;
- Each mattress takes a few minutes to process and costs are approximately \$4;
- Pilot has been successful in diverting between 90 to 98 per cent of the mattresses received;
- The average value of the airspace saved by diverting mattress is \$6 per mattress;
- Annually, it is estimated that the average airspace volume saved is 2650 cubic meters;
- The cost and closure of that average airspace is estimated to be \$33,500;
- The overall impact is positive.
- Bylaw 170 requires amendment to add the a \$6 per unit charge;
- The unit charge provides \$36,000 to complete additional work which is similar to the fridge processing undertaken at landfill currently.

Citizen/Public Relations

Residents participating in the mattress diversion pilot were pleased with the service offered, particularly the value of keeping the material from being landfilled. The CSWM service received positive feedback about the pilot, and residents that contacted the CSWM service staff felt \$6 per mattress was a reasonable cost.