

Producer Responsibility for Mattresses

White Paper

December 16, 2013



Prepared by the California Product Stewardship Council

Funded by and Prepared for the City of Napa



CITY of NAPA

Purpose

The purpose of this white paper is to review the history and existing infrastructure for mattress end-of-life management in California, the status of mattress producer responsibility in the United States, and the likely outcomes of mattress producer responsibility with the adoption of SB 254 in California and similar legislation adopted in other states. This white paper evaluates the current issues, challenges and proposed solutions to managing waste mattresses and how this can impact the City of Napa. It also lists opportunities for Napa to maximize recycling and ensure the new mattress recycling program works for the City.

Background

Mattress recycling and rebuilding saves landfill space and can generate significant greenhouse gas (GHG) savings. According to a [2012 mattress case study](#)¹ commissioned by the Department of Resources Recycling and Recovery (CalRecycle), recycling mattresses is estimated to offset 45 percent of GHG emissions from product manufacturing and end-of-life management, and rebuilding instead of recycling would increase this offset to 66 percent or higher. Made up primarily of steel, wood, foam and fiber, most of a mattress's mass can be readily recycled. However, according to the International Sleep Products Association (ISPA), mattresses pose unique challenges to manage at end-of-life and therefore most waste mattresses are disposed of in landfills.²

Mattresses are relatively expensive to manage at end-of-life. They are bulky and therefore difficult to handle during waste pickup and transport. Their low density materials make them costly to landfill, and mattress springs can jam the equipment used at transfer stations and landfills.³ Due to their low material value, mattress recycling opportunities are limited for consumers. Box springs are highly recyclable (wood and metal) but have many of the same challenges and impacts that discarded mattresses pose. They also, though not always, tend to be generated at the same time as mattresses. Because of these issues, illegal dumping of mattresses and box springs is a widespread problem which led Senator Loni Hancock to introduce mattress legislation. Local business groups asked for legislation that would deal with the issue of mattresses being illegally dumped in the business district. Mattresses also pose the unique issue of potential bed

THE PROBLEMS WITH WASTE MATTRESSES:

- Bulky
- Costly to dispose of
- Difficult to pick up & transport
- Difficult & costly to manage
- Limited material value
- Limited access to disposal
- Illegal dumping is prevalent
- Bed bug infestations on the rise

1. CalRecycle (2012) Mattress and Box Spring Case Study, California Department of Resources Recycling and Recovery (CalRecycle), available at: www.calrecycle.ca.gov/Publications/Documents/1430/20121430.pdf

2. ISPA (2004) Used Mattress Disposal and Component Recycling – Opportunities and Challenges, International Sleep Products Associations (ISPA), Alexandria, VA

3. ISPA (2004) Used Mattress Disposal and Component Recycling – Opportunities and Challenges, International Sleep Products Associations (ISPA), Alexandria, VA

bug contamination, a serious public health concern. South of Napa, Alameda County reported that bed bugs have “re-emerged recently to become a major nuisance pest in Alameda County.”⁴

Waste mattresses and box springs can be managed in a variety of ways, including reusing, rebuilding, and recycling materials into other products. CalRecycle estimates that 85 percent of mattress material is recyclable. According to [CalRecycle’s case study](#),⁵ an estimated 4.2 million units (mattresses or box springs) are discarded annually in California, but less than 5 percent are currently recycled. Although these disposal and recycling estimates are highly debatable, they are based on recent sales and population data, and provide practical approximations for the purposes of this paper. According to the case study, collection and recycling of all of these waste mattresses and box springs would **create an estimated 1,000 new California jobs, and reduce GHG emissions by between 130,000 and 190,000 metric tons (carbon dioxide equivalent)**. Mattress rebuilding would offset almost 100 percent of the emissions from product manufacturing, reducing GHG emissions by an estimated 280,000 metric tons.⁶

While researching mattress processing for this paper, we identified several different terms used by ISPA, the California Department of Consumer Affairs (DCA), CalRecycle, and in legislation (SB 254, Hancock) to describe various methods of used mattress processing. These terms are summarized in Table 1.

Term	Used by	Meaning
Reused	DCA, CalRecycle and SB 254	Second-hand mattress, used in its entirety, which is properly sanitized by State approved methods. These are usually used mattresses returned to a retailer by a consumer (also referred to as “comfort returns by industry”). Must be sold with a yellow “sanitized” label. Not defined in SB 254 but used three times; e.g., “The total volume, number, and weight of used mattresses collected recycled, renovated, and <i>reused</i> in this state...”
Rebuilt	DCA, CalRecycle, SB 254 and ISPA	Mattress containing second-hand material which is properly sanitized by State approved methods. Must be sold with yellow “sanitized” and red “second-hand” labels. Not defined in SB 254; used once: “Renovate...includes... <i>rebuilding</i> ...”
Refurbished	CalRecycle and SB 254	Not defined in SB 254 but used twice; e.g., “... this chapter will not undermine existing used mattress recycling, resale, <i>refurbishing</i> , and reuse operations...”
Renovate	CalRecycle and SB 254	“Altering a used mattress for the purpose of resale,” such as replacing components, adding filling, and/or rebuilding a used mattress. Does <u>not</u> include sanitizing without otherwise altering the mattress.
Remanufacture	DCA and CalRecycle	See “rebuilt.”
Recycling	CalRecycle, SB 254 and ISPA	Separation of mattress to recover components/commodities for reuse or recycling.

4. ACVSD (2102), Bed Bugs, Alameda County Department of Environmental Health, Vector Control Services (ACVSD), available at: www.acvcsd.org/services/vectorid/bedbugs.htm

5. CalRecycle (2012) Mattress and Box Spring Case Study, California Department of Resources Recycling and Recovery (CalRecycle), available at: www.calrecycle.ca.gov/Publications/Documents/1430/20121430.pdf

6. CalRecycle (2012) Mattress and Box Spring Case Study, California Department of Resources Recycling and Recovery (CalRecycle), available at: www.calrecycle.ca.gov/Publications/Documents/1430/20121430.pdf

The terms shaded in green have been used interchangeably in the past and this led to confusion. For the purpose of this paper we are using the term “rebuilt” as opposed to “refurbished,” “renovated,” or “remanufactured” for mattresses that are repaired containing at least some second-hand material that is sanitized, because it is the common term used by State regulators, industry and legislation. Additionally for the purposes of this paper we are using the term mattress to include box springs as they are processed along with mattresses.

End-of-Life Management Challenges

High Cost of Illegal Dumping: Consumers face a series of challenges when it comes time to dispose of an unwanted mattress. Waste mattresses are bulky and difficult to transport. Some cities accept mattresses as part of the “bulky waste pick-up service” that is offered at no charge to households on a limited basis. While free for residents, these programs incur significant costs for the local jurisdiction since collection costs exceed reuse or recycling value. According to ISPA, due to their low density, mattresses take up a lot of space relative to their weight, making them unprofitable to landfill.⁷ Solid waste disposal facilities typically charge a premium for mattress disposal, due to the difficulty of managing them. This creates a barrier for many consumers who simply cannot afford or are unwilling to pay the high cost of proper disposal, and the problem is often exacerbated in low-income and rural areas. Also, unlicensed low-cost rubbish haulers are often suspected of dumping mattresses illegally to avoid paying special fees at disposal facilities. Illegally dumped mattresses can grow mold and harbor pests, creating a public health issue.

According to Senator Loni Hancock, the co-author of SB 254, illegally dumped mattresses have become a growing problem with the recent recession and due to their prevalence are a huge cost to the public. In Oakland between 18 and 35 illegally dumped mattresses are recovered by the city per day, at an estimated cost of \$500,000 annually.⁸ Table 2 summarizes the range of illegally dumped mattresses estimated to be recovered annually by three California municipalities, and the local solid waste facility fees charged per unit for legal mattress

Municipality	City Population	Number of Mattresses⁸	Mattress Disposal Fee⁹
Oakland	400,740	6,570 to 12,775	\$21.70
San Francisco	825,863	27,375 to 29,200	\$37.00
Los Angeles	3,857,799	43,800 to 54,750	\$52.00

disposal.⁹

7. ISPA (2004) Used Mattress Disposal and Component Recycling – Opportunities and Challenges, International Sleep Products Associations (ISPA), Alexandria, VA

8. Hancock (2013) SB 254, Used Mattress Recovery and Recycling Act, September 6, 2013 Senate Bill Floor Analysis, available at: http://leginfo.ca.gov/pub/13-14/bill/sen/sb_0251-0300/sb_254_cfa_20130906_215110_asm_floor.html

9. Rates provided by the Davis Street Transfer Station, Recology SF Transfer Station, and Central L.A. Recycling & Transfer Station.

High Cost of Diversion: Used mattresses require special handling due to their size and composition. Mattress recycling and rebuilding operations each face unique economic and logistical challenges. Nationally, the fees



charged by recyclers to accept mattresses (“recycling fee”) range from \$5 to \$50.

Appendix 1 illustrates recycling fees, where available in California, which vary from \$7 to \$34. Despite the fact

that at least 85 percent of their mass can be readily recycled (wood, foam, fiber and metal), CalRecycle’s [case study](#) estimates that less than 5 percent of waste mattresses and box springs are actually recycled.¹⁰

Three Options for End of Life Management:

Used mattresses not destined for landfills may be:

- 1) reused,
- 2) rebuilt, or
- 3) recycled.

Reuse involves sanitizing a used mattress for resale. The reuse of a whole unit would offset almost 100 percent of the GHG emissions from product manufacturing.¹¹



Rebuilding consists of removing old coverings and materials inside the mattresses and box springs, and reusing the metal or wooden

framework and springs, which are repaired as needed, cleaned and sanitized. New padding and foam is placed over the

reused frame and springs, and new mattress ticking is sewn on.¹² Rebuilding offers a significant environmental benefit over complete deconstruction for material recycling. **Recycling** involves deconstructing and separating all mattress components, including fiber, foam, wood and steel. Materials are generally sold and manufactured into new products. Steel can be recycled and

REBUILDER SPOTLIGHT: GATEWAY MATTRESS COMPANY

Gateway Mattress Co., Inc. is a mattress rebuilder located in Montebello, CA. With 48 employees, they manufacture 120,000 pieces per year, and recycle many more pieces that are not suitable for rebuilding.

Every rebuilt mattress and box spring that Gateway manufactures reuses materials. Old mattresses are either recycled or rebuilt, depending on their condition. Gateway has been turning old mattresses into new ones for over 50 years.¹²

RECYCLER SPOTLIGHT: DR3

DR3 – short for divert, reduce, reuse, recycle – is a mattress recycler located in Oakland, CA. They process between 120,000 to 130,000 mattresses and box springs each year, with 17 full-time employees.

Reusable mattresses are separated and sold to be rebuilt. Mattresses that are not suitable for reuse or rebuilding are manually deconstructed. DR3 recycles about 90 percent of all mattress components.¹³

10. CalRecycle (2012) Mattress and Box Spring Case Study, California Department of Resources Recycling and Recovery (CalRecycle), available at: www.calrecycle.ca.gov/Publications/Documents/1430/20121430.pdf

11. CalRecycle (2012) Mattress and Box Spring Case Study, California Department of Resources Recycling and Recovery (CalRecycle), available at: www.calrecycle.ca.gov/Publications/Documents/1430/20121430.pdf

12. Gateway (2013) Information provided by Don Franco Jr., Vice President, Gateway Mattress Co., Inc.

recast as new items, foam can be chipped for use in carpet padding, fiber can be used in the textile market or insulation, and wood can be turned into mulch, composted or used as fuel.¹³

Regulation of Mattress Reuse & Rebuilding: The regulation of

mattress reuse and rebuilding is under the authority of the California Department of Consumer Affairs (DCA) Bureau of Home Furnishings and Thermal Insulation. Mattress reuse and rebuilding requires a sanitization process, which either uses dry heat or chemical disinfectants. There are different labeling requirements for a used mattress to be legally resold. To be reused as a whole unit, a used mattress must be sanitized and sold with a yellow sanitization label. A rebuilt mattress must be sold with both a yellow sanitization label and a red “secondhand” material label. Brand new mattresses have a white label. The mattress industry would like there to be a new label, something like “clean recycled” that does not have negative connotations and allows mattresses with recycled content to compete with new mattresses.¹⁴



DCA licenses over 24,000 businesses, which sell reused, rebuilt, or new mattresses, including: furniture and bedding retailers, manufacturers, importers, wholesalers, custom upholsterers, supply dealers, sanitizers, and thermal insulation manufacturers. Every rebuilt mattress dealer must have a license from the DCA. There are only seven staff from DCA to inspect all licensed facilities including the dealers and facilities that rebuild mattresses statewide. Therefore, they rely on the public and competitors to flag concerns. In the past eight years the DCA has initiated 217 enforcement actions for non-compliant sanitization practices. The DCA estimates that nearly half of the rebuilt mattresses do not conform to regulations. With more reuse and rebuilding comes more need for staff to inspect facilities for proper sanitization practices.¹⁵

Bed Bug Infestations: Mattress collection, transportation, reuse, rebuilding, and recycling, if not done properly, can risk the spread of bed bugs, which have recently become a problem in some parts of California.¹⁶ Bed bugs can be spread from used furniture and transported in luggage, overnight bags, clothing, and anywhere else where they can hide, infecting areas as they travel.¹⁷ “Reusing a mattress as-is without refurbishment will pose a bed bug risk; however, a mattress that is properly refurbished and sanitized, according to the state requirements, will eliminate the risk from that particular mattress,” explains Don Franco Jr., Vice President of Gateway Mattress Co., Inc., a California mattress rebuilding company. Reuse is the best option to manage mattresses from a waste hierarchy perspective and responsible mattress rebuilders who follow proper sanitization procedures are to be commended and supported and pose no threat to spreading bed bugs.

13. DR3 (2013), Information provided by Terry McDonald, Executive Director, DR3
 14. CalRecycle (2012), Illegal Dumping Technical Advisory Committee, November 27, 2012 Meeting Minutes
 15. CalRecycle (2012), Illegal Dumping Technical Advisory Committee, November 27, 2012 Meeting Minutes
 16. CDPH (2011) Bed Bugs in California: Local Agency Services and Response Survey Summary, California Department of Public Health (CDPH), available at: www.cdph.ca.gov/HealthInfo/discond/Documents/BedBugSurveyReport10-11.pdf
 17. CDC (2013), Bed Bugs FAQs, Centers for Disease Control and Prevention (CDC), available at: www.cdc.gov/parasites/bedbugs/faqs.html

Bed bugs are a public health problem, and infestations have “exploded” in recent years in places like Pasadena, CA.¹⁸ In 2011, the California Department of Public Health conducted a survey regarding the extent of California’s bed bug problem. Sixty-five percent of all counties responded. Napa County was one of the twenty counties that did not respond to the survey due to the fact that many counties without an issue consider them as annoyances and not vectors of disease. There are 15 counties with a bed-bug issue which do track reports of bed bugs. No counties reported a decrease in bed bug infestations, and 48 percent of the counties surveyed indicated that the number of infestations had increased over the last three years.

Table 3 compares the number of bed bug reports in three municipalities in 2005 and in 2010.¹⁹

County	2005	2010
Alameda	25	234
San Francisco	215	567
Los Angeles	n/a	390
<i>State Average</i>	<i>1.7</i>	<i>45</i>

New businesses are trying to curb the spread of bed bugs. For example, some companies are now producing mattress bag covers that consumers and businesses can use to guard against bed bugs during short term storage and/or transport.

Existing Infrastructure & Job Creation: Local mattress recycling and rebuilding opportunities are currently limited. The exact number of mattress recyclers and rebuilders in the state is unknown due to a number of municipal solid waste facilities and nonprofit organizations that have small recycling operations which do not readily advertise mattress recycling, and a number of businesses licensed to sanitize goods for the purpose of rebuilding which do not specify mattresses on their permits. Based on currently available public information, we have confirmed nine mattress recyclers and six mattress rebuilders in California; **Appendix 1** provides these facility names, contact information, and recycling fees (if provided).²⁰ Based on information provided by DR3 in CalRecycle’s mattress case study, it takes one full-time employee to recycle approximately 7,300 mattresses and box springs annually. We can estimate that 432 full-time jobs are needed to reach the State diversion goal of 75 percent. The recycling of all 4.2 million mattresses and box springs discarded in California would require approximately 575 full-time employees.²¹ The expanded collection of mattresses would also impact the industries that process the secondary materials, creating additional jobs in California. CalRecycle’s case study estimates that the reuse and recycling of all 4.2 million mattresses would create a total of 1,000 new California jobs.

One company, Recyc-mattresses Corporation, approached CPSC looking to site four mattress recycling facilities in California whether or not SB 254 passed. For the last 7 years, Recyc-Mattresses has been recycling mattresses and box springs with long term contracts with major retailers, government agencies and the waste industry. They have already met with

18. Lauren Gold (2013), Bedbugs on the rise in Pasadena area, San Gabriel Valley Tribune, May 31, 2013, available at: www.sgvtribune.com/news/ci_23370647/bedbugs-rise-pasadena-area?source=rss_viewed

19. CDPH (2011) Bed Bugs in California: Local Agency Services and Response Survey Summary, California Department of Public Health (CDPH), available at: www.cdph.ca.gov/HealthInfo/discond/Documents/BedBugSurveyReport10-11.pdf

20. DCA (2013) Information provided by Carrie Cathalifaud, Laboratory Supervisor, California Department of Consumer Affairs (DCA), Bureau of Electronic Appliance Repair, Home Furnishing and Thermal Insulation

21. CalRecycle (2012) Mattress and Box Spring Case Study, California Department of Resources Recycling and Recovery (CalRecycle), available at: www.calrecycle.ca.gov/Publications/Documents/1430/20121430.pdf

representatives from the Regional Council of Rural Counties and several local governments and haulers across California to determine where they might site plants.

Through the many stages of our recycling process, which utilizes machinery, the company www.Recyc-Mattresses.com recycles over 95% of the by-products generated from all mattresses, box springs, futons and foam beds that come through their recycling facilities. They can take any type of mattress in any condition. In 2012 Recyc-mattresses has recycled more than 1,800,000 mattresses through their facilities located in Canada, US and Europe with projections to open 3-5 facilities a year for the next 10 years. They also operate three carpet recycling facilities in Florida and more are opening this year. According to the company CEO, Pascal Cohen, “All our contractual agreement with governments, manufacturers and retailers prohibits any used mattress sales because of sanitary reasons and require every unit to be dismantled, baled, shredded and recycled. We supply quarterly reports of products coming in, recycled, as well as supplying a copy of our waste disposal invoices quarterly as to demonstrate our transparency and explain our recycling percentages. We can build facilities for the specific needs of each customer, whether it is a retailer, city, transfer station or landfill. The capacity of our standard facility vary and can handle from 50,000 to 1,000,000 pieces a year.”

Producer Responsibility Solution

Extended Producer Responsibility (EPR) is a mandatory type of product stewardship that requires the producers to fund, design and manage their product at end of life. EPR started in Europe in the late 1980's with packaging as the first product category and they called it the Green Dot Program. It has evolved into EPR policies worldwide covering a wide variety of products including automobiles, electronic waste, paint and pharmaceuticals in countries as diverse as Japan, Israel and Canada. The producer of the product has the greatest ability to minimize adverse impacts, but other stakeholders, such as suppliers, retailers, and consumers, also play a role. When producers share responsibility for the safe collection and disposal of their products and packaging, collection and disposal costs are shifted from the general public via taxes or garbage rates to producers and consumers who use and benefit from the product. This is a fundamental shift away from socialized cost sharing to a user-pays system.

In the United States EPR is a relatively new concept that has resulted in no federal legislation. 32 States have passed 72 laws to date and only one local government, Alameda County in California, has passed an ordinance making EPR the law for pharmaceuticals. Currently that ordinance is being challenged in court, Alameda prevailed in the 9th Federal Circuit Court and that decision was appealed by PhRMA and other medicine related organizations.

To harmonize the terminologies used in legislative processes and public discussions, the Product Policy Institute in partnership with the Product Stewardship Institute and CPSC adopted the [product stewardship and extended producer responsibility definitions and principles](#). This has been adopted by a diverse group of over 70 businesses, government associations and non-profits, including the Natural Resources Defense Council, Alameda StopWaste and the U.S. Conference of Mayors.

EPR is a policy approach expanding widely around the world for an ever expanding group of products, with the United States trailing most industrialized countries. Interestingly California adopted its first EPR law for mercury thermostats in 2008 and in 2010 adopted legislation for both carpet and paint that strayed from the pure EPR model by requiring visible fees. The carpet bill was the first EPR program in the world for that product probably because carpet is mostly wool in other countries and plastic in the US.

To our knowledge, there are no other EPR systems in the world for mattresses outside of the new systems being established in the United States. The first legislation on producer responsibility to our knowledge in the world was in Connecticut, then Rhode Island and California which all passed in 2013. None of these bills has been implemented so there are no precedents to look to as to what will work. What we can do is look to existing California EPR legislation and implementation experiences to gauge what might work when applied to mattresses.

In analyzing how SB 254 might work for Napa and other jurisdictions, we look at how this industry operates. Generally speaking, rebuilding mattresses is not in the economic interest of the mattress industry, as a rebuilt mattress sells at a fraction of the cost of a new mattress. This can undermine an industry's incentive to follow the waste hierarchy and promote reuse and rebuilding before recycling. Due to the bulkiness and size of mattresses they can be logistically challenging to move. Producer responsibility programs which increase collection and set recycling goals consistent with California's recycling goals and waste management hierarchy are key to maximizing the benefits of mattress end-of-life management programs.

As outlined in the EPR principles, there are two fundamental reasons we support an EPR approach:

- 1) Shifting financial and management responsibility, oversight, upstream to the producer and away from the public sector, and;
- 2) Providing incentives to producers to incorporate environmental considerations into the design of their products and packaging.

SB 254 certainly does shift the operational management responsibility to the producers so that goal has been met. However, since SB 254 removed the direct economic impact to the producers by using a visible fee instead of cost-internalization, the second goal is to provide an incentive to incorporate environmental considerations into the design of their product and packaging which does not appear to have been met by the economic system or any language in the bill. Therefore, a fundamental concern is that there is nothing incentivizing product redesign to make mattresses easier to rebuild and recycle which would enhance economic and environmental benefits.

The following are very brief descriptions of the mattress legislation that passed in 2013:

Connecticut Legislation: Mattress recycling legislation was adopted in Connecticut in May 2013. Connecticut's [Public Act 13-42](#) requires mattress manufacturers to establish an industry "council" to develop a program to manage waste mattresses. This law establishes a visible fee at the point of sale, and the retailer transfers the funds to the manufacturers, who use them to pay

for transportation and recycling of waste mattresses. The government does not administer the program or control the funds collected.

Rhode Island Legislation: Rhode Island’s Mattress Recycling Program ([Senate Bill 0261](#) and [House Bill 5799](#)) was created in July 2013 and was based on the Connecticut legislation. Similarly, it requires establishment of an industry “council,” composed of mattress manufacturers, that decides how it will go about recycling mattresses. The government does not administer the program or control the funds collected but like Connecticut, does not internalize end of life management as a cost of doing business and instead allows a visible fee.

California Legislation: [Senate Bill 254 \(Hancock\)](#), the Used Mattress Recovery and Recycling Act, co-sponsored by Californians Against Waste and ISPA, was signed by the Governor on September 27, 2013. The legislation aims to increase the recovery and recycling of waste mattresses in order to reduce illegal dumping in California. It requires mattress manufacturers and retailers to establish a “mattress recycling organization” composed of manufacturers, rebuilders, and retailers, in order to develop a statewide mattress recycling program. It also establishes a “recycling charge” to be added to the purchase price of a mattress, requiring consumers to fund the program.²² The government does not administer the program or control the funds collected. According to the Governor’s signing statement, the legislation contains a “lack of specificity and ambiguous language” which needs to be clarified through cleanup legislation in the next session. Of particular concern is language that appears to limit the regulatory authority of the Department of Resources Recycling and Recovery (CalRecycle) and the requirement that CalRecycle reduce its administrative costs by the amount of penalties it collects.²³

Appendix 2, developed by the Product Stewardship Institute, provides a comparison of the key elements of the California, Rhode Island and Connecticut mattress legislation.²⁴

Appendix 3, developed by CPSC provides the timeline of legislative deadlines for SB254

Voluntary Stewardship: In 2013, Mattress Firm, a Texas-based retailer, announced its partnership with Sleep Inc., a Texas-based manufacturer, on [DreamGreen](#), a Sleep Inc. initiative to form a mattress stewardship program. Every Mattress Firm store in Texas will take part in the program, working to collect and recycle old mattresses.²⁵ In 2012 Sleep Inc. recycled more than 60,000 mattresses and box springs, diverting over 8 million pounds of materials from landfills.

Recycling Charge vs. Cost Internalization: Unlike the legislation passed in California, Rhode Island and Connecticut, the voluntary stewardship program established by Sleep Inc. does not pass on any program costs visibly to consumers. Instead, the mattress manufacturer accepts the

22. Hancock (2013) Senate Bill No. 254, Used Mattress Recovery and Recycling Act, Chaptered September 27, 2013, available at: http://leginfo.ca.gov/pub/13-14/bill/sen/sb_0251-0300/sb_254_bill_20130927_chaptered.pdf

23. Office of the Governor (2013), SB 254 Signing Statement, letter to State Senate, September 27, 2013

24. PSI (2013), Information provided by the Product Stewardship Institute

25. Alan Gerlat (2013), Mattress Companies Partner on Recycling Program, Waste Age, August 21, 2013, available at: http://waste360.com/waste-generators/mattress-companies-partner-recycling-program?NL=WST-02&Issue=WST-02_20130904_WST-02_729&YM_RID=donna@calpsc.org&YM_MID=1420018&sfvc4enews=42

program as just another cost of doing business, taking full responsibility for the recycling of waste mattresses. CPSC believes that internalization of the cost of recycling is the appropriate model versus a visible fee paid by the consumer. In other words, full cost accounting or internalizing the externalities returns us back to a working free-market system where the full costs are transparent to the consumer who can make a good purchasing choice. The industries argue that a line item on a receipt is the best way to make consumers aware that they are paying for a recycling service at end of life, but there are no studies supporting that claim that we can find. What we do know is that when industries receive state authority and protection against anti-trust claims, and then do not pay for recycling as a cost of doing business, they have little economic reason to reduce end of life costs because they take the fee and use it but it does not impact corporate profitability therefore, removing the free-market incentive to reduce costs.

Implications of SB 254

With passage of SB 254 and pending cleanup legislation, a stewardship plan could be developed to support existing businesses focusing on mattress rebuilding over deconstruction and recycling. It is possible, though not certain, that the mattress recycling organization will develop a program plan with objectives that are consistent with the state's solid waste management hierarchy. Because mattress rebuilding and recycling are labor intensive, the legislation said it would create new jobs in California. However, if there is a lack of emphasis in the program on reuse and rebuilding, mattress rebuilders may be forced to close, and California jobs could be lost.

SB254 does not address problems that could be caused by bed bugs. "Proper handling and sanitization procedures are necessary to ensure that bed bugs do not spread to new mattresses, homes or effect public health and safety. The result of leaving this problem unaddressed could be an adverse impact on the mattress recycling market. Amendments to address this problem head on should prescribe minimal best practices for handling contaminated mattress" said Andrea Altman with the City of San Diego.²⁶ The legislation also does not take into account the resource burden it will put on DCA to ensure proper adherence to proper handling and sanitization procedures. These issues could be addressed in the pending clean-up legislation.

SB 254 also mandates a point of sale fee. This removes the financial incentive to redesign mattresses for durability and recyclability. There is no language in the legislation that requires attention to greener design of mattresses, durability and cost-effective recyclability.

Two key amendments proposed by CPSC that were included or addressed in SB 254 were:

- Local governments and the solid waste industry will have **representatives appointed by the Department's director to an advisory committee** participating with the mattress recycling organization.

26. City of San Diego (2013), Information provided by Andrea Altmann, LEED Green Associate, Environmental Services Department, City of San Diego

- Ensure that urban and rural local governments and participating solid waste facilities that accept mattresses are provided with a mechanism for recovery of illegally disposed used mattresses that is funded at no additional cost to their programs.

Recommendations for Cleanup Legislation: The following issues could be addressed with cleanup language to clarify the intent of SB 254:

1. **Funding & Green Design** – The current language in SB 254 is quite unclear as to which entity is actually responsible for collecting and/or remitting the “recycling charge.” One can assume that the mechanics of the specific financing structure are to be laid out in the Mattress Recycling Organization’s Stewardship Plan. However, if the legislature continues to pass bills with visible fees at the point of sale, it needs to be clear as to which entities are responsible for what.

The language in SB 254 permits the “recycling fee” to be potentially collected and remitted by the retailers. This is a concerning issue because it will essentially exempt the producers, placing all the responsibility for collecting and remitting the “recycling fee” on the retailers instead. As a practical example, a mattress, with over 100 springs that are individually encased in non-recyclable plastic, is far more labor intensive and costly to recycle compared with most other mattresses.²⁷ A uniform fee at the point of sale will do nothing to encourage the manufacturer of that type of mattress to change to a more recycling- or rebuilding- eco-friendly design.

Without the economic incentive of internalized cost, the industry’s program plan and annual reports could include a discussion about what they are doing to improve design so it is much easier and more cost-effective to recycle all types of mattresses which could be part of the clean-up legislation.

2. **Recycling Goal** – Ensure the goal that is set by CalRecycle is a firm performance metric, not a vague goal and NOT just “substantial compliance”. Either they meet it or they don’t. Penalties or enforcement options for not meeting set goals could also be explicit in cleanup legislation.
3. **Oversight deadlines** –Waiting until 2019 to have the first recycling goal when the bill is passed in 2013 is too long a time, as illustrated by how flawed the carpet program became in two years. Perhaps with the first goal in 2018 (one year) and give CalRecycle tools to keep them on track.
4. **Individual Producer Responsibility** – Mattresses are currently labor intensive and therefore expensive to recycle. If a producer decides to spend time and money on research and development (R&D) to design a “green” mattress that lasts longer and can be more economically recycled, they should be able to recover those R&D costs. When they are forced to merge with 35 percent of the industry to have a “Mattress Recycling Organization,” as is currently written into the bill, all the companies they pool with will benefit from their

27. City of Oakland (2013), Information provided by Steve J. Lautze, Green Business Development Specialist, Office of Economic & Workforce Development, City of Oakland

reduced recycling costs. This situation is a disincentive to a company who wants to do green design. CPSC prefers as do many international organizations, companies and countries, an Individual Producer Responsibility approach, as this supports healthy competition.

5. **Bed bugs** – Many jurisdictions were disappointed that SB 254 did not address the risk of bed bug infestations with the collection and recycling of used mattresses. Responsible mattress rebuilders and recyclers who follow proper sanitization procedures are also concerned about bed bug contamination. California has seen significant increases in bed bug infestations in recent years, and the DCA does not have enough staff to inspect all the facilities that receive used mattresses, yet we are pushing rebuilding and recycling. Bed bugs hide in the light, and putting used mattresses in the same truck with new mattresses could exacerbate the spread of infestations. Proper handling and sanitization are necessary to ensure that bed bugs do not spread to new mattresses. The City of San Diego suggested this language for SB 254 but it was not included and could be in the clean-up bill:

42987.1. On or before July 1, 2015, the mattress recycling organization shall develop and submit to the department a plan for recycling used mattresses in the state in an economically efficient and practical manner that includes all of the following goals and elements:

(j) Proper handling and storage procedures to eliminate the spread of bed bugs and other contaminants.

6. **Illegal dumping** –It is not clear if SB 254 will meet the stated goal of reducing illegal dumping, especially in the short term. In a survey of 18 retailers in the Sacramento and Napa areas, half already offered free pickup of a used mattress with the purchase of a new mattress, the cost being built into their purchase price or delivery fee. Three of the 18 retailers also offered free drop-off of a used mattress with the purchase of a new one. Five of the retailers charge a recycling fee, which varies from \$10 to \$35, the median fee being \$15. Only three of the 18 retailers surveyed did not offer any sort of take-back of used mattresses.
7. Retailer pickup, when available, likely prevents illegal dumping. However, it is not clear if SB 254 will change incentives for illegal dumping unless it adds more robust free drop-off or pickup provided to households by municipalities or franchised haulers.
8. SB 254 includes language indicating the legislation will provide job creation opportunities through expansion of mattress rebuilding and recycling industry. However it is not clear that the jobs will be in-state verses potentially having the mattresses exported out-of-state or out-of-country. This issue could be addressed in the cleanup legislation or through the development of the industry EPR plan approved by CalRecycle.
9. It is not clear how haulers/recyclers/consolidators of mattresses will operate under the new producer responsibility plan versus the true rebuilders/recyclers of mattresses. There needs to be a clear designation of collectors and recyclers/rebuilders. This can be addressed in the cleanup legislation or the development of the industry plan to avoid having collectors caught in the middle by having to continue to collect a fee or being prohibited from doing so when

their costs are not covered in the reimbursement chain. Additionally to institute incentivizing having the higher environmental benefit of rebuilding verses recycling, there should be a higher reimbursement value for rebuilding verses recycling.

Conclusion & Options for the City of Napa

SB 254 will likely save local government's money associated with managing waste mattresses, and provide more recycling opportunities for consumers. However, it does not outline an ideal producer responsibility solution and CPSC, Napa and others will continue to work together with the mattress industry for many years to ensure this program works as planned. It will begin implementation by July 1, 2014. Local governments and other stakeholders will have a voice on the mattress recycling organization governing body, and their input will help to ensure that the program performs as the act intended. With program implementation, illegal dumping cleanup and solid waste management costs associated with mattresses should be reduced for urban and rural local government and participating solid waste facilities that accept mattresses.

Opportunities for the City of Napa to Consider:

The following is a list of opportunities for Napa to ensure maximum benefits to the City from the new mattress recycling program.

- 1) Until implementation of the legislation occurs, the City of Napa can promote to its residents and businesses the three closest mattress rebuilders, which are Estate Mattress Co. in Oakland, Sacramento Valley Mattress in Sacramento, and Mattress Factory in Sacramento and the three closest mattress recycling locations which are Devlin Road Transfer Station in American Canyon, Global Materials Recovery Services Recycling Center in Santa Rosa and DR3 in Oakland. This promotion can occur until Napa verifies the retailers have begun providing either free pickup or drop off of mattresses in July, 2014.
- 2) Napa can support any candidate they believe is worthy to be appointed to the Mattress Advisory Council. This council will be appointed by the Department Director and could be done in the near future. Appointments could be of City representatives, the NRWS, local mattress sellers and distributors, or a representative of CPSC. *This Advisory Council will be critically important at providing oversight of the details of the program and ensuring local government needs are met in the stewardship plan such as ensuring rebuilders are supported to a higher degree than recyclers.*
- 3) Beginning July 2014, Napa can ensure that local retailers are providing the free pick-up or drop-off options and reporting findings to the Advisory Committee.
- 4) Napa can track and work with CPSC and others to support any or none of the possible amendments in the clean-up legislation.
- 5) Napa can screen the organizations receiving mattresses to ensure they are compliant with the DCA standards and do not further the spread of bed bugs which could hurt the rebuilding/ refurbishing industries.

- 6) After March of 2015, Napa can screen processors to ensure they are listed and compliant with CalRecycle's compliant list.

Acknowledgements

Photos provided by DR3.

Information on recycling and rebuilding provided by: Don Franco Jr. of Gateway Mattress Company, Terry McDonald of DR3, Steve J. Lautze of the City of Oakland, Andria Altmann of the City of San Diego, and Carrie Cathalifaud of the California Department of Consumer Affairs Bureau of Electronic Appliance Repair, Home Furnishing & Thermal Insulation.

Mattress legislation comparison table provided by the Product Stewardship Institute.

Appendix 1

California Mattress Recyclers & Rebuilders

Recyclers:			
Facility Name	Address	Contact	Recycling Fee (drop-off unless otherwise noted)
1) Devlin Road Transfer Station	889 Devlin Road, American Canyon, CA 94503 naparecycling.com/devlinroadrecycling	(707) 258-9005 Steve Kelley, General Manager	\$34 minimum load fee
2) Global Materials Recovery Services Recycling Center	3899 Santa Rosa Ave, Santa Rosa, CA 95407	(707) 586-6666	\$10 per mattress
3) DR3	9921 Medford Avenue, Oakland, CA 94603	(510) 351-0520 Terry McDonald	\$7 per mattress
4) Bob's Foam Factory (foam mattresses only)	4055 Pestana Place, Fremont, CA 94538	(510) 657-2420	Free (foam mattresses only)
5) Goodwill Industries of Silicon Valley	1080 North 7th Street, San Jose, CA 95112	(408) 998-5798	\$10 per mattress
6) Hope Services (Gilroy)	8855 Murray Avenue, Gilroy, CA 95020	(408) 842-0334 Lisa Estrada	\$10 per mattress
7) Hope Services (Salinas)	546 Brunken Avenue, Salinas, CA 93901	Alex Andrade (831) 754-5509	\$10 per mattress
8) LFP Recycling	14926 Templar Drive, La Mirada, CA 90638	(213) 570-3436 Steven Perez, President	Free drop off; fee for pickup
9) Blue Marble Materials	6050 Rickenbacker Road, West Commerce, CA 90040	(617) 407-0164 Tchad Robinson	Free
Rebuilders:			
1) Estate Mattress Co. (single size mattress only – no queen/king sizes)	2650 Magnolia St Oakland, CA 94607	(510) 625-1200 Michael Leung, Manager	Single size mattresses only. Free if rebuildable; \$15 per mattress for disposal
2) Sacramento Valley Mattress	4160 14th Avenue, Sacramento, CA 95820 www.sacramentovalleymattress.com	(916) 454-4052 Jose Hernandez, Owner	Call first to check availability. Free pickup or drop-off with new purchase, otherwise \$10 per mattress; also take comfort returns from SleepTrain
3) Mattress Factory	4301 Power Inn Rd, Sacramento, CA 95286	(916) 452-9123 Karen	Free pickup with new purchase
4) Shady Rest Enterprises	116 Third St, Marysville, CA 95901	(530) 743-1417	Free if rebuildable
5) High Desert Respiratory	42247 12th St. West #115, Lancaster, CA	(661) 974-8009 Randy	No public drop-off; work with home care companies only
6) Gateway Mattress Company	624 South Vail, Montebello, CA 90640 www.gatewaymattress.com/	(323) 725-1923 Don Franco Jr., Vice President	No public drop-off; will do pick-ups for other mattress companies

Appendix 2

Comparison of Mattress Recycling Laws*

Program Element	Connecticut Public Act 13-42	Rhode Island SB 0261 and HB 5799	California SB 254
Product Scope	Mattresses of all sizes; foundations (or box springs); futons (with detachable mattress). Excludes: waterbeds; air mattresses; furniture that otherwise does not contain a detachable mattress. (Note: crib mattresses are accepted in the program, but are not assigned a fee.)	Mattresses of all sizes; foundations (or box springs); futons (with detachable mattress). Excludes: waterbeds; air mattresses; furniture that otherwise does not contain a detachable mattress. (Note: crib mattresses are accepted in the program, but are not assigned a fee.)	Mattresses of all sizes; foundations (or box springs); futons (with detachable mattress); renovated mattresses and foundations. Excludes: waterbeds; air mattresses; juvenile products (e.g., crib); furniture that otherwise does not contain a detachable mattress.
Stewardship Organization	Single stewardship organization – “Mattress Recycling Council” or “Council” means the nonprofit created by the producers or created by any trade association that represents producers who account for a majority of mattress production in the United States to design, submit and implement the mattress stewardship program described in the bill. Each producer shall join the Council. Retailers may participate in the “Council,” but are not required to participate.	Single stewardship organization – “Mattress Recycling Council” or “Council” means the state wide nonprofit organization created by producers or created by any trade association that represents producers who account for a majority of mattress production in the United States to design, submit and implement the mattress stewardship plan as described in the chapter. Each producer shall join the council. Retailers may participate in the Council but are not required to participate.	Stewardship organization – “Mattress Recycling Organization” means a nonprofit 501(c)(3) or (c)(6) organization “that is established by a qualified industry association.” “Qualified industry association” means “the International Sleep Products Association or a successor of that organization, or a group of mattress manufacturers that collectively represent at least 35% of the volume of mattresses manufactured in the United States.” (Note: Manufacturers, retailers, and renovators required to register with the Organization.)
Funding Mechanism	Mattress stewardship fee – “ <i>shall appear on the invoice and be accompanied by a brief description of the fee.</i> ” Council may establish an alternative, practicable means of collecting or remitting fee, subject to CT DEEP approval.	Uniform mattress stewardship fee – “ <i>shall add the amount of such fee to the purchase price.</i> ” Council may establish an alternative, practicable means of collecting or remitting fee, subject to RIRRC approval.	Mattress recycling charge – “ <i>shall be clearly visible on the invoice, receipt, or functionally equivalent billing document... The mattress recycling organization shall develop reimbursement criteria to enable retailers to recover administrative costs associated with the collecting of the charge.</i> ” “ <i>The organization shall not set more than two different charges to accommodate mattress size differentials.</i> ”
Performance Targets	Council to establish performance goals for the first 2 years. By Oct. 1, 2016 , Council to submit updated performance goals based on first 2 years of implementation. CT DEEP to establish performance goals 3 years after plan approval (2017).	Council to establish performance goals for the first 2 years. By Oct. 1, 2017 , Council to submit updated performance goals based on first 2 years of implementation.	By Jan. 1, 2018 , CalRecycle to establish recycling goals based on plan and first annual report. CalRecycle to review and update goals as necessary by July 1, 2020, and every 4 years after.
Spread of Human Pathogens	Defines “sanitization” as direct application of chemicals to a mattress to kill human disease	Defines “sanitization” as direct application of chemicals to a mattress to kill human disease	Does not define sanitation or sterilization.

Program Element	Connecticut Public Act 13-42	Rhode Island SB 0261 and HB 5799	California SB 254
	causing pathogens. Defines “sterilization” as the mitigation of any deleterious substances or organisms, including human disease causing pathogens, fungi and insects from a mattress or filling material using a process approved by the Commissioner of Consumer Protection.	causing pathogens. Defines “sterilization” as the mitigation of any deleterious substances or organisms, including human disease causing pathogens, fungi and insects from a mattress or filling material using a process approved by the Department of Business Regulation.	
Implementation Schedule			
Establish stewardship organization	N/A	N/A	July 1, 2014 – CalRecycle then has 60 days to certify. Prior to certification, CalRecycle shall appoint an advisory committee (which may be comprised of members of the environmental community, solid waste industry, local government, and others involved in mattress management) to be part of the organization. (Note: mattress manufacturers, retailers, and renovators must register with the mattress recycling organization by Jan. 1, 2015. Sales ban in effect for noncompliant manufacturers and retailers beginning Jan. 1, 2016.)
Stewardship plan submitted by:	July 1, 2014 – DEEP then has 90 days to approve.	July 1, 2015 – RIRRC then has 90 days to approve.	July 1, 2015 – CalRecycle then has 90 days to approve. Mattress Recycling Organization must consult advisory committee at least once before submitting the plan.
Program implementation	120 days once plan is approved. (Target: first quarter of 2015.)	120 days once plan is approved.	90 days once plan is approved.
Retailer required to provide option for pickup of used mattress when delivering new mattress	N/A	N/A	July 1, 2014 – Retailers may contract with a third party to provide pickup of used mattress at no cost to consumer, and may charge for delivery of new mattress. Common carriers delivering mattresses purchased online are not required to pick up used mattress.
First annual report	Oct. 15, 2015	Oct. 1, 2016	July 1, 2017
Department report to legislature	3 years after plan approval (2017), report to also establish performance goals.	3 years after plan approval (2018), and every 2 years after.	N/A
Program audit to Department	2 years after program implementation (2017), and at least every 3 years after.	2 years after implementation, and at the request of RIRRC (but not more frequent than once a year).	Submitted with each annual report.

*Table provided by the Product Stewardship Institute

Appendix 3

Timeline of Legislative Deadlines for SB254

Date	Party	Action or Required Action
9-27-2013	Governor Brown	Signed SB 254
7-1-14	Recycling Organization	Must be established (CalRecycle has 60 days to certify the organization)
7-1-2014	Retailers	Required to give consumer option to have used mattress picked up at time of new mattress delivery or provide a free drop off option.
1-1-2015	Manufacturers, Retailers and Renovators	Required to register with the Recycling Organization.
3-1-2015	Department	Shall post on their internet website the list of manufacturers and renovators that are compliant. They shall continue this annually.
7-1-2015	Recycling Organization	Shall prepare and approve a proposed mattress recycling program including with a budget for the next calendar year. They shall continue this annually.
10-1-2015	Department	Shall approve or disapprove the proposed plan. They shall continue this annually.
1-1-2016	Retailers, Manufacturers and Renovators	Prohibited from selling mattresses in California if they are not compliant.
7-1-2016	Recycling Organization	Required to reimburse the Department once every three months and within the fiscal year for its direct costs to implement and enforce this chapter.
7-1-2017	Recycling Organization	Submit report to the Department and make it publicly available on the Recycling Organization's internet site. They shall continue this annually.
1-1-2018	Department	In consultation with the Recycling Organization based on the plan and first annual report will establish the state mattress recycling baseline amount and the state mattress recycling goals.
7-1-2019	Recycling Organization	The annual report shall demonstrate good faith effort to comply with goals. They shall continue this annually.
7-1-2020	Department	Shall review and update the baseline amount and goals to ensure program advances statewide recycling goals. They shall continue this every four years.