



The State of the Mattress Recycling Industry

third edition

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**The Cascade Alliance has published previous versions of The State of the Mattress Recycling Industry in 2014 and 2016.*

“It is a major milestone, but is also just the beginning. We are still committed to making mattress collection and recycling in these states easier and more efficient for everyone.”

- Ryan Trainer, President of the Mattress Recycling Council, celebrating its millionth mattress recycled

Fewer mattresses clog U.S. landfills

Discarded mattresses and box springs, long the bane of landfill operators, have begun to be recycled in much larger quantities, thanks to product stewardship laws in three states and increasing interest and efforts in a handful of other locations. As more states take note of the success of legislated diversion, the multiple benefits – job creation, waste reduction, increased availability of usable commodities – could grow.

Americans dispose of an estimated 20 million mattresses and box springs every year and the vast majority end up in landfills or incinerators. That’s roughly 55,000 discarded each and every day.¹ They contribute 450 million pounds of waste and fill more than 100 million cubic feet of landfill space every year.² End-on-end, the number of disposed mattresses every year would circle the earth.

Bulky mattresses pose several challenges for landfills. They don’t compact well, take up a lot of space, create flammable air pockets, and the springs get tangled in the bulldozer compacting equipment, often damaging it. Mattresses contain non-biodegradable synthetic foam and fibers, plus hazardous flame retardant chemicals, which can leach into drinking water.³ That’s why municipalities and private waste haulers generally charge extra for disposing of a mattress. For example, in Rhode Island the cost of disposing of a used mattress set could run as high as \$50.

Good for the environment and good for the economy

Deconstructing mattresses in order to recycle their still-usable materials is an increasingly popular solution to this vexing waste problem. Once disassembled, up to 85 percent of the

¹ [Recycling v Landfill](#), Greenbedrecycling.com (visited on February 13, 2017)

² [100 Places to Recycle Your Old Mattress](#), SleeponLatex.com (visited on February 13, 2017)

³ Ibid



components can be recycled. Recycling one mattress saves 23 cubic feet of landfill space and repurposes up to 65 pounds of materials.⁴

Components and recycled uses⁵



On a per-ton basis, sorting and processing recyclables sustain 10 times more jobs than landfilling or incineration.⁶ Mattress recycling in particular is a labor-intensive endeavor. Many recyclers take apart box springs and mattresses manually. As the beds are being dismantled, materials are sorted and baled.⁷

Today, there are approximately 56 mattress recycling facilities in North America, a 30 percent increase over 2013.⁸ St. Vincent de Paul Society of Lane County pioneered mattress recycling in California in 2000, opening the first facility of its kind under the name DR3 Recycling in Oakland. The nonprofit opened a second operation in Oregon in 2004, and together the two plants diverted roughly 170,000 mattresses annually. In 2015, SVDP opened a third facility just outside of Sacramento, California.⁹ In 2016, the three operations combined recycled 302,463 mattresses. SVDP employs 46 people in its mattress recycling facilities.

However, recycling mattresses is not a profit-making, or even a break-even, business venture. The fluctuating revenue from the sale of commodities - steel, foam, fibers and wood – doesn't cover the labor costs to recycle the mattresses.¹⁰ For this to pencil out, recyclers have to be paid a per mattress fee. Because of the headaches and expenses involved in landfilling mattresses, paying to recycle mattresses is becoming more accepted. And the current recycling rate of 5 percent is expected to increase.

⁴ [100 Places to Recycle Your Old Mattress](#)

⁵ [Mattress Recycling Council](#) (visited on February 15, 2017)

⁶ [Recycling Means Business](#), Institute for Local Self-Reliance (visited on February 10, 2017)

⁷ [Mattress Recycling Business Opportunities](#), www.thebalance.com (visited on February 14, 2017)

⁸ Bye Bye Mattress [mattress recycling facility locator](#) (searched on February 20, 2017); [This is no place for a mattress – Industry taking lead to recycle](#), BedTimes Magazine, March 2013

⁹ On December 30, 2015, the state of California implemented a [statewide mattress recycling program](#).

¹⁰ [The Mattress Recycling Council Continues to Boost its Reach](#), Waste360, February 16, 2017



Product stewardship laws passed

The problems and costs associated with mattress disposal and a growing interest in environmental stewardship has prompted the municipalities, mattress industry, retailers, institutions and the hospitality industry to demand (and a willingness to pay) for mattress recycling services.

In response to the growing demand, mattress recycling was on the radar of many state legislatures, who looked to previously enacted extended producer responsibility laws for electronics and paint as models to follow for mattresses. Extended producer responsibility laws require manufacturers to help deal with end-of-life issues for their products. This prompted involvement of the trade group the International Sleep Products Association (ISPA) “The industry identified the dual problem of too many mattresses going into landfills and legislators proposing impractical and costly ways to address this situation,” said Ryan Trainer, ISPA president.

“ISPA is encouraging the development of a self-sustaining infrastructure for handling used bedding so that steel and other components can be efficiently extracted from mattresses and foundations and put to new uses. To do that, we need to develop new programs and increase participation in existing programs,” Trainer said.¹¹

In 2013, three states (Connecticut, Rhode Island and California) passed laws requiring manufacturers to create statewide programs to collect and recycle mattresses and box springs. (This is not a recycling mandate and mattresses are not banned from landfills. Several other states are considering similar legislation. Maine passed a bill in May that was later vetoed by the governor. Maryland reviewed a stewardship bill in March that didn’t move beyond a committee hearing. Massachusetts has set up a pilot program with more than a dozen cities diverting mattresses; and King County, Wash., is expected to invite proposals from mattress recyclers for its own pilot sometime in 2017. The stewardship laws and pilot programs are significantly changing the playing field for mattress recyclers (and, to a lesser extent, rebuilders) in the United States.

In the three states that have existing laws, the recycling rules are similar. ISPA, through the nonprofit Mattress Recycling Council (MRC) it established, worked with lawmakers and regulators in California, Connecticut and Rhode Island to create a common strategy for rolling out regulations that would successfully divert mattresses.¹²

MRC named its recycling program Bye Bye Mattress.

¹¹ [Mattress Recycling Programs Create Successful Solutions](#), BedTimes Magazine, January 2017

¹² Ibid.



Programs launch

Bye Bye Mattress debuted in Connecticut in May 2015, California in December 2015, and Rhode Island in May 2016. Each state program is funded through a recycling fee that retailers collect from consumers when mattresses and box springs are sold. The fee is used to operate the program in each state by covering the cost of collecting and transporting mattresses to contracted recyclers for deconstruction, and to pay recyclers a per-mattress fee.

Across the three states, mattresses are collected at more than 300 locations where the public is able to drop off old mattresses and box springs for recycling at no cost. Eleven contracted recycling facilities (operated by a mix of for profit and nonprofit businesses) process mattresses on behalf of the program. California has seven recyclers; Connecticut and Rhode Island each have two.

In January 2017, Bye Bye Mattress announced that the three states had recycled 1 million mattresses, roughly 5 percent of all mattresses disposed in a year.¹³ In doing so, these programs have saved roughly 11 million cubic feet of landfill space and employed more than 200 people. The new laws, thanks to the consumer-paid fees, represent the benefits to the community of the product stewardship approach.

Connecticut

When Connecticut passed [Public Act 13-42](#) in May 2013¹⁵ it became the first state to approve a mattress recycling law. Recycling is defined as the process of breaking mattresses into their components and transforming those parts into new, usable or marketable materials. Recyclers that participate in the program must recycle at least 85 percent of the materials in each mattress. Incineration is not considered recycling, even if it generates energy. The Connecticut Department of Energy and Environmental Protection has regulatory authority over the program. The state has a contract with MRC to manage the program.

Funding comes from a \$9 fee that consumers pay when they purchase a new mattress or box spring. There is a mechanism to raise or lower that fee as needed.

Mattresses are collected at transfer stations, or they can be delivered to the recycling facility directly by other entities including retailers, hotels and universities. It is important to note that none of the entities are obligated to participate in the mattress recycling program, and no individual in Connecticut is required to actually recycle their mattresses. They can do so if they choose for free at participating locations, but mattresses are not banned from landfills.

¹³ [We've Recycled One Million Mattresses!](#), Bye Bye Mattress, January 24, 2017

¹⁵ In 2014, [Public Act 14-170](#) was passed making further amendments to the law to provide additional clarity.



MRC’s program has two major components: transportation and recycling. The organization selected three transportation companies through a competitive bid who pick up all mattresses and box springs. Those companies transport the mattresses to the recycling companies, which were also selected through a competitive bid process.

The original two mattress recyclers were Park City Green (run by the nonprofit Greater Bridgeport Community Enterprises¹⁶) and Recyc-Mattresses (run by a Canadian for-profit company). But Recyc-Mattress ran into problems, specifically with safety violations, and closed its doors. In 2017, the contracted mattress recyclers are Park City Green and Willimantic Waste.

The lack of priority given to reuse is troubling. As currently written the law will not help the rebuilding businesses. Reuse is higher on the waste reduction hierarchy and should be encouraged whenever possible. (This deficiency could be because ISPA, which helped write the law, discourages the sale of rebuilt mattresses. “Unscrupulous renovators build a business out of acquiring mattresses that are covered in stains and infested with bedbugs, sewing new covers on and then selling them to the unsuspecting consumer,” says veteran mattress retailer Barrie Brown. “They take away as much as \$1 billion in sales from legitimate manufacturers and retailers.”¹⁷)

Connecticut’s program went into effect in May 2015. In the first five months, nearly 50,000 mattresses and box springs were recycled. By the end of the first year, Connecticut’s program had grown to include 101 participating collection sites, exceeding MRC’s goal of 88 collection sites in the first two years, and recycle 150,000 mattresses.

“In just its first year, about 80 percent of the components and materials from the 150,000 mattresses collected and dismantled were recycled,” says Justine Fallon, New England program coordinator for MRC. “That figure bests the goal of 75 percent.”¹⁸

Connecticut At-A-Glance¹⁹

May 1, 2015: Program Launch

3.5 million: Approximate population

150,000: Goal for number of mattresses recycled annually

2,800 tons of steel, foam and other recycled materials have been reclaimed

¹⁶ GBCE is a member of the [Cascade Alliance](#).

¹⁷ [This is no place for a mattress – Industry taking lead to recycle](#), BedTimes Magazine, March 2013

¹⁸ [Mattress Recycling Programs Create Successful Solutions](#), BedTimes Magazine, January 2017

¹⁹ [2015-2016 Annual Report of the Connecticut Bye Bye Mattress Program](#), Mattress Recycling Council



2: Number of MRC-contracted recyclers

\$9: The fee collected when a mattress or box spring is sold to Connecticut consumers

Additional resources:

- A copy of the state’s plan can be found [here](#):
- Information about the state’s mattress recycling law can be found on the Department of Energy and Environmental Protection’s website: <http://www.ct.gov/deep/mattressrecycling>
- Mattress Recycling Council, [Connecticut program webpage](#)

California

The Used Mattress Recovery and Recycling Act, [SB254](#), is California’s mattress recycling bill. The California program is similar to Connecticut’s with a few notable exceptions.

California prioritizes the waste hierarchy (reduce, reuse, recycle); however, the final plan acknowledges, “implementing source reduction efforts is beyond the scope of both the act and the plan.” Regarding reuse, the plan states, “A primary goal of the program is to divert discarded mattresses that would otherwise be disposed of as solid waste. The plan will not interfere with reuse or renovation activity that complies with state and federal law.”²⁰

This is good news for nonprofits that give away used mattresses to people in need, mattress recyclers who want to sell reusable springs, and for mattress rebuilding companies, who pushed very hard to make sure their business wouldn’t be hurt by the law.

Under California’s stewardship law, retailers are required to collect an \$11 fee per mattress and box spring to fund the recycling program. MRC awarded contracts to seven recyclers that operate 11 recycling/consolidation facilities throughout California. In addition to the per mattress recycling fee paid to contracted recyclers, MRC has a reimbursement schedule for companies transporting the mattresses from participating collection locations to the recycling facilities.

An unintended consequence that has emerged with the rollout of this law is that transfer site participation is lower than anticipated because program participants are barred from charging for mattress disposal. This revenue stream for solid waste facilities that have plenty of landfill space discourages participation. The plan includes a provision for reimbursing solid waste facilities for

²⁰ MRC’s recycling plan includes a list of registered renovators that are covered by the plan. Mattresses recyclers with MRC contracts can only sell to renovators on the approved list. Further, MRC explains that its incentive payment of \$3 per unit is lower than what renovators pay for used mattresses thus the incentive won’t undermine their existing efforts.



the cost of handling mattresses, but it is not as profitable as the bulky handling fee that such sites can charge their customers.

California's program went into effect on January 1, 2016. In the first year, approximately 900,000 mattresses and box springs were recycled. MRC anticipates more than 1 million mattresses will be recycled California in 2017. There are currently about 150 collection sites in California. (California's annual report to MRC is due July 1, 2017.)

California At-A-Glance²¹

January 1, 2016: Program Launch

39.5 million: Approximate population

1 million: Goal for number of mattresses recycled annually, with unit collection increasing over time

7: Number of recyclers contracted by the Mattress Recycling Council (with 11 processing facilities total)

\$11: The fee collected when a mattress or box spring is sold to California consumers

Additional resources:

-A copy of California's mattress recycling program can be found here:

<http://www.calrecycle.ca.gov/Mattresses/Plans/November2015.pdf>

- CalRecycle has information about the state's mattress recycling law on its website:

www.calrecycle.ca.gov/mattresses

- Mattress Recycling Council, [California program webpage](#)

Rhode Island

Rhode Island [General Law 23-90](#), enacted in July 2013²², established the statewide mattress recycling program. The law requires mattress producers and importers that sell, or offer mattresses for sale, to Rhode Island end users must join the Mattress Recycling Council (MRC).

Developed in partnership with ISPA, the program is modeled after Connecticut's mattress recycling law. Participation in the program is voluntary; it is not illegal to throw a mattress in the landfill. (Reuse/refurbishing is not a prioritized disposal method. The plan states "recycling shall be preferred over any other disposal method. . .")

²¹ [2015-2016 Annual Report of the Connecticut Bye Bye Mattress Program](#), Mattress Recycling Council

²² In June 2015, the state amended Chapter 23-90.



In Rhode Island, MRC requested bids for joint transport and recycling services, and a separate request for just recycling services. MRC selected two companies to haul and recycle the mattresses: Express Mattress Recyclers and Ace Mattress Recycling.

In January 2016, The Rhode Island Resource Recovery Corp., which has regulatory authority over the law, approved the [Rhode Island Mattress Recycling Plan](#) proposed by MRC.

The Rhode Island program launched on May 1, 2016. Retailers and other businesses selling mattresses charge consumers a \$10 recycling fee on each box spring and mattress sold. (Prior to the launch, Rhode Island Resource Recovery, the state's landfill operation was recycling about 38,000 mattresses a year and charged customers \$15 per mattress.²³)

MRC's goal was to have 80 percent of Rhode Island's municipal transfer stations participating in the program by the end of the first two years of operation. According to Mike O'Donnell, MRC Managing Director, about 30 of 39 municipalities (about 7 percent) are participating in the program as of February 2017. No numbers yet have been released regarding the number of mattress recycled under the program.

Rhode Island At-A-Glance²⁴

May 1, 2016: Program launch

1 million: Approximate population

65,000: Goal for number of mattresses recycled annually

2: Number of MRC-contracted recyclers

\$10: The fee collected when a mattress or box spring is sold to Rhode Island consumers

Additional resources:

- A copy of Rhode Island's mattress recycling program can be found [here](#).
- Mattress Recycling Council, [Rhode Island program webpage](#)

²³ [Statewide mattress recycling program starts May 1](#), Cranston Herald, March 30, 2016

²⁴ [2015-2016 Annual Report of the Connecticut Bye Bye Mattress Program](#), Mattress Recycling Council



Other states considering mattress recycling legislation

A few other states are in various stages of pursuing stewardship laws. Maine was furthest along with legislation passed but vetoed in May; Maryland's bill did not progress beyond committee. The state's 2014 [solid waste plan](#) calls for a program similar to CT, CA and RI to be "pursued by 2017." (See below for more information.) New Mexico, and Massachusetts — have expressed interest in recycling legislation. However, it is likely that other states will wait and see how the laws pan out in CT, CA and RI before taking setting up their own programs.

Summary of states that have considered or are pursuing, in some form, mattress recycling:

Colorado: The Colorado Department of Public Health and Environment, under the [Recycling Resources Economic Opportunity Act](#), granted Spring Back Recycling \$297,770 in 2017 to establish and operate a mattress recycling facility in northern Colorado (Boulder, Larimer and Weld counties). The previous year, the agency provided more than \$250,000 to Spring Back Recycling to set up a mattress recycling facility in Denver.

Maine: The state environmental agency considered mattress stewardship in a January 2016 report ([Implementing Product Stewardship in Maine](#)), but concluded: "At this point in time, these [recycling] fees remain high and could be even higher in Maine based on population and geographic constraints faced in our rural state. Until these issues are addressed, it would be premature to pursue any mandates regarding this specific product type in Maine."

Maryland: In February 2017, a mattress recycling feasibility study was introduced in the House, [HB 1070](#). It was later withdrawn. The previous year, a mattress stewardship bill was introduced in the House, [HB 1117](#). It did not proceed to a full House vote.

Massachusetts: In 2015, in an effort to spur a new recycling market and to save municipalities money, environmental officials awarded \$500,000 in grants to help cities and towns start mattress recycling programs. That same year, the state signed contracts with three mattress recycling facilities to recycled old beds: Ace Mattress Enterprises (\$10), Raw Material Recovery Corp (\$13), and UTEC, Inc. (\$10).

In 2016, the state awarded municipalities a total of \$352,000 for the transportation and recycling of household mattresses.²⁵ That same year, the state provided UTEC (up to \$152,000) and Raw Material (up to \$150,000) grant funds to purchase additional mattress recycling equipment.²⁶

In September 2016, UTEC, Inc.,²⁷ was awarded \$700,000 in federal funding (Administration for

²⁵ [Sustainable Materials Recovery Program \(SMRP\) Municipal Grants](#), MassDEP 2016

²⁶ [Recycling Business Development Grants](#) MassDEP 2016

²⁷ UTEC, Inc. is a member of the Cascade Alliance. UTEC's mission "is to ignite and nurture the ambition of Lowell's most disconnected young people to trade violence and poverty for social and economic success."



Children and Families/Office of Community Services) to expand its mattress recycling enterprise.²⁸

Minnesota: The Minnesota Pollution Control Agency (MPCA) prepares a Solid Waste Policy report every four years.²⁹ The state’s [2015 Solid Waste Policy report](#) concluded that mattresses are “well suited for a product stewardship model, because most furniture stores offer back-haul of the mattress when you buy a new one. In addition, they offer recoverable materials such as steel, cotton, foam, and wood. There are currently two processing facilities located in the state Goodwill (Duluth) and at PPL Industries (Minneapolis).” However, for reasons not listed, mattress recycling is not in the final “recommendations for product stewardship” section of the report.

Mississippi: In 2015, a mattress stewardship law ([HB 285](#)) was introduced in the Mississippi legislature, but the bill died in committee. No similar bills were introduced in 2016.

New Mexico: In 2013, the New Mexico Legislature passed House Memorial 56, which established a task force to study the potential for product stewardship programs in the state.³⁰ In 2014, the Product Stewardship Advisory Group formed to facilitate research, collect stakeholder input, and develop potential programs. The group, which included stakeholders representing solid waste facilities, private businesses, NMRC, and NMED, recommended that NMED pursue efforts toward establishing product stewardship programs in the state. Mattress recycling was selected as the top priority. The state’s 2015 Solid Waste Management Plan concluded that the action steps for Product Stewardship Advisory Group are to “Research and propose product stewardship programs to shift financial burden for waste disposal upstream, toward manufacturers, away from local governments.” The 2016 report will be published in spring 2017.

Vermont: In 2015, the Beyond Waste Advisory Group of the State’s Department of Environmental Conservation presented to the legislature a [comprehensive list](#) of difficult-to-manage materials that have been considered in other similar prioritization processes in New England. Mattresses were discussed, but did not make the final list of priority materials.

Other efforts

Several mattress manufacturers and retailers are initiating their own recycling programs. In 2009, mattress manufacturer Sleep Inc. started recycling its retailers’ used mattress pickups at no charge. Sleep Inc.’s mattress recycling arm, [Dream Green Mattress Recycling](#), in Gainesville, GA serves mattress distribution centers across the southeastern United States. The company reported in 2014 that it had recycled more than 248,000 units. (It is unclear whether this is the cumulative

²⁸ [UTEC to get \\$700G to expand mattress-recycling program, create 28 new jobs](#), Lowell Sun, September 22, 2016.

²⁹ Minnesota Pollution Control Agency, [Solid Waste Policy Reports](#) (website visited February 21, 2017)

³⁰ [2015 Solid Waste Management Report](#), New Mexico Environment Department, Solid Waste Bureau (website visited February 22, 2017)



or annual count.)

Mattress retailer Ikea is committed to recycling the used mattresses it picks up from consumers who have purchased a new Ikea mattress. The company's waste hauler, Waste Management, has reached out to SVDP to partner on a nationwide recycling program.

Conclusion

Mattress recycling is a burgeoning industry. With interest from municipalities to reduce the problems of mattress disposal and extend the life of landfills, to the hospitality industry and retailers who seek a less expensive and more responsible way to dispose of used mattresses and the mattress industry itself that is motivated to get in front of the curve and shape the stewardship program, the availability of mattress recycling is poised to grow nationwide.

“As the public becomes more aware of mattress recycling, more companies are interested in working with us. The next time we request proposals for recycling contracts, I think we will see healthy competition,” predicted MRC President and ISPA CEO Ryan Trainer.³¹

³¹ [The Mattress Recycling Council Continues to Boost its Reach](#), Waste 360, February 16, 2017

