

Recycle your mattress, and rest easy

By Karlee Weinmann
Minneapolis Star Tribune

In the Minneapolis-St. Paul metro area, residents buy about 350,000 new mattresses each year, according to the International Sleep Products Association. Of the old ones they replace, about half are reused or given away.

But the other half are discarded or dumped, causing problems when the mattresses — designed to last, not biodegrade — take up space without breaking down in landfills. Their sturdy steel springs are so difficult to compress that they can damage compactors, so entire mattresses end up getting dumped in landfills, where they tend to float to the top after other trash decomposes, dirty but intact.

Finally, in an age of increasing environmental awareness, mattress-recycling operations are beginning to crop up. Minnesota now has two, including one in southeast Minneapolis that's been fully functional since April.

"Welcome to Mattressville," Douglas Jewett said as he meandered through the basement of a Minneapolis warehouse, where dozens of mattresses stand on end, waiting to be stripped and gutted so the materials in them can be put to new uses.

A \$200,000 start-up boost from Hennepin County, Minn., helped Jewett — chief operating officer for PPL Industries, a nonprofit that offers hands-on skills training — start the service.

"Everything has to be recycled," said Jewett, who has a manufacturing background and has led recycling programs before. "The longer

you wait, the more it costs to get it back."

And when mattresses are filled with materials that could have lives beyond their original uses, such as the steel innards and polyurethane foam, finding a way to redistribute those commodities for reuse makes sense, Jewett said.

In the Minneapolis facility, a custom-built machine crams and shapes the mattresses' bare steel skeletons into a bale, which then is weighed, tagged and picked up, sold and reused. So far, the steel is the most valuable part of a discarded mattress with the most reuse potential. A given mattress' steel is worth about \$16 to PPL, Jewett said.

Many components of a mattress can be refashioned, if properly deconstructed. The steel and foam can be melted down, and the low-grade cotton shows promise for use in oil and storm water filtration, said Tim Hagen, research coordinator for the University of Minnesota-Duluth's [Natural Resources Research Institute](#). Hennepin County commissioned him in June 2008 to research new uses for old mattress materials and explore marketing those second-life products.

For now, the shoddy outer fabric and wood primarily are used to generate heat, but that could change as a push for mattress recycling yields further research, Hagen said.

"Like any recycling process, you've got to separate the individual components and properly prepare them for the marketplace," Hagen said.

Jewett anticipates his program will reach the 40,000-mattress-a-year mark within two years, though he estimated it'll be about a decade

before mattress recycling is integrated in the mainstream of refuse handling.

That's a reasonable goal, given the size of the metro area, said Greg Conkins, contributed goods manager for Goodwill Industries. He oversees Minnesota's first mattress-recycling program operated by Goodwill in Duluth.

For each of the past two years, about 17,000 pieces have been processed there, largely drawn through partnerships with 10 counties and their waste management services.

The Minneapolis operation, which charges a \$15-per-mattress fee, already has partnered with Hennepin and McLeod counties, the cities of Coon Rapids and Anoka, delivery service Suntrax Logistics and furniture retailer Room & Board, all of which bring discarded mattresses to PPL. Jewett expects more cooperation with counties and retailers as the program takes off.

People can bring mattresses to waste drop-off sites, and the municipalities will transport them to the recycling plant. The PPL plant will not accept dropoffs from individuals.

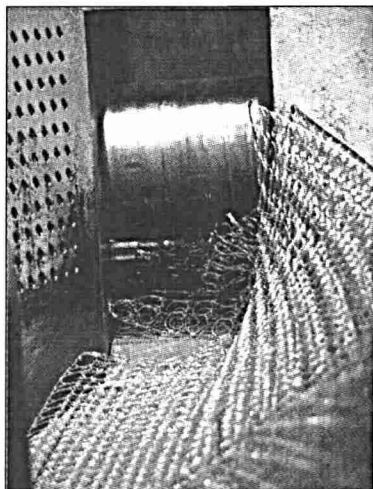
Despite anticipated growth, there still are difficulties associated with the emerging industry, now in its infancy.

"Some of the recycling markets have been challenging, but they slowly but surely overcome that," said Heidi Ringhofer, operations and maintenance supervisor for Western Lake Superior Sanitary District, who since its beginning in 2004 has been involved with the Duluth mattress-recycling operation.

Still, overall the industry is a slow-growing one, Ringhofer said. That's partly because there's a limited number of mattresses discarded — unlike the pervasive plastic bottles that people use and toss every day — and partly because of the labor-intensive process of stripping mattresses of their many individual components, Ringhofer added.

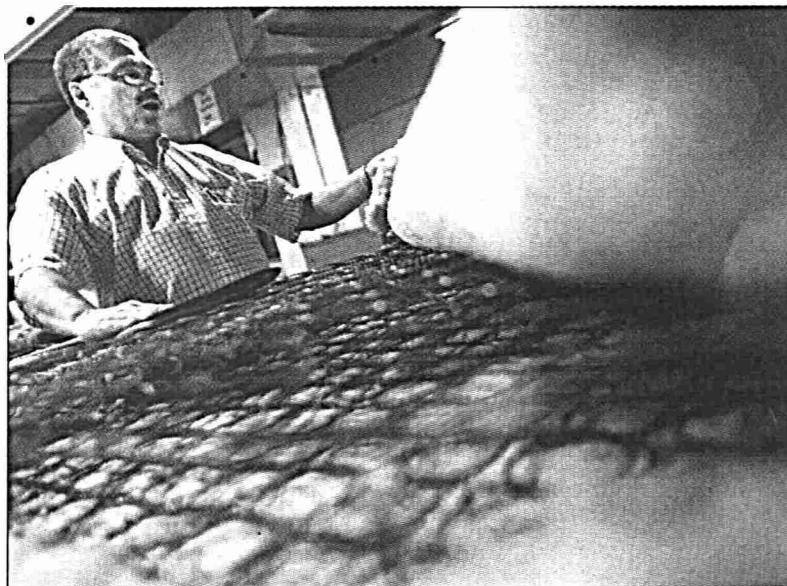
"They are big items to recycle, and there are such specific items in there," she said. "It's not like when you can recycle glass to glass or aluminum to aluminum."





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▲ A custom machine bales the mattress steel springs into a bundle that can be sold.



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▲ Douglas Jewett is the chief operating officer at Project for Pride in Living. PPL partnered with Hennepin County, Minn., to start a mattress recycling program, the second in the state and among only a few in the country.

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