Understanding Delaware’s Universal Recycling Law
February 2017

Background

In 2015, the American Beverage Association (ABA) released an “Issue Analysis” which examines the impacts of Delaware’s new Universal Recycling Law, implemented in 2011.¹ The Container Recycling Institute (CRI) has prepared this fact sheet to provide additional information not currently presented in ABA’s analysis.

Mandatory Collection of Recyclables

In June 2010, Delaware’s Beverage Container Deposit Law (a.k.a. Bottle Bill) was repealed and replaced with the Universal Recycling Law. The elimination of the deposit return program for plastic and glass beverage containers (used for carbonated beverages) was the result of Senate Bill 234 (SB234), which passed the Delaware House and Senate in May 2010. The new law mandated that all waste haulers provide these services:

- Single stream curbside recycling to single family homes as well as to bars and restaurants by September 15, 2011;
- Recycling to multi-family residences by January 1, 2013; and
- Recycling to all commercial establishments by January 1, 2014.

Since its implementation, the new law has contributed to increasing Delaware’s overall municipal solid waste (MSW) “recycling diversion rate” to 41.8% in 2014, up from 33.7% in 2010, the year preceding implementation, as Table 1 shows. Groups like the ABA – which represent beverage companies – are using this “success” to lobby for the repeal of existing bottle bills and to convince other state legislators to adopt similar initiatives (Delaware-style Universal Recycling Laws) to improve their recycling rates.

A Closer Look at the Numbers in Delaware

Those who argue for the repeal of existing bottle bills in favor of universal recycling laws in other states, based on the results of Delaware’s new program, are not taking into account some essential differences between Municipal Solid Waste (MSW) collection circumstances between states. In addition to having much more comprehensive and successful bottle bills than what Delaware had in place, many of these deposit return states already have curbside residential programs that are significantly more successful than Delaware’s 2010 program was.

Table 1. Recycling Diversion in Delaware*

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent diversion</th>
<th>Major milestones</th>
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</thead>
<tbody>
<tr>
<td>2010</td>
<td>33.7%</td>
<td>Universal Recycling Signed into Law</td>
</tr>
<tr>
<td>2011</td>
<td>37.4%</td>
<td>Central and Southern Yard Waste bans take effect</td>
</tr>
<tr>
<td>2012</td>
<td>40.1%</td>
<td>First full year of single-family, single stream</td>
</tr>
<tr>
<td>2013</td>
<td>41.9%</td>
<td>First full year of multi-family, single stream</td>
</tr>
<tr>
<td>2014</td>
<td>41.8%</td>
<td>First full year of commercial recycling</td>
</tr>
</tbody>
</table>

* A "recycling diversion rate" should not be confused with a "recycling rate," which measures the amount of material marketed to end users. In Delaware, 10-18% of materials collected–diverted—may be lost during processing due to contamination.

The increase in Delaware’s total diversion rate from 33.7% in 2010 to 41.8% in 2014 represents a 113,197-ton increase in recyclable and compostable material. Note, however, that this increase includes mixed recyclables, including packaging and paper; electronics waste; household hazardous waste; large appliances and organics (compostables). Organic materials collection alone increased by more than 31,000 tons between 2010 and 2014. This is partly a result of an entirely separate piece of legislation that banned leaf and yard waste from landfills.² This increase represents 28% of the total increase in Delaware’s recycling rate from 2010 to 2014. In terms of the total recycling increase, about half of the gain came from the residential sector, and the other half came from the commercial sector.

The ABA’s “Issue Analysis” reports Delaware’s diversion rates starting in 2006: 4 years before SB 234 passed. In 2008, only 17% of Delaware residents even had curbside recycling collection: 56% lower than the national average (73%)\(^3\). Comparing three-year increases in Delaware’s recycling rates to those in states like Massachusetts, New York and Connecticut—where access to recycling was already high at 65% or more—is like comparing apples to oranges since these states had achieved comparable increases in previous years.

**Beverage Container Recycling in Delaware**

Prior to being repealed, Delaware’s deposit return program was the weakest in the country, covering only glass and plastic beverage containers used for carbonated drinks, which represented less than 20% of all beverage containers sold in the State.

In addition to being limited in scope, the law contained no provision to ensure that collected containers were actually recycled, resulting in some retailers having no pick-up of the containers that had been redeemed at their location. As a result, the recycling rates reported for deposit containers in Delaware’s bottle deposit program were significantly lower than those reported in other bottle bill states (See Figure 1).\(^4\)

Delaware’s new Universal Recycling Program collects all packaging and printed paper through single stream recycling systems, in which the individual materials are sorted out at the Material Recovery Facility (MRF). It should be noted that approximately 10% to 18% of all materials entering single-stream MRFs is residual waste, and this is included in the State’s recycling rate. This means that roughly 11,000 tons of the materials included in the recycling totals are actually recyclables and non-recyclables that are disposed of in landfills. To provide a more accurate representation of the State’s recycling performance, the recycling rate should exclude these landfilled residuals. (They are currently being double-counted by counting as both recycling and disposal.)

Furthermore, and more importantly, each load of recyclables sent from MRFs contains a certain level of contaminants, which end up being removed by recyclers and sent for disposal. Collectively, these contaminants contribute to a significant decrease in the percentage of PET, glass and aluminum containers actually recycled. While dual stream and deposit programs may still suffer some breakage and contamination, the level of contamination experienced in single stream collection systems is generally much higher.

When the MRF residual rate and these conservative contamination losses are applied to the recycling rates of PET, glass and aluminum containers collected in Delaware (2014), it is possible that the tons of beverage container material actually recycled may be as low as 30-40% of these beverages sold.\(^5\) Accurate reporting of the State’s recycling performance would exclude these losses from the rate calculation.

Glass is typically impacted to the greatest degree, with contamination losses making up 20% to 40% of the tons shipped from MRFs. According to the

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5. Using Table 2 - State of Delaware – Assessment of MSW Recycling for CY2013, DSM Environmental, we applied loss rates of 10% for the MRF residue as reported in footnote #7; determined the share of beverage containers versus non-beverage packaging based on industry reports (PET: 70%; glass: 85%; aluminum 95%) and applied conservative contamination losses at the recyclers of 20% for glass; 35% for PET and 5% for aluminum, based on reports from US-based recyclers. These values were compared against sales data from BMDA 2010 prorated to 2013, using a 2% annual growth in sales.
recyclers of post-consumer glass, the glass collected via Delaware’s new universal recycling program is of much lower quality than that which was collected under the now-repealed bottle bill. As a result, glass manufacturers are now paying more for processing and waste management than before. Moreover, due to its low quality, most of the glass that is recovered through single stream collection systems ends up as road fill, instead of being recycled into new bottles. US plastic recyclers have also cited higher contamination of PET collected through single stream recycling programs, reporting an average contamination rate of 31% for curbside bales of PET in 2013.6

Only One Third of the Anticipated Funding Has Been Distributed

To finance the transition to the new recycling program, Delaware’s former 5-cent refundable deposit on certain beverage containers was replaced with a 4-cent non-refundable recycling fee. The revenues from this fee were intended to support the creation of the Delaware Recycling Fund, which is used by the State to issue grants and low-interest loans to support the waste management industry’s investment in the new single stream recycling infrastructure. The original intent was to charge beverage distributors the fee (4 cents per unit sold), which they could pass on to retailers and then to consumers. In the end, however, the law mandated that every retailer—not distributors—pay the recycling fee.

Beverage distributors projected revenues to total $22 million (based on projected sales) from 2011 until the time the fee was set to expire on December 1, 2014 (regardless of how much was raised). Distributors successfully lobbied to require fee collection from retailers, not distributors. However, by the end of 2014, the fund had only raised $12.9 million, falling short of projections by $8 million. This shortfall is likely due to the fact that a number of containers sold got a “free ride” because some specific sellers of beverages were more difficult to collect from.

These include vending machines, big box stores, and small convenience stores.

Moreover, only $8 million in grant funding was given out from 2011 to 2016. The grant recipients were:

- Waste haulers and other commercial entities received $4.6 million;
- Municipalities received $2.5 million;
- Schools and other non-profit organizations received $865,000, as Table 2 shows.

Only 15 of 57 cities in Delaware received funding through this program.

<table>
<thead>
<tr>
<th>Category</th>
<th>Municipalities</th>
<th>Waste Haulers &amp; Other Commercial Entities</th>
<th>Schools and non-profit organizations</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount</td>
<td>$2,458,938</td>
<td>$4,626,873</td>
<td>$864,793</td>
<td>$7,950,604</td>
</tr>
<tr>
<td>Percent of total</td>
<td>31%</td>
<td>58%</td>
<td>11%</td>
<td>100%</td>
</tr>
</tbody>
</table>

There was $5 million remaining in the Fund for distribution in future grant cycles, but on July 1, 2016, the Governor signed HB 450, a budget bill that appropriated this $5 million for other uses. No more recycling grants will be made from that fund, and there is no mechanism to replace it.

Prior to the Fund’s demise, an advisory committee had been established to oversee the grant program, but there was no prohibition on grants being given to companies or agencies represented by the advisors. In fact, five companies or agencies that received grants also had a representative on the advisory committee in Delaware. In sum:

- Only 59% of the anticipated funding was raised by the non-refundable fees,
- Only 15% of the anticipated funding was granted to public and non-profit entities,
- $5 million in dedicated recycling funding was diverted to the State’s General Fund, and
- There is no fundraising mechanism for future recycling grants or ongoing state administration of the program.

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6 Qualitative reports from glass processing industry pre and post bottle bill repeal.
Hybrid is Best: Universal Recycling System AND Deposit Return

Proponents of a bottle bill repeal suggest that deposit return and a Universal Recycling Program are mutually exclusive. However, as evidenced by the experiences in other jurisdictions—all U.S. bottle bill states, nearly every Canadian province, and numerous European countries—the two systems complement each other very well.

While universal recycling does an excellent job at addressing recyclables and organics generated inside the home, it does not target recyclables generated away from home, such as those consumed in parks, in the car, or at outdoor events such as concerts, etc., which make up about 30% of all beverage container sales. Deposit return provides an economic incentive to recycle these containers rather than dispose of them in the trash or litter them on the street.

States with deposit return consistently show high recovery rates for beverage containers while those with only curbside recycling programs do not. In the U.S., the average return rate for deposit-bearing containers is 71%; in non-deposit states, the average is 29%.

Those who oppose expanded bottle bills and/or support the repeal of existing programs often claim that deposit return robs municipalities of material that could otherwise be sold to pay for recycling programs. These arguments do not take into account the savings realized by municipalities from avoiding the costs associated with collecting and processing these materials in the first place.

For example, when the province of Ontario (Canada) introduced a deposit return system for alcohol containers in 2007, the City of Toronto reported savings of $448K and $381K in the first two years of the program as a result of lower processing and disposal costs. Consistent with these findings, a recent study on the impacts of Minnesota’s bottle bill found that when all costs and savings are accounted for, municipalities actually enjoy a net savings in costs with a deposit-return program.

About the Container Recycling Institute (CRI)

CRI is a non-profit organization and a leading authority on the economic and environmental impacts of used beverage containers and other consumer-product packaging. Its mission is to make North America a global model for the collection and quality recycling of packaging materials. We do this by producing authoritative research and education on policies and practices that increase recovery and reuse; by creating and maintaining a database of information on containers and packaging; by studying container and packaging reuse and recycling options, including deposit systems; and by creating and sponsoring national networks for mutual progress. CRI envisions a world where no material is wasted and the environment is protected. It succeeds because companies and people collaborate to create a strong, sustainable domestic economy.

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9 Amendments to Processing Fees Due to LCBO Deposit Return Program, report to Public Works and Infrastructure Committee from General Manager, Solid Waste Management Services: October 29, 2008.
10 Increasing recycling of beverage containers in Minnesota: Recommendations for a statewide recycling refund program, Minnesota Pollution Prevention Agency, Feb 2014.