COMPARISON OF CONTAINER DEPOSIT PROGRAMS IN THE UNITED STATES (September 2014)

This paper compares state specific container deposit program information. Because of different reporting requirements across beverage container deposit states some information was obtained from some states, while the same information was not available from other states. Many topics relating to beverage container deposit programs are covered, including: redemption rates, including the amount collected through curbside (where available); implementation and expansion of curbside programs in Hawaii; startup costs for select states; minimum and maximum container sizes for containers included in various deposit programs; material collection and ownership; the role retailers, bars, and restaurants play in various container deposit programs; and whether curbside operators can redeem deposit containers that are collected through curbside recycling programs.

Redemption Rates for Deposit Materials

As mentioned previously, some data is unavailable from some container deposit states due to varying reporting requirements across states. Material specific data on redemption rates for materials collected at redemption centers in California, Oregon, New York, and Hawaii were obtained, though material specific curbside rates were only available for California and Oregon.

In Connecticut, the 2012/2013 redemption rate for the deposit program is estimated to be 62%, however curbside collection percentages are not applicable to the state.

The figures in Massachusetts point to 23% of non-carbonated beverages being recycled via curbside and drop-off recycling. Data from the Massachusetts Department of Revenue indicates 72% of deposit containers have been redeemed since 1990; factoring in an additional 8-10% of deposit containers that are recycled by curbside and drop-off recycling brings the figure to around 80%.

The percent of containers collected by curbside in Hawaii as a whole is a figure that is not available. However, the figures are available for the counties that have curbside recycling programs in place.
Table 1. Redemption Rates for Deposit Materials in Four States, Including Amounts Collected Through Curbside Recycling Programs (where known)

<table>
<thead>
<tr>
<th>Material</th>
<th>California 2013&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Oregon 2013&lt;sup&gt;2&lt;/sup&gt;</th>
<th>New York 2012/2013 (in tons)</th>
<th>Hawaii (in pounds) 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redemption Center Glass</td>
<td>65%</td>
<td>74.83%</td>
<td>196,004</td>
<td>6,116,062</td>
</tr>
<tr>
<td>Curbside Glass</td>
<td>20%</td>
<td>8-10%*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Redemption Center Aluminum</td>
<td>92%</td>
<td>76.38%</td>
<td>27,624</td>
<td>142,081</td>
</tr>
<tr>
<td>Curbside Aluminum</td>
<td>8%</td>
<td>8-10%*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Redemption Center PET</td>
<td>69%</td>
<td>58.29%</td>
<td>63,439</td>
<td>2,175,502&lt;sup&gt;3&lt;/sup&gt;</td>
</tr>
<tr>
<td>Curbside PET</td>
<td>5.92%</td>
<td>8-10%*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Curbside recycling numbers for Oregon are estimates – no hard data is available.

Implementation & Expansion of Curbside Collection Programs After Implementation of the Container Deposit Program in Hawaii

On Oahu the beverage deposit program was in place before the curbside collection program. In 2005 Oahu did not have a curbside collection program. In this respect things have changed drastically. The pilot curbside collection program began in 2007 and was in full operation by May 2010<sup>4</sup>.

After the program had been in effect for one year, a 6% reduction in municipal solid waste was diverted from the Oahu landfill.<sup>5</sup> Since then Oahu has seen steady increases in recovery through increased participation. For 2013, Oahu’s program recovered over 22,000 tons of material, up from over 19,000 tons in 2010<sup>6</sup>. They are anticipating further increases in recovery.

Currently, between the gray (refuse), green (yard waste), and blue (mixed recyclables), the percentage of curbside-collected material is between 8% and

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1 [www.bottlebill.org](http://www.bottlebill.org)
3 Plastic #1 & 2
4 City & County of Honolulu, ENV - Refuse Division, Recycling Program Branch Chief
6 City & County of Honolulu, ENV - Refuse Division, Recycling Program Branch Chief
9%.

All 180,000 homes on Oahu have curbside refuse collection. Of that total, approximately 160,000 single-family homes are on an automated collection system, using the three carts noted above. The other 20,000 homes receive “manual” refuse collection service, which currently does not include a curbside recycling option. Homes that receive manual service are in areas that are not accessible by automated trucks – on steep and/or narrow lanes, for example – and therefore cannot receive 3-cart automated service.

The City delivers all of its curbside-collected mixed recyclables to a private processor. Their contract with this private processor requires them to sort all deposit containers for redemption.

The County of Maui also has a curbside collection program (The 3 Can Plan), with Phase 1 beginning in select neighborhoods of South Maui in mid August 2012. Residents received three carts one for rubbish, one for green waste, and one for mixed recyclables.

Other counties, like Kauai, have no curbside recycling in place because they do not have a Materials Recovery Facility (MRF). Currently Kauai is working on having a MRF situated on the island. Municipalities in Kauai do not pull out containers and redeem them since there is no MRF. The County anticipates that the MRF contract will require the contractor to separate deposit containers for redemption and use those revenues to offset the costs of facility operations.

**Startup Costs & Funding**

**Startup Costs for Container Deposit Programs in Oregon and Hawaii**

Oregon’s program started in 1973. At that time most beverages were sold in refillable containers. In 1960, 96% of all beer and soft drinks came in returnable containers in the United States. By 1967 that figure fell to 67%, in 1978 it dropped to 20%, and by 1986 10% of all beer and soda containers came in refillable containers. Therefore, there was no startup cost because operations continued as they always had – grocery stores would take back both the refillable bottles and cans, as well as one-way beverage containers.

The most recent container deposit program to be implemented in the United States is in Hawaii. Hawaii’s program is administered through the State’s Department of Health. In Hawaii’s case, individual recyclers (entrepreneurs) funded startup costs. A grant program and rebate program were also in existence.

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for a short time, with funding provided by the beverage container recycling fund. One company was funded through personal equity as well as leasing and traditional bank loans. Another company had startup costs funded by the owner. A year or two after operations started, a $1 million dollar grant was received from the state beverage container recycling fund, which they used to buy new trailers, forklifts, bobcats, an accounting system, reverse vending machines, etc. That operator also used bank loans to purchase balers, wire strippers, trucks, and processing plants.

The reverse vending machine (RVM) rebate program required the program to provide monies for a rebate of 50% of the actual cost of each RVM, including shipping and general excise tax, purchased by a person or contracted recycler. Under this program, the Department of Health provided over $765,000 in rebates to four companies who took advantage of the offer. The Infrastructure Improvement Grant Program awarded nearly $6 million in funds to 15 contractors to improve and expand redemption center services to the public. Another component was the County Assistance Program. Counties provided assistance for locations that did not have redemption centers.

**Central Organizations (Co-ops or Industry Funding Organizations)**

Oregon’s set up is much different from Hawaii, where a state agency runs the program. In Oregon, the Oregon Beverage Recycling Cooperative (OBRC) is a privately member owned cooperative corporation that connects consumers, retailers, and distributors. In this type of system, the central organization, OBRC helps with distributors sales reports, retailers collection reports, with OBRC reconciling both, as well as reporting on recycling efforts. The OBRC has no obligation to disclose who sits on their board. If the program in Oregon were to face a structural deficit, then OBRC would pay or act as the backstop.
Beverage Container Sizes Included in Beverage Container Deposit Programs

As Table 2 indicates below, standard minimum or maximum sizes accepted in the various container deposit programs do not exist. Rather, the accepted sizes range from no minimum size to a minimum size of less than 16 ounces for vegetable juice in California and a minimum size of 50 milliliters in Vermont. The same is true for a maximum sizes accepted, where some states have no maximum size while others have guidelines dictating what maximum size container is acceptable.

Table 2. Minimum and Maximum Container Sizes for Containers Included in Various Deposit Programs

<table>
<thead>
<tr>
<th>State</th>
<th>Minimum Size</th>
<th>Maximum Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connecticut*</td>
<td>none</td>
<td>&gt; 3.78 liters excluded</td>
</tr>
<tr>
<td>California</td>
<td>&lt; 16 oz vegetable juice excluded</td>
<td>(&lt; 24 oz = 5 cent deposit, &gt;24 oz = 10 cent deposit)</td>
</tr>
<tr>
<td>Hawaii</td>
<td>Serving size of 1 oz. or less exempted</td>
<td>68 oz</td>
</tr>
<tr>
<td>Maine</td>
<td>none</td>
<td>4 liters</td>
</tr>
<tr>
<td>Michigan</td>
<td>none</td>
<td>1 gallon</td>
</tr>
<tr>
<td>New York</td>
<td>none</td>
<td>1 gallon</td>
</tr>
<tr>
<td>Vermont</td>
<td>50 ml</td>
<td>1 liter</td>
</tr>
<tr>
<td>Oregon**</td>
<td>none</td>
<td>3 liters</td>
</tr>
<tr>
<td>Iowa</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>none</td>
<td>2 gallons</td>
</tr>
</tbody>
</table>

Notes: *In Connecticut, any manufacturer who bottles and sells two hundred fifty thousand or fewer beverage containers containing a noncarbonated beverage (water beverage containers) that are 20 ounces or less in size each calendar year may apply to the Commissioner of Energy and Environmental Protection for an exemption from the requirements of sections 22a-244 to 22a-245a, inclusive, with regard to such beverage containers containing noncarbonated beverages (water beverage containers). Another exemption from bottle deposit law requirements comes into play when beverage containers are offered for sale for consumption on interstate passenger carriers.

**In Oregon, House Bill 3145 amended the Bottle Bill in 2011 and adds all beverages except wine, liquor, dairy or milk substitutes to the Bottle Bill as of Jan. 1, 2018 at the latest. Beer, soft drinks and water will continue to be covered in containers that are 3 liters or less in size, but the new beverages will be covered only if they are in bottles or cans from 4 ounces to 1.5 liters in size. Metal cans that require a can opener will not be included.
Collection and Ownership of Materials

In all states but California and Hawaii, the deposit initiators (distributor) own the material. The deposit initiator/distributor is the entity responsible for the collection of materials. Collection services are provided by deposit initiators themselves, contracted RVM companies, and other entities contracted by the deposit initiators. In New York the deposit initiator/distributor is required to pick up as often as they deliver filled products.

Exemptions for Bars & Restaurants

Generally speaking, there are no square footage exemptions for bars, restaurants, or retailers; they are like any other consumer and can do with the materials as they wish.

There are no square footage exemptions for bars and restaurants in Hawaii and counties administer mandatory recycling ordinances and conduct inspections of bars and restaurants. If assistance is needed, the Department of Health provides outreach to the counties. All liquor-serving establishments on Oahu are required to recycle their glass bottles, per City ordinance\(^8\).

When it comes to the ownership of the material in Hawaii, it depends on the bar and/or restaurant’s recycling contract, but generally the material is the establishment’s property until they use the recycler’s bins. The material is collected by small haulers (mosquito fleets) from the bars and restaurants and is then taken to the local redemption centers.

In Massachusetts, restaurateurs (on-premise consumption) are not required to charge a deposit and therefore do not have to accept returns. The distributors, in effect, own the material since they are on the back end and pay the deposits and handling fees to the redemption centers and dealers. Therefore, the material is at their facility (or one they designate to handle it) and they get the scrap value. Third-party companies, like Tomra, collect materials on behalf of distributors. Distributors are required to provide pickup service to dealers, but not to redemption centers.

Connecticut does not have square footage exemptions for bars and restaurants.

In Oregon, bars and restaurants generally do not sell beverages for off-site consumption, and generally do not accept containers for redemption. Bars and restaurants are charged a deposit on the containers they purchase, and receive the refund value when they redeem the containers, but they do not charge a

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\(^8\) See Article 3, Section 9 3.1: http://www.honolulu.gov/rep/site/ocs/roh/ROH_Chapter_9.pdf
deposit or issue a refund for in-house consumption.

**Exemptions for Retailers**

Under certain circumstances in New York, a dealer (small grocery store) consisting of less than 10,000 square feet may limit redeeming to 72 containers/person/day.

Massachusetts currently does not have square footage exemptions, but the ballot referendum\(^9\) from 2014 would have exempt retailers under 4,000 square feet (provided a redemption center operates in proximity).

In Hawaii & Connecticut retailers do have square footage exemptions. In Hawaii retailers, like bars and restaurants, are regulated by the county and not by the state.

In Oregon, stores with a space of 5,000 square feet or larger, which include standard and larger-sized grocery stores, must take back empty containers and pay the refund value if they sell, or have sold within the past six months, that same kind of beverage (water, beer or soft drink) and if the containers are marked with the Oregon 5-cent refund value, even if the containers are different sizes or brands than the store sells. They are able to limit the amount of redeemed containers to 144 containers per person per day. However, stores of less than 5,000 square feet may refuse to take back any empty beverage containers of any kind, size and brand that they do not sell\(^10\) and can limit the number of redeemed containers to a maximum of 50 per person per day\(^11\).

**Redemption of Materials Collected through Curbside Recycling by Curbside Operators**

In New York, bulk redemption is considered to be a drop-off consisting of more than 2,500 beverage containers\(^12\).

Oregon and New York do not allow bulk redemption for material recovery facility (MRF) operators. MRFs do not sort out containers for redemption. In Oregon, in order to redeem containers, the MRFs would have to take the containers back to stores or redemption centers. The OBRC could figure out a way to redeem

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\(^9\) CRI Weekly Headlines, October 10, 2014. [\textlink{http://org2.salsalabs.com/o/7377/t/0/blastContent.jsp?email_blast_KEY=1308663}]

\(^10\) [\textlink{http://www.deq.state.or.us/lq/sw/bottlebill/bottlebillfaq.htm}]

\(^11\) [\textlink{https://www.oregonlegislature.gov/citizen_engagement/Reports/OregonLiquorControl.pdf}]

\(^12\) [\textlink{http://www.dec.ny.gov/docs/materials_minerals_pdf/bulkredeem.pdf}]
containers in bulk, but has no incentive to do so. In Connecticut, there is no legislation that prevents MRF operators from pursuing this option.

In Hawaii there is really only one true MRF on the island of Oahu and it operates according to the State DOH’s rules for Certified Redemption Centers, which, generally speaking, does not allow for bulk redemption.

**Conclusion**

This is not an exhaustive comparison of container deposit programs in the United States, but does highlight many of the working pieces within the different state programs.