Report to the Joint Standing Committee on the Environment and Natural Resources

Annual Product Stewardship Report

January 2020

Contacts

Paula M. Clark
Director, Division of Materials Management
207-287-7718
paula.m.clark@maine.gov

Megan Mansfield Pryor
Environmental Specialist, Division of Materials Management
207-314-3357
megan.pryor@maine.gov
# Table of Contents

I. Introduction .................................................................................................................................................. 2

II. Candidate products for future stewardship programs ............................................................................. 2
   A. Legislation to establish new stewardship programs ............................................................................. 2
      1) Mattresses........................................................................................................................................ 2
      2) Packaging.......................................................................................................................................... 3
   B. Stewardship legislation carried over from the last session ................................................................. 3
      1) Tobacco........................................................................................................................................... 3
      2) Pharmaceuticals............................................................................................................................... 3
      3) Consumer batteries........................................................................................................................ 3
   C. Future candidate products .................................................................................................................... 5
      1) Carpet.............................................................................................................................................. 5
      2) Gypsum wallboard......................................................................................................................... 6
      3) Household hazardous waste......................................................................................................... 6
      4) Solar panels...................................................................................................................................... 6

III. Existing programs’ performance and recommendations ........................................................................... 7
   A. Container Redemption (“Bottle Bill”) – 38 M.R.S. §§3101-3119....................................................... 7
   B. Mercury Auto Switches – 38 M.R.S. § 1665-A.................................................................................... 8
   C. Electronic Waste - 38 M.R.S. § 1610.................................................................................................. 9
   D. Mercury Thermostats - 38 M.R.S. § 1665-B...................................................................................... 10
   E. Cellular Telephones – 38 M.R.S. § 2143........................................................................................... 11
   F. Mercury Lamps- 38 M.R.S. § 1672.................................................................................................... 11
   G. Architectural Paint - 38 M.R.S. § 2144............................................................................................. 12
   H. Plastic Bags - 38 M.R.S. § 1611........................................................................................................ 13

IV. Conclusion.................................................................................................................................................. 15

Appendix A - Department Testimony on LD 1594 ..................................................................................... 17
Appendix B - Comments Received on Posted Report ................................................................................. 21
I. Introduction

This report is prepared in accordance with 38 M.R.S. §§ 1771 through 1776, Maine's Product Stewardship framework law, which directs the Department of Environmental Protection ("Department" or "DEP") to develop an annual report for the Legislature evaluating Maine’s product stewardship programs. Product stewardship is a public policy approach that can be used by governments and businesses to minimize the negative impacts of products and packaging throughout their lifecycle. Manufacturers (a.k.a. producers) have the greatest influence over the lifecycle impacts of their products, starting with material sourcing and design, although distributors, retailers and consumers also have a role. Product stewardship laws that mandate some level of manufacturer (producer) responsibility for proper product management at the end-of-life are known as extended producer responsibility (EPR) laws. EPR relieves the public sector of some of the burden of managing products at their ‘end of life’.

P.L. 2019, ch. 227, An Act To Implement Recommendations of the Department of Environmental Protection Regarding the State's Product Stewardship Program Framework Laws, strengthened the State's product stewardship program framework laws based on recommendations included in the Department's annual report on the State's product stewardship programs. The Department anticipates that new program elements incorporated into the framework will drastically improve the quality and performance of new product stewardship programs implemented in Maine.

Maine currently has nine laws related to the end-of-life management of specific consumer products that may be considered to be product stewardship laws, administered by five agency staff. Maine's Product Stewardship framework law requires the Department to solicit and collect public comments on the content of the report for 30 days prior to submittal to the Legislature, and to append all comments received to the report.

Given that the 129th Legislature considered numerous proposals for new product stewardship programs in 2019, this report does not include recommendations for any additional programs. This report provides the Joint Standing Committee on the Environment and Natural Resources (ENR Committee) with a status check on Maine's current product stewardship programs, and information from a variety of perspectives on proposals for improvements or additional programs. The Department is currently utilizing five full-time equivalent positions to implement nine product stewardship programs and cannot take on responsibility for any additional product categories or programs without accompanying resources.

II. Candidate products for future stewardship programs

A. Legislation to establish new stewardship programs

During the First Regular Session of the 129th Legislature, two resolves were passed that direct the Department to provide additional information related to the development of new product stewardship programs in Maine.

1) Mattresses
LD 710 (P.L. 2019, ch. 36) - Resolve, To Require the Department of Environmental Protection To Study the Establishment of a Product Stewardship Program for Mattresses. This resolve directed the Department to study the establishment of a new stewardship program in the State for mattresses and report the findings of its study, including recommendations and recommended legislation, to the ENR Committee in December of 2019. The report was submitted for the ENR Committee’s consideration.

2) Packaging

LD 1431 (P.L. 2019, ch. 42) - Resolve, To Support Municipal Recycling Programs. This resolve directed the Department to develop legislation establishing an extended producer responsibility law for packaging in the State. A briefing on the Department’s work in this regard was held in early January before the ENR Committee.

B. Stewardship legislation carried over from the last session

The following stewardship bills introduced in the First Regular Session were carried over for consideration by the Legislature in the second session. If passed, these bills would result in the creation of new product stewardship programs in Maine.

1) Tobacco

LD 544 - An Act To Create Extended Producer Responsibility for Post-consumer Waste Generated from the Use of Tobacco Products, is a concept bill creating a tobacco stewardship program.

2) Pharmaceuticals

LD 1460 - An Act To Support Collection and Proper Disposal of Unwanted Drugs, would establish a drug-take back product stewardship program. As noted in our 2019 Product Stewardship report, a pharmaceutical product stewardship program meets four of the five criteria listed in the framework law – all but the criterion of increasing recovery of material for reuse and recycling. There is increasing evidence that improperly managed pharmaceuticals adversely impact the environment and public health and safety. Although there are entities in Maine offering free pharmaceutical takeback programs, collection sites and events are limited, as is money to cover the costs for education, outreach, and collection. Establishing an EPR law for pharmaceuticals could guarantee on-going funding and provide for safe, convenient collection from consumers, extended care facilities, and medical service providers.

3) Consumer batteries

LD 1594 - An Act To Establish a Stewardship Program for Consumer Batteries, was considered by Maine’s 129th Legislature; the Department provided testimony in support of the bill (attached as Appendix

---

1 Current efforts include 59 permanent sites for collection from households only (medical and residential care facilities cannot utilize the current system). The permanent collection sites are located at police offices or sheriff’s stations; they offer continuous collection then store pharmaceuticals until they can access free disposal provided by the USDEA National Takeback Days. Although Maine has just 0.4% of the country’s population, Maine collected 3% by weight of total drugs turned in during the most recent national one-day USDEA event, including unwanted pharmaceuticals collected at 157 temporary collection sites.
A.) This bill would repeal and replace the existing battery law with an EPR law covering all consumer battery types, including primary batteries. The existing battery law, 38 M.R.S. § 2165, Regulation of certain dry-cell batteries (enacted in 1991), requires manufacturers of nickel cadmium and small sealed lead acid batteries to provide recycling services for these batteries, and is implemented by Call2Recycle on behalf of the manufacturers.

A stewardship program for all consumer batteries meets all five criteria outlined in the Framework Law, as described below:

A. Consumer batteries containing lithium, lithium-ion, lead, cobalt, and cadmium, among other materials, can adversely impact the environment or public health and safety when the casing on improperly disposed batteries degrades and toxic chemicals leach into the surrounding environment. In addition to certain batteries being toxic, improperly managed lithium and lithium-ion batteries can adversely impact public health and safety by exploding and causing fires, as was discussed in our Annual Product Stewardship Report 2019.

B. A product stewardship program that includes all consumer batteries will increase the recovery of materials for reuse and recycling. New data from Vermont shows that, in addition to increasing the collection of primary batteries not currently covered by law, the state’s rechargeable battery collection significantly increased when a stewardship program for primary batteries was passed and consumers were able to recycle primary and rechargeable batteries together. Simplifying the process of battery recycling not only reduces confusion and the related risk of improperly disposed batteries but is likely to increase all battery recycling.

C. A product stewardship program for all consumer batteries will reduce the costs of waste management to local governments and taxpayers. Costs associated with primary battery management are currently born by municipalities, as are the costs of dealing with the fire-risks associated with improperly managed lithium and lithium-ion batteries.

D. There is success in collecting and processing similar products in programs in other states or countries, as demonstrated by Vermont’s numbers shown in the graph below.

E. Existing voluntary product stewardship programs for the product in the State are not sufficient. Maine’s battery collections have hovered around 31,000-32,000 pounds for the past several years. In contrast, Vermont has collected over 110,000 pounds per year since implementing primary battery stewardship.

Battery collection data from Vermont’s 2019 Call2Recycle Report on Battery Stewardship.
If the Legislature passes **LD 1594 - An Act To Establish a Stewardship Program for Consumer Batteries**, the Department will evaluate options for addressing nonremovable batteries (“not easily removed or is not intended or designed to be removed from a covered battery-containing product other than by the manufacturer.”) in future reports.

**C. Future candidate products**

Maine’s Product Stewardship Framework law **38 M.R.S. chapter 18 §1772** establishes the following criteria for identifying products and product categories that when generated as waste may be appropriately managed under a product stewardship program:

A. The product or product category is found to contain toxics that pose the risk of an adverse impact to the environment or public health and safety;

B. A product stewardship program for the product will increase the recovery of materials for reuse and recycling;

C. A product stewardship program will reduce the costs of waste management to local governments and taxpayers;

D. There is success in collecting and processing similar products in programs in other states or countries; and

E. Existing voluntary product stewardship programs for the product in the State are not effective in achieving the policy of this chapter.

Included below are several products that were identified using the above criteria. Some of these products have previously been the subject of discussion in Maine, and EPR programs or certain ‘end of life’ handling requirements have been established for each of these products in other jurisdictions. Although the Department is not currently recommending product stewardship programs for these items, they have been identified as products of concern and may be comprehensively assessed by the criteria outlined in the Framework Law as potential stewardship candidates in the future.

1) **Carpet**

Carpet consistently meets four of the five criteria listed in the framework law for identifying stewardship candidate products, and certain carpets meet the criterion of toxics in the product. Research shows that some carpets may contain brominated flame retardants, which pose health concerns related to endocrine disruption, immunotoxicity, reproductive toxicity, and neurotoxicity.

---

2 Environmental concentrations and consumer exposure data for selected flame retardants (TBB, TBPH, TBBPA, ATO), Consumer Product Safety Commission, 2015

In 2018, researchers also detected PFAS, or per- and polyfluoroalkyl substances at levels up to 25 parts per million (PPM) in five out of 12 carpet products tested. According to the U.S. Environmental Protection Agency, PFAS have been used in carpets since the early 1980s for their stain, soil, and grease-resistant properties. A product stewardship program for carpet would increase the recovery of materials for reuse and recycling and reduce the costs of waste management to local governments and taxpayers. For a successful program, it is important to incentivize reuse as well as the use of recycled content.

2) Gypsum wallboard

Gypsum wallboard, also known as drywall, plasterboard, or sheetrock, is composed primarily of CaSO4 2H2O (calcium sulphate dihydrate). Although gypsum is not hazardous, landfill disposal of the material can result in odor issues and health impacts from hydrogen sulphide gas. Due to the risks associated with landfilling of gypsum, it has been banned from landfill disposal in several jurisdictions, including Massachusetts and in British Columbia and Europe, where there are reuse requirements on gypsum in addition to landfill bans. More recently, an ordinance in Seattle set a requirement to separate gypsum from all construction and demolition projects for reuse. There are strong environmental incentives to reduce landfill disposal, but a lack of economic incentives to recycle as well as a lack of access to recycling options in Maine, making gypsum a good candidate for product stewardship.

3) Household hazardous waste

Household hazardous waste (HHW) is a term used to describe common household products that exhibit the same characteristics of hazardous waste as defined in the Resources Conservation and Recovery Act but are exempt from the precautionary handling requirements under Subtitle C that apply to commercially generated hazardous waste. This means that hazardous waste from households can generally be handled as if it were not hazardous and may be disposed of in the trash like any municipal solid waste. HHW products may catch fire, react, or explode or may be corrosive or toxic if not managed properly. These risks to human health and the environment underscore the importance of managing HHW cautiously. HHW meets four of the five criteria for product stewardship outlined in the Framework Law and has the potential to meet all five criteria if managed in such a way that products can be fully utilized through reuse programs.

4) Solar panels

---

5 Dusaj 1988; U.S. EPA 2012
8 Ibid.
Product stewardship for photovoltaic (PV) modules, commonly referred to as solar panels, meets all five criteria outlined in the Framework Law. Solar panels are made up of photovoltaic cells and semiconductors electrically connected in a module or panel. The overall proportion of waste to new installations is expected to increase over time from an estimated 4-14% in 2030 and up to more than 80% in 2050. Proactively establishing EPR for solar panels would encourage companies to internalize recovery costs into current production and sales. In addition, the increasing volume of PV waste may improve economies of scale over time. Including incentives for design are an important consideration to minimize impacts on the environment and increase efficient use of resources for production, collection, and recycling. However, there is a need for a balanced approach to ensure any up-front or internalized costs for end-of-life product management do not inhibit progress in transitioning to renewable energy.

III. Existing programs’ performance and recommendations

Based on reviews of Maine’s nine product stewardship programs, the performance of each of the implemented programs is described below.

A. Container Redemption (“Bottle Bill”)– 38 M.R.S. §§3101-3119

Maine’s Manufacturers, Distributors, and Dealers of Beverage Containers, a.k.a. the “Bottle Bill” law was enacted in Title 22 in 1976, with the resulting beverage container redemption program originally implemented in 1978 under the purview of the Department of Agriculture. The Legislature transferred responsibility for the program to the Department of Environmental Protection effective November 1, 2015. The Bottle Bill has resulted in a very successful collection program with estimated recovery rates in the 75 to 87% range, well above Maine’s statewide recycling rate of 38.09% and the national recycling rate of 34.7%.

In May 2018, the Office of Program Evaluation and Government Accountability (OPEGA) completed a review of and report on the Bottle Bill program. The purpose of the review as stated in the report was to assess: “whether the program was operating as intended; the costs and offsets of the program for both the State and the initiators of deposit (IoDs); the degree to which risks of non-compliance, fraud, and abuse were mitigated in the program; and how the program compared to the management of beverage containers in other states.”

12 Ibid.
15 Based on available data, Maine’s estimated MSW recycling rate in 2017 was 38.09%, up slightly from 36.79% in 2016.
Many of the recommendations for departmental and Legislative consideration from this report were implemented in 2019 through the passage of three bills that enact a number of changes to the State's container redemption laws, as summarized below:

**LD 1628** (P.L. 2019, ch. 526) – *An Act To Implement Recommendations of the Department of Environmental Protection Regarding the State's Container Redemption Laws.* This bill contained a number of changes to the State's container redemption laws, including but not limited to, reporting requirements on beverage container sales and redemptions, an increase in the annual licensing fee for redemption centers, clarifications on commingling agreements, recycling requirements, clarifications on the Department's rule-making and administrative authority, and standards and requirements for redemption centers.

**LD 248** (P.L. 2019, ch. 133) - *An Act To Increase the Handling Fee for Beverage Containers Reimbursed to Redemption Centers.* The bill contained an increase to the handling fee for beverage containers reimbursed to the redemption center and a temporary moratorium on new redemption center licenses.

**LD 338** (P.L. 2019, ch. 11) - *An Act To Allow Flexibility in the Deposit Labeling of Metal Returnable Beverage Containers.* The bill removed a requirement that metal returnable beverage containers have the deposit information permanently embossed or stamped on the top of the container. Deposit information may now be permanently embossed or stamped on the side of metal beverage containers.

The Department is currently in the process of implementing changes and developing reporting processes in accordance with revisions to the State's container redemption laws enacted during the 2019 legislative session. Pursuant to P.L. 2019, ch. 526, the Department will submit a separate report to the ENR Committee assessing efficiency and convenience of the beverage container redemption system with any recommendations to improve efficiencies in the handling and transportation of beverage containers and ensure convenient collection of beverage containers for consumers.

### B. Mercury Auto Switches – 38 M.R.S. § 1665-A

The mercury auto switch stewardship program has been in place since 2003. The original law prohibited the sale of new motor vehicles with mercury switches, required that mercury switches and headlamps be removed before a motor vehicle can be crushed, and required motor vehicle manufacturers to pay for the recycling of mercury auto switches and pay a $4 bounty to the collector for each switch. Since that time, more than 160 pounds of mercury have been collected in Maine through the program, which amounts to approximately 25% of that estimated to be available for collection. Complete 2019 numbers are not yet available, but only 402 switches were collected during the first 3 quarters of 2019, down from 2421 in 2018 and 4448 in 2017. The decrease is likely a result of decreased department outreach.

While department outreach was likely a factor in the 2019 collection numbers, there is also a decreasing number of available switches. Statute directs the department to recommend repeal of the program once the Commissioner determines that the number of mercury switches available for collection is too small to warrant continued collection. The department is not recommending this action at this point.
End of Life Vehicle Solutions (ELVS), the non-profit entity that runs mercury auto-switch collection programs for auto manufacturers nationally, currently plans to end collection in states where switches are collected voluntarily in 2021. Last year we reported that extrapolation of the estimates of switches available for collection in Maine from previous years suggests that the number of available switches will be negligible after 2021. We subsequently received data from the Maine Department of Transportation on the model years of cars registered in Maine in 2017 indicating that almost 25% were manufactured prior to 2003 and, therefore, could contain mercury auto switches. While not every car manufactured prior to 2003 has mercury auto switches, many models have multiple switches, so there are likely many switches left to collect.

In the coming year, the department plans to continue to evaluate a potential sunset date, increase outreach, and consider opportunities for improving efficiency of collection as switches come in more slowly.

C. Electronic Waste - 38 M.R.S. § 1610

Maine’s electronic waste product stewardship program has facilitated the recycling of printers, televisions, interactive entertainment computers, and other devices with screens of at least 4 inches measured diagonally since 2006. Since 2012, Maine has recycled between 8 and 10 million pounds of electronic waste annually.

---

16 Year class refers to the model year, so the 2003-year class was actually manufactured in 2002 and, therefore, includes models that contained mercury auto switches.
Complete collection data for 2019 is unavailable due to the closure of one of Maine’s electronic waste consolidators. Ewaste Recycling Solutions, which managed about a third of the material moving through Maine’s ewaste program, in addition to acting as a demanufacturer of cathode ray tube devices for recyclers in Maine and other parts of New England, unexpectedly closed in April of 2019 leaving a warehouse full of electronic waste. Clean up was successful but costly to landlords and other recyclers that had sent material for demanufacturing. Other consolidators quickly assumed collection of electronic devices from municipal collection points, but there were fewer one-day collection events during 2019, so the program may see a one-year decrease in pounds recycled.

The e-waste statute was amended by P.L. 2017, ch. 391 to increase efficiency by reducing brand-sorting, among other things. Issues discussed but not addressed in the 2018 amendment include the question of appropriate product scope and an increase or removal of the per pound cap of recycling costs that can be approved by the Department. The department will continue to examine these issues in the year ahead. Other issues under consideration include: the sufficiency of the credits provided to manufacturers of environmentally preferable products, potential cost control mechanisms, proper end-of-life management of plastics containing brominated flame retardants, and mechanisms for addressing unanticipated closures of electronic waste processing facilities.

**D. Mercury Thermostats - 38 M.R.S. § 1665-B**

Maine’s *Mercury-added Thermostats* law, 38 M.R.S. § 1665-B, enacted in 2005, established extended producer responsibility for the collection and recycling of mercury-added thermostats, and beginning in 2007 required a five-dollar ($5.00) incentive payment for each mercury thermostat returned.
An estimated 3,145 mercury thermostats were collected in 2018 (by TRC and through universal waste management), down from 4,112 in 2017 (3,973 by TRC and 139 through universal waste management). Preliminary data retrieved from TRC’s real-time reporting system shows that 2019 collections are up over 2017 and 2018, with around 4,397 mercury thermostats collected. Data on mercury thermostat collection through other universal waste management entities for 2019 is not yet available. Since 2001, over 500 pounds of mercury has been recovered through thermostat recycling efforts in Maine, approximately 86% of which was recovered through TRC’s program.\(^{17}\) From 2007-2016, collections averaged roughly 5,200 thermostats per year, consistently at least 40% higher than rates achieved before the $5 incentive was implemented.

TRC has conducted an annual round of site visits to 35-50 Maine collection locations that had not returned their mercury thermostat bin within the past year and implemented a “miss you” mailing campaign to reach any past-due collection locations that could not be targeted by an in-person technical assistance visit. TRC also conducted national and regional advertising campaigns in 2017 and 2018, although campaign efforts that may have reached Maine residents did not mention Maine’s $5 incentive. However, TRC ramped up its Maine-based efforts in 2019, working with the Department to improve its education and outreach campaign throughout the state with messaging specific to Maine’s incentive program.

**E. Cellular Telephones – 38 M.R.S. § 2143**

Maine’s cellular telephone recycling law, originally enacted in 2007, was amended by P.L. 2019, ch. 151 – *An Act To Implement Recommendations of the Department of Environmental Protection Regarding the State’s Cellular Telephone Recycling Law*. This bill amended 38 M.R.S. § 2143 to remove the requirement that cellular telephone service providers submit annual reports to the Department regarding the collection and disposal, reuse or recycling of used cellular telephones. The law now requires only that a retailer selling cellular phones shall accept, at no charge, used cellular telephones from any person.

**F. Mercury Lamps- 38 M.R.S. § 1672**

\(^{17}\) Department staff recently reviewed all historic data provided by TRC. An average of 3.18 grams of mercury per thermostat was found and used in calculations for this year's report. In previous reports, an estimate of 4 grams per thermostat was used to calculate the total amount of mercury collected.
This law, originally enacted in 2011, was amended by P.L. 2019, ch. 286 - An Act To Implement Recommendations of the Department of Environmental Protection Regarding the State's Mercury-added Lamp Law. This bill removed a restriction that previously limited this program to mercury lamps from households. Schools, small businesses, nonprofits, etc., may now recycle mercury lamps through the program. The revised law does impose a limit on the number of non-CFL mercury lamps (linear tubes, high-intensity discharge, etc.) that may be dropped off per person, per visit (up to ten) at a collection location. This cap does not apply to CFLs, which may be dropped off in any quantity provided a collection location has the capacity to accept the amount. Other key changes in the law include requirements for an independent third-party assessment of consumer awareness, more detailed reporting, education and outreach requirements, and geographic coverage goals to ensure collection site access in rural as well as more populated areas of the state.

In 2018, NEMA collected and recycled approximately 213,596 mercury-added lamps through its product stewardship program in Maine, which equates to approximately 15.6% of available lamps and represents a 17.8% increase in the number of lamps collected over the previous year. This coincided with a 39.6% increase in the number of lamps collected by universal waste management companies in Maine in 2017.

G. Architectural Paint - 38 M.R.S. § 2144

38 M.R.S. § 2144, Maine’s Stewardship program for architectural paint law was enacted in 2015. PaintCare serves as the stewardship organization authorized under Maine’s law. PaintCare is a non-profit third-party organization established by the paint manufacturers to fulfill their responsibilities under EPR laws in effect in nine states and the District of Columbia. The PaintCare program costs are funded by a fee levied at the point of sale on paint. Consumers may return unwanted architectural paint at no cost to participating retail and municipal collection sites, and to municipally-offered household hazardous waste (HHW) collection events that partner with PaintCare. PaintCare provides the collection sites with gaylords (boxes that are approximately one cubic yard in size) for collection and transportation of the paint, in-person training and a training manual, and education and outreach materials for collection sites. In addition, PaintCare’s Program Manager visits each collection location throughout the state at least once annually. Due to budget constraints, the program has not employed robust education and outreach campaigns since 2017, but has continued to provide signage, brochures and handouts for collection sites, implemented social media campaigns, and promoted paint collection events, as well as conducting an annual survey to assess consumer awareness.

In January of 2019, PaintCare established a separate subsidiary to operate the Maine program, PaintCare Maine LLC. This subsidiary serves to keep all funds collected in Maine for Maine program activity only. PaintCare reports on a fiscal year (July 1 – June 30) basis. The Maine program ended FY 2019 (July 1, 2018 – June 30, 2019) with a reserve fund of $161,368. Declining paint sales combined with increased paint collections in FY 2019 led to a decrease in the reserve fund, which stood at $270,716 at the end of FY 2018. As required by Maine’s paint stewardship law, the amount of the paint stewardship assessment must be sufficient to recover, but may not exceed, the cost of the paint stewardship program. If revenues generated from the fee at sale prove insufficient to cover the cost of operating the paint stewardship program, PaintCare may propose a fee increase in the future.
In FY 2019, PaintCare collected and processed 134,906 gallons of postconsumer paint, an increase of nearly 5,000 gallons over FY 2018. 74% of the paint collected was latex and 26% was oil-based. The program had a recycling rate of approximately 64% in 2019. The paint recovery rate, which is the volume of paint collected divided by the volume of new paint sold during the year, was 6.9%, 17% more than the recovery rate in 2018. 96% of the oil-based paint was used as fuel and 4% was recycled into new paint; the percentages of oil-based paint recycled was slightly higher than in the previous reporting period. 85% of the collected latex was made into recycle-content paint and <1% was used as fuel; 14% was unrecyclable and sent to landfills for disposal. These percentages were similar to the previous reporting period. In addition, 112 tons of consumer packaging, i.e., metal and plastic containers, were recycled. PaintCare's analysis shows that its collection network provides a permanent collection site within 15 miles of 94.8% of Maine's population, exceeding the 90% goal set in statute.

**H. Plastic Bags - 38 M.R.S. § 1611**

P.L. 2019, ch. 346 - *An Act To Eliminate Single-use Plastic Carry-out Bags* was enacted during the First Regular Session of the 129th Legislature. This bill repealed and replaced 38 M.R.S. § 1605 *(Plastic bags; recycling)* which required retailers to collect and recycle plastic bags.

38 M.R.S. § 1611 establishes a statewide ban on single-use plastic carry-out bags used to bag products at the point of sale in retail establishments including stores, restaurants, farmers' markets, and fairs that sell merchandise like food, goods, products or clothing, effective April 22, 2020. Once the law is in effect, all carry-out bags provided by the retailer at point-of-sale must be either a reusable bag or a recycled paper bag and retail establishments must charge a fee of at least 5¢ per bag for reusable bags made of plastic or recycled paper bags.

The new law includes a requirement that retailers providing single-use plastic bags to bag items within the establishment (produce bags, deli bags, etc.) other than at point of sale continue to serve as plastic bag recycling drop-off locations. However, the Department has identified an issue with the language of the law as it relates to the recycling requirement, which relies on the text below marked in bold.

- 38 M.R.S. §1611.1. H. Describes a "Single-use carry-out bag" as a bag provided by a retail establishment at the point of sale for the purpose of transporting merchandise away from the retail establishment.
- 38 M.R.S. §1611.2. A. Establishes a ban on single-use carry-out bags at point of sale effective April 22, 2020 except for the exempted bags described in paragraph B.  
- 38 M.R.S. §1611.2. B. Sets exemptions for numerous bags and uses, but the primary exemption relating to the recycling requirement is in 38 M.R.S. §1611.2. B (3): “Bags used

---

18 Based on the percentages of latex and oil-based paint recycled, approximately 86,260 gallons of recovered paint was recycled into new paint.
19 The following single-use bags are exempted under §1611.2. B:
   (1) Bags provided by a pharmacy to a customer for transporting a prescription medication away from the store;
   (2) Bags without handles used to protect items from being damaged or from damaging or contaminating other purchased items placed in a recycled paper bag or a reusable bag;
by customers inside a retail establishment to package loose items, such as fruits, vegetables, nuts, coffee, grains, bakery goods, candy, greeting cards or small hardware items; to contain or wrap frozen foods, meats or fish; or to contain or wrap flowers or potted plants;”

- 38 M.R.S. §1611.2. C. Sets the recycling requirement, noting that retail establishments may make exempted single-use plastic carry-out bags available to customers to bag products within the retail establishment other than at the point of sale only if the retail establishment serves as a plastic bag recycling drop-off.

This language is problematic because the recycling requirement is based on retailers making exempted single-use plastic carry-out bags available to bag products within the retail establishment other than at point of sale. However, single-use carry-out bags are, by definition, exclusively used at the point of sale to transport merchandise away from the retail establishment. The simple fix is to remove the phrase “carry-out” from the following sub-sections of 38 M.R.S. §1611:

- 38 M.R.S. §1611.2. A. Except as otherwise provided in this subsection, beginning April 22, 2020, a retail establishment may not provide a single-use carry-out bag to a customer at the point of sale or otherwise make single-use carry-out bags available to customers.
- 38 M.R.S. §1611.2. C. A retail establishment may make single-use carry-out bags made of plastic that are exempted in paragraph B available to customers to bag products within the retail establishment other than at the point of sale only if the retail establishment:
  - Locates inside the retail establishment or within 20 feet of the main entrance to the retail establishment a receptacle for collecting any used single-use carry-out bags made of plastic; and
  - Ensures that single-use carry-out bags made of plastic that are collected by the retail establishment are recycled or delivered to a person engaged in recycling plastics.

The department recommends that this clarification be made in order to facilitate implementation of the law in accordance with its original intent.

---

(3) Bags used by customers inside a retail establishment to package loose items, such as fruits, vegetables, nuts, coffee, grains, bakery goods, candy, greeting cards or small hardware items; to contain or wrap frozen foods, meats or fish; or to contain or wrap flowers or potted plants;
(4) Laundry, dry cleaning or garment bags, including bags provided by a hotel to guests to contain wet or dirty clothing or bags provided to protect large garments like suits, jackets or dresses;
(5) Newspaper bags;
(6) Bags sold in packages containing multiple bags intended to contain garbage, pet waste or yard waste;
(7) Bags used to contain live animals, such as fish or insects sold in pet stores;
(8) Bags used for vehicle tires;
(9) Bags used to transport chemical pesticides, drain cleaning chemicals or other caustic chemicals sold at a retail establishment;
(10) Bags used by a hunger relief organization such as a food pantry or soup kitchen to distribute food directly to the consumer at no charge;
(11) Bags that customers bring to the retail establishment for their own use or for carrying away from the retail establishment goods that are not placed in a bag provided by the retail establishment.

20 Ibid.
IV. Conclusion

Maine’s EPR programs for certain consumer items continue to divert a significant amount of material for recycling and ensure the safe handling of products containing toxics. The Department is currently focused on implementing recent legislative changes and overseeing existing EPR programs. As described in the Department’s 2019 report, implementation of new product stewardship programs will require no less than one-half full time equivalent (FTE) staff position. While the Department supports continuing to utilize product stewardship strategies to increase recycling, regulation of new product categories will require additional resources for program administration. The Department will continue to assess candidate products presenting end-of-life management challenges that may be addressed by carefully constructed EPR programs in the future.
Appendices
Appendix A - Department Testimony on LD 1594

TESTIMONY OF

Carole Cifrino, SUPERVISOR RECYCLING PROGRAMS

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

SPEAKING IN SUPPORT OF L.D. 1594

AN ACT TO ESTABLISH A STEWARDSHIP PROGRAM FOR
CONSUMER BATTERIES

SPONSORED BY REPRESENTATIVE FAY

BEFORE THE JOINT STANDING COMMITTEE
ON
ENVIRONMENT AND NATURAL RESOURCES

DATE OF HEARING:

May 1, 2019

Senator Carson, Representative Tucker, and members of the Committee, I am Carole Cifrino, the Supervisor of Recycling Programs at the Department of Environmental Protection, speaking in support of L.D. 1594. Over the many years I have worked in solid waste management at the Department, we have received more unsolicited inquiries from Maine consumers seeking to recycle batteries than for any other product. Mainers’ desire to recycle batteries reflects our strong cultural heritage of conservation and a general disinclination to waste materials.

Current program and challenges
As you know, Maine has an existing battery product stewardship law that was enacted 28 years ago to ensure the recycling of rechargeable nickel cadmium and sealed lead acid batteries at no cost from governmental agencies and certain industrial, communications and medical facilities. Around that same time, several other states enacted similar laws, and the rechargeable battery industry responded by creating the non-profit Rechargeable Battery Recycling Corporation, a producer responsibility organization. RBRC, now called “Call2Recycle”, made free rechargeable battery recycling widely available, with many municipalities and retailers in Maine opting to voluntarily act as collection sites. Over the past three decades the consumer battery industry has expanded to include additional battery chemistries with longer battery life, making them ideal for powering the ever-growing variety of consumer electronics.

As more and more consumers turn their spent batteries into the Call2Recycle rechargeable battery collection boxes, the number of batteries collected that were put on the market by manufacturers that do not contribute to the operations of Call2Recycle increases. These batteries from non-participating manufacturers are both rechargeable batteries as well as single-use batteries, also called primary batteries. This means that manufacturers that are required to offer rechargeable battery collection in Maine are unfairly bearing the cost of recycling batteries placed on the market by their competitors.

The most direct way to address the unfairness that has evolved in the implementation of current limited-scope battery recycling laws and the desire of Mainers to recycle all of their spent batteries is to modernize the law to cover all consumer batteries.

**Framework Criteria**

This year’s *Annual Product Stewardship Report* discusses how the category of primary and rechargeable consumer batteries meets all five of the criteria in Maine’s *Product Stewardship* framework law, making all consumer batteries a good candidate for an extended producer responsibility program.

- They contain toxics, and lithium battery chemistries in the MSW waste stream increase the risk of fires within normal waste handling operations.
- A product stewardship program for all consumer batteries will increase the recovery of materials for reuse and recycling as most consumer batteries in Maine end up in our landfills or waste-to-energy incinerators.
- It is estimated that over 28 million consumer batteries are sold in Maine each year, so although each battery is small in size, in aggregate consumer batteries are a significant volume. Therefore, a successful collection and recycling program will reduce the costs of waste management borne by local governments and taxpayers.
- There are successful EPR programs for combined rechargeable and primary batteries in Canada and in Vermont. In the first year after adding primary batteries to its rechargeable battery program together, Vermont consumers increased primary battery recycling by 1,820% and also recycled 44% more rechargeable batteries. Not requiring consumers to distinguish between rechargeable and primary batteries encourages the return of more rechargeables for recycling.
Anyone who accumulated primary batteries in Maine today must pay to have them recycled. Although battery recycling services are readily found on-line, the cost of this service is a significant barrier to recycling.

Proposal development

This proposed legislation is based on an amendment to LD 1578 that was introduced in 2016 by Senator Saviello at the request of battery manufacturers, and then amended by the ENR Committee and voted ought-to-pass out of Committee. LD 1578 ultimately failed when amended on the Senate floor to eliminate battery-containing products from the legislation and the battery manufacturers withdrew their support due to this change.

This year’s LD 1594 includes a few additional provisions aligned with the Department’s proposals for Maine’s Framework Law. These include measurable goals for consumer awareness, the inclusion of a proposed budget in the program plan including funding for a ½-time person dedicated to implementing the program in Maine, and an independently audited financial report with a breakdown of program expenses as part of the annual reporting requirement. Because these are new provisions, I expect that others may offer additional thoughts on the appropriateness of these requirements for this program.

You will also note that this legislation is more prescriptive than a proposal might be if it were developed based strictly on Maine’s Framework Law. Much of the more prescriptive language was developed by the battery industry to provide predictability in the plan review process and implementation of sales ban provisions as well as clear parameters for the pursuit of a limited right to private action. Additional provisions ensure that manufacturers who sell products containing batteries either carry the same responsibilities as other manufacturers placing batteries on the market, or that they utilize only batteries from manufacturers participating in an approved stewardship program and report on their battery use to the DEP and the program operator upon request.

DEP discussion with battery industry representatives

In early February Department staff met with representatives from PRBA, the Portable Rechargeable Battery Association, and NEMA, the National Electrical Manufacturers Association, to discuss the draft legislation included as Appendix C in the 2019 Product Stewardship Report. As a result of that meeting, the Department is supporting Representative Fay’s proposed legislation rather than the Appendix C draft. We also discussed PRBA’s and NEMA’s decision to change from their previous support of their legislative proposal for an EPR program for all consumer batteries to opposing this current legislation. They expressed that this change in position is due to their belief that the legislative process is likely to result in exemptions that will enshrine in statute a lack of end-of-life responsibility for the manufacturers of specific battery-containing products.

In the February meeting, NEMA also asserted that the recycling of primary batteries has greater environmental impacts than disposing of these single-use batteries in landfills. After the meeting,
NEMA provided the Department with the life-cycle assessment it commissioned and other documents to support this assertion. Department staff have reviewed these documents as well as other studies on the comparative impacts of the recycling vs. landfilling of primary batteries, and determined that:

- The NEMA study has not been peer reviewed, and its finding of net negative environmental impacts for measures primarily driven by fossil fuel combustion are out of line with other data sources.
- The study’s assumptions are not aligned with the proposal in this bill, e.g., it omits lithium primary batteries, and the scope is limited to the separate recycling of primary batteries, i.e., it does not analyze the co-collection of primary batteries with rechargeable batteries.
- The modeling assumptions for the collection system are not accurate for Maine; the assumptions overestimate the resources used by consumers in delivering batteries to collection and in transportation to sorting and processing facilities.
- The modeling assumptions do not include a complete accounting of the benefits of recycling.
- The study does not consider implementation of more efficient recycling technologies.

Even with the overestimation of the environmental impacts from collection and transportation and the underestimation of environmental benefits of recycling, the study shows that separate alkaline battery recycling has a net positive environmental impact by some measures.

- Measures of harm to human health (both carcinogenic and non-carcinogenic) and of ecotoxicity show that recycling of primary batteries is beneficial.
- Eutrophication impacts modeled show recycling as less harmful than landfilling.

Given the preponderance of evidence, it is clear that the co-collection of primary and rechargeable batteries as proposed in this legislation will have significant net positive environmental impacts.

Thank you for the opportunity to testify in support of this legislation to implement an incremental step on our path to a circular economy. I am happy to answer any questions you may have.
Appendix B - Comments Received on Posted Report
Dear Megan,

I worked on the issue of recycling solar panels last year. A good amount of research is available that expounds the CHC concerns about solar panels. I was interested in implementing a recycling process – the first in America.

But I ran into an industry that denies that solar panels contain any hazardous chemicals. And these companies selling panels are deceiving customers about the fact that they will eventually be responsible for recycling of all such panels.

I even tried to get some legislators to introduce my well-researched recycling bill. I would gladly give you the bill if you would submit it. (Your coworkers may have it already). There needs to be mandatory inspection and recycling programs, and substantive fines for misrepresenting the Chemical risks to customers. I would propose that sellers be required to pay into a reserve to pay for recovery of CHC. It is worth noting that municipalities are large purchasers of this future risk and thus taxpayers will be stuck with remediation in the future.

The bill to require recycling is slightly problematic since there are NO legitimate recycling processes in America and only two worldwide. It is an opportunity for someone to start a business. But this won’t happen autonomously. There is little money to make from recycling and thus needs a legislative mandate to move it forward.

As such, I would encourage DEP to move solar recycling up the priority list and at least get the ball rolling this year. Assume it will take 2 to 3 years for the solar industry to catch up with a legislative mandate, DEP need to act today.

As a minimum, could DEP please bring greater attention to the hazard. Real facts. As long as solar retailers are claiming there are no CHC in solar panels, I certainly couldn’t make any headway. I/We need a proclamation that in fact, all solar panels include CHC, albeit in minute quantities that are extremely dangerous and hard to remedy.

Kenneth A. Capron, ret. CPA, MCSE
1375 Forest Avenue D-11
Portland, Maine 04103
Phone: 207-797-7891
Email: kcapron1@maine.rr.com
February 13, 2020

Megan Mansfield Pryor
Environmental Specialist, Division of Materials Management
Maine DEP
17 State House Station
Augusta, ME 04333-0017

Re: Annual Product Stewardship Report 2020 - Carpet

Dear Ms. Mansfield Pryor,

I read with interest your January 2020, “Annual Product Stewardship Report.” I am the President of the Carpet & Rug Institute (CRI), a not-for-profit trade association that represents carpet manufacturers who are responsible for more than 95% of the carpet produced in the United States. I am concerned about the possible ramifications of over-regulating post-consumer carpet products. Carpet is one of the last remaining major U.S. textile industries, and tens of thousands of American jobs depend on the U.S. carpet industry, in manufacturing, transportation, installation, retail sales, recycling, and more. Your report references the amount of carpet going into Maine’s landfills, and while carpet is neither toxic nor hazardous, we understand that landfill space is significantly limited.

The carpet industry has been a leader in forging product sustainability. One of our significant accomplishments is the Carpet America Recovery Effort (CARE). CARE is a voluntary, non-profit organization dedicated to increasing the landfill diversion, reuse, and recycling of waste carpet through market-based solutions that benefit the economy as well as the environment. Reduction in the amount of carpet going to landfills each year is already happening. Since its inception in 2002, CARE has worked with recyclers to divert over 5.5 billion pounds of used carpet from landfills. CARE’s four hundred-plus members include independent carpet recyclers, carpet manufacturers, dealers, retailers, suppliers and non-governmental organizations.

Unlike newspapers and aluminum cans which are relatively easy to recycle, carpet is a complex product that is difficult to separate into its component parts. However, there are multiple products currently in use that contain materials recovered from used carpet.

- New carpet and carpet padding
- Plastic components for automobiles and consumer products
- Building materials – architectural moldings, boat docks, and decks
- Sound barriers – along interstates and elsewhere
- Erosion control, silt and oil filtration materials
- Alternative fuel source

CRI and its members have not only worked hard to ensure that their products are completely safe to the consumer, but they have taken great effort towards producing sustainable products. We are therefore particularly concerned that the carpet industry, which has been a leader in addressing environmental concerns in a proactive manner, would have carpet highlighted as one of the first non-hazardous products to be considered for extended producer responsibility.

Carpet is one of the safest and healthiest products in the home, office, or school. It adds comfort, warmth, and beauty to any home. In fact, carpet’s use in virtually every residential and commercial interior setting is so accepted that we are not aware of any federal or state requirements restricting its sale or use. As such, carpet, because of its long track record of performance and sustainability initiatives, should not be subjected to the kind of extreme product stewardship or take-back program referenced in your report.
These approaches rely on the flawed premise that assigning product manufacturers the end-of-life costs of recycling or disposing of products will result in more environmentally-preferred product designs, eliminate product disposal costs, and reduce disposal of products in landfills. However, current product-mandated manufacturer take-back programs have not successfully demonstrated positive cost-benefit results in collecting products at the end of their life-cycles. It is unrealistic to expect that consumers will utilize individual and separate product take-back programs for diverse product categories or that those programs would use resource efficiently.

Manufacturers are continually producing more environmentally-preferable products and using the most recyclable and environmentally-friendly components and packaging available and feasible. These activities serve the best interests of the environment and are also necessary in order to be cost-effective with limited resources and responsive to consumer demands.

Mandates for product take-back and recycling can harm the environment in unforeseen ways, by forcing companies to switch from materials that are perhaps more energy-efficient to produce, lighter to transport, or safer, to heavier materials that are more recyclable, but require more energy to produce and use and could pose greater safety concerns. Market processes encourage innovation in the use of limited resources throughout a product’s life-cycle, while mandated product take-back programs override this natural research and development process.

In these times of extreme fiscal pressures on industry and government, it seems prudent to include a requirement for cost-effectiveness or a cost/benefit analysis in any proposed new mandate. However, there appears to be no such requirement included in this program. Consequently, the mandates of this program could effectively put an industry out of business and drain state resources in staggering administration costs, while still mandating DEP to move forward. We urge the inclusion of a cost-benefit analysis component in any extended producer program in order to prioritize limited resources and prevent fiscally questionable mandates.

As an alternative to mandates, CRI supports continued voluntary initiatives to find cost-effective solutions. We feel a much more prudent and effective approach to the landfill diversion of carpet lies in using the power of government in a different way; by driving the use of products that contain recycled or recyclable materials through the state’s product specification process. Why not use the expertise of DEP to identify products containing post-consumer recycled and recyclable materials and requiring state purchase of such products? This approach would drive the market to develop products that meet these requirements, and thereby reduce the amount of material going to landfills.

On behalf of the members of the Carpet and Rug Institute, I thank you for your consideration of these concerns. If you have any questions, please do not hesitate to contact Jennifer Stowe, CRI Vice President, Government Relations at jstowe@carpet-rug.org, or 703-875-0634.

Sincerely,

Joe W. Yarbrough
President
February 14, 2020

Ms. Megan Mansfield Pryor
Director, Bureau of Land Resources
Maine DEP
17 State House Station
Augusta, ME 04333-0017

Ms. Mansfield Pryor,

On behalf of the members of the Product Management Alliance (PMA), we appreciate the opportunity to express the Product Management Alliances’ position on the Department of Environmental Protection’s Annual Report to the Joint Standing Committee on Environment and Natural Resources, Concerning the Implement of Product Stewardship in Maine.

My name is Kevin Canan, and I serve as the Executive Director of the PMA. By way of introduction, the PMA is a coalition comprised of trade associations and corporations that represent a broad array of consumer products. Our mission is to support market-based extended producer responsibility (EPR) efforts, as well as voluntary incentives for increased recovery and sustainable products and package design. We were founded precisely as a response to the signing of LD 1631 into law in 2010, the law which compels this report.

PMA’s members have long strived to voluntarily recover the products that they manufacture. The PMA understands and appreciates Maine’s desire to seek ways to improve the recovery rates of goods. However, we believe that expanding current EPR programs and adding additional EPR programs for additional products, specifically the carpet and mattress industries enumerated in the report, would simply add costly and unnecessary mandates for both the state government to implement and run this program; as well as for retailers and manufacturers in Maine. These costs will ultimately be borne by taxpayers and consumers.

Additional EPR programs would set up a confusing and bureaucratic system of recovery for the residents of the state with similar types of products having very different end-of-life recovery schemes. In addition, these types of restrictive programs would likely to have a chilling effect on manufacturers and retailers doing business in Maine, and as a result business very well could be lost to neighboring states.

PMA members and businesses utilize sophisticated programs in place that continue to increase the amounts of products recovered and recycled through voluntary initiatives. Today recovery rates are at record levels, and they are continually striving to increase these numbers. The existence of these efforts illustrate that new mandates on producers are not necessary to reduce waste and increase recycling and the use of recycled content. Thus, we urge the DEP and the legislature to strongly examine voluntary, market-based recovery efforts for increased recovery of products and oppose any new or further expansion of EPR in the state that are enumerated in the report.
The members of the PMA, and the industries they represent, recognize the desire of the public and policymakers for environmentally responsible business practices. That is why our member companies are voluntarily involved in waste recovery programs, and support recycling where it is economically and logistically feasible.

We hope to have a positive and constructive working relationship with you.

Sincerely,

Kevin C. Canan
Executive Director

Product Management Alliance
1000 Potomac Street, NW
Suite 200
Washington, DC 20015
(888) 588-6878
info@productmanagementalliance.org
www.productmanagementalliance.org
February 14, 2020

Megan Mansfield Pryor
Division of Materials Management
Maine DEP
17 State House Station
Augusta, ME 04333-0017

RE: Comments on the 2020 Product Stewardship Report

Dear Ms. Pryor:

My name is Curtis Picard and I am the President and CEO of the Retail Association of Maine. I am a resident of Topsham. We have more than 350 members statewide and represent retailers of all sizes. Maine’s retailers employ more than 85,000 Mainers. Thank you for the opportunity to share our comments on the 2020 Product Stewardship Report.

The Retail Association of Maine has been working diligently with other stakeholders on the mattress disposal issue. We continue to explore a number of options of how to disassemble mattresses to their component parts for better recycling. I personally attended the trial shredding experiment at PERC in Orrington. It was interesting to see first hand how that process works and how that plant operates. More recently, our group is exploring whether or not a pilot program is possible in the Lewiston / Auburn area.

Additionally, our association in partnership with the Maine Grocers and Food Producers Association helped draft Maine’s upcoming plastic bag law. With the April 22, 2020 effective date quickly approaching, we continue to help educate affected businesses about the upcoming law. I will add that we have fielded a few calls from members that are having difficulty sourcing paper bags. We are told that there are only three major manufacturers of paper bags in the US and with the growing demand for these products and more municipalities passing similar laws or ordinances, the factories are not able to keep up with the demand. We are hopeful that this
is more of a short-term problem that will work itself out, but we plan to keep an eye on it as well.

We wanted to focus some of our comments on Maine’s e-waste program.

Maine’s e-waste program has remained virtually unchanged since its inception. Our members that participate in the e-waste program in Maine and in other states around the country have told us that there are more efficient and effective models and programs in other states. They have told us that Maine’s program is one of the costliest in the nation. In fact, they have told us that the cost of Maine’s program is even higher than the costs in Hawaii where the material needs to be shipped to the Mainland for processing.

Our request is to have Maine DEP work with e-waste stakeholders to see how Maine’s program can be operated more effectively and cost-efficiently.

We believe that Maine’s e-waste program is valuable and worth continuing, but the product stewardship programs in place in Maine should be operating with comparable costs to other states.

Thank you for the opportunity to share our concerns with you.

Sincerely,

Curtis Picard, CAE, President and CEO