MASSACHUSETTS CONTAINER DEPOSIT RETURN SYSTEM: 
2016 Employment and Economic Impacts in the Commonwealth

April 2018 Addendum: 
Impact of Ardagh Group Plant Closure

This addendum updates the 2017 report for the Container Recycling Institute (CRI) that examined a suite of economic impacts associated with the existing Massachusetts “Bottle Bill” (originally passed as the Beverage Container Recovery Law; H.2943/S.1588).

The 2017 report examined direct Massachusetts-based employment associated with annual implementation of the Bottle Bill, based on 2015 container return rates and data, and documented broader statewide economic and employment impacts of the container deposit return system using the IMPLAN model.

Since publication, the Ardagh Group has announced that its glass bottle manufacturing facility in Milford, Massachusetts is closing in April 2018. This change in the market affects both the direct employment in Massachusetts (by eliminating 220 manufacturing jobs) and also affects the broader measures of economic impacts associated with the Bottle Bill.

This addendum updates the final results in the 2017 report to reflect the closure of the Milford facility. The changes reflect only the impact of closing that facility. This update does not alter other data or assumptions in the analysis, such as container return data or commodity prices. However, we have confirmed that demand for and prices associated with container glass are not likely to be affected by the Ardagh Group plant closure.

The updated analysis describes the Massachusetts container recovery market as follows:

- **Market volume:** Over 1.2 billion containers were recovered in 2015, with a commodity value of roughly $19 million.

- **Direct employment:** The market currently encompasses 1,260 jobs in Massachusetts. These jobs include full-time equivalent jobs (FTEs) necessary to ensure collection, transport, and processing of bottles and cans into high quality secondary materials within the system.

- Employment is distributed across over 2,020 companies and locations:
  - Roughly 840 collection, transportation, and maintenance jobs in 1,950 retail locations across the Commonwealth.
  - An estimated 340 jobs sorting materials at 68 redemption centers located throughout the Commonwealth.
  - Roughly 80 processing jobs at four dedicated materials processing operations, including Strategic Materials in Franklin, Parallel Products in New Bedford and Billerica (TOMRA Mass operates out of Parallel Products facilities), and Arbor Recycling in Worcester.
- **Cash flows** related to the Bottle Bill are:
  - $105.7 million collected in deposits.
  - $62.3 million returned to consumers through refunds.
  - $43.4 million unrecovered deposits turned over to the Massachusetts Department of Revenue.
  - $32 million paid to redemption centers and retailers by distributors to implement collection.
  - Nearly $19 million in revenue to distributors and processors from scrap value of empty beverage containers.

- **Contribution to State GDP:** An analysis using the IMPLAN model to calculate indirect and induced economic effects ("ripple effects") associated with the container recycling market in Massachusetts shows that:
  - Roughly 1,600 to 1,800 total jobs are associated with the economic system surrounding the Bottle Bill totaling $24 million in income and benefits;
  - State and local tax revenues of over $4 million annually, in addition to $2 to $8 million in property tax revenues; and
  - Total value added to the economy ranges from $43 to $72 million, including direct, indirect, and induced effects.

In addition, by redirecting containers from the municipal waste stream, the Bottle Bill saves cities and towns the cost associated with collection, recycling, and/or disposal of those containers; these cost savings are likely on the order of $20 million annually.

The exhibit below provides a summary of the updated economic impact results from IMPLAN, reflecting the closure of the Milford plant.

**Updated Analysis of Employment and GDP Effects: IMPLAN Results**

<table>
<thead>
<tr>
<th>Analysis of Employment and GDP Effects: IMPLAN Results</th>
<th>Employment*</th>
<th>Value Added ($million)*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Direct</td>
<td>Indirect</td>
</tr>
<tr>
<td>Collection</td>
<td>1,180</td>
<td>36 – 83</td>
</tr>
<tr>
<td>Pickup and RVM Maintenance</td>
<td>~80</td>
<td>16 – 41</td>
</tr>
<tr>
<td>Processing and Manufacture</td>
<td>~80</td>
<td>16 – 41</td>
</tr>
<tr>
<td>Total</td>
<td>1,260</td>
<td>52 – 124</td>
</tr>
</tbody>
</table>

* Totals may not add due to rounding

** To avoid double-counting direct value added, the $4.3 million figure does not include the $32 million that distributors pay to retailers and redemption centers to ensure that containers are collected. Indirect and induced effects, however, do consider the distribution and “ripple effects” of that $32 million.