



Hawaii Deposit Beverage Container (DBC) Program Study of Handling Fees

The Hawaii Department of Health (DOH) administers the DBC Program. The DBC program establishes a 5-cent deposit and a 1-cent container fee that manufacturers and distributors, and ultimately consumers, pay when they purchase bottled water, soda, beer, and other similar beverages. Consumers receive back the 5 cents when they recycle their empty containers at an independent recycling company (Certified Redemption Center (CRC)). Since 2005, over 7 billion beverage containers have been recycled through the DBC Program.

The 1-cent container fee supports Program administration, Program operations, and funds a handling fee to support recycling at CRCs. The handling fees, paid on each container recycled, were set at between 2-cents and 4-cents per container in 2008. In 2018, for the first time, the DOH conducted a study to evaluate an appropriate level for handling fees that would cover the costs of recycling beverage containers. The DOH selected Crowe LLP (Crowe) to conduct the Study of Handling Fees. Crowe has over 25 years of beverage container recycling, integrated waste management, and cost survey experience.

In coordination with the DOH, Crowe developed a cost survey to obtain CRC costs to recycle DBC containers and scrap values paid to recyclers. The survey consisted of a census of all CRCs. Crowe's team visited all recently closed and operating CRC headquarters and site locations during May and June 2018 to obtain the necessary financial, labor, and scrap value information. In total, Crowe surveyed 19 CRC companies and performed surveys at over 70 CRC locations.

Crowe utilized a detailed survey methodology to capture and categorize costs of recycling and scrap payments by DBC material type, recycler type, county, and statewide. The cost component of the survey captured financial information by expense category, assigning direct costs to specific material types when applicable. The survey methodology utilized structured labor allocation interviews to apportion costs between DBC material types and non-DBC activities. The top four CRC cost categories were direct labor (37%), transportation (17%), rent (14%), and indirect labor (11%).

The financial and scrap value survey determined costs per container and scrap payments per container during two fiscal years: FY16 (July 1, 2015 to June 30, 2016) and FY17 (July 1, 2016 to June 30, 2017). Crowe calculated costs per container and scrap payments per container, based on the weighted-average costs over the two fiscal years, for aluminum, glass, combined plastics, and an overall cost per container.

Cost per Container Results

Crowe utilized the cost per container results as a basis to develop the recommended handling fees. There were slight variations on costs per container between counties. There were more significant variations in costs to recycle between material types. The cost per container to recycle glass is consistently higher than aluminum and plastic due to high shipping costs. Aluminum costs to recycle are the lowest of the three material types.

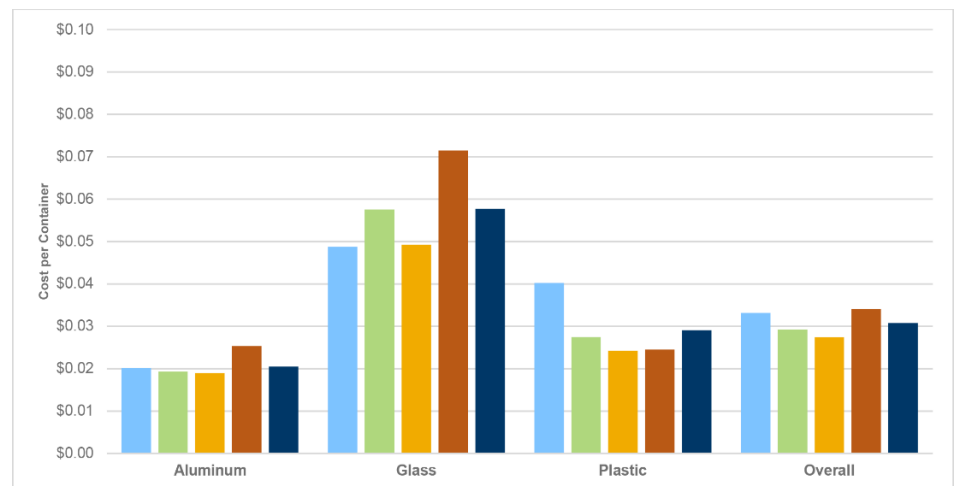
Exhibit 1 illustrates the cost per container for each material type, county, and statewide.

Cost of Recycling Adjustments

The study originally proposed that the handling fees for each material type would be determined by subtracting the scrap revenue from the cost of recycling:

$$\text{Handling Fee} = \text{Cost per Container to Recycle} - \text{Scrap Revenue per Container}$$

Exhibit 1
Cost per Container by Material Type, County, and Statewide (FY16/FY17)



Legend: Hawaii Honolulu Kauai Maui Statewide



**Exhibit 2
Selected Adjustment Factors**

| | |
|-------------------------|---|
| Wage Indices | <ul style="list-style-type: none"> • 47.5% of costs wage-related • Minimum wage increases • 18.82% increase to wage costs |
| COLA | <ul style="list-style-type: none"> • Commonly used to counteract impact of inflation • 3.7% increase to other costs |
| Financial Return | <ul style="list-style-type: none"> • Industry accepted approach • Helps provide stability • 10% increase to all costs |

**Exhibit 3
Comparison of Recommended, Initial Results, and Current per Container Handling Fees**

| DBC Material Type | Recommended HF | Initial HF Results | Initial Cost of Recycling | Current Honolulu County HF | Current Neighbor Island HF |
|-------------------|------------------|--------------------|---------------------------|----------------------------|----------------------------|
| Aluminum | 3 cents | 1 cent | 2 cents | 2 cents | 3 cents |
| Glass | 7 cents | 6 cents | 6 cents | 4 cents | 4 cents |
| Plastic | 3.5 cents | 2 cents | 3 cents | 2 cents | 3 cents |
| Bi-metal | 3 cents | 16 cents | 16 cents | 2 cents | 3 cents |

Crowe and the DOH ultimately decided to remove the scrap revenue per container from the handling fee calculation because of: 1) variability within the scrap market due to global market factors, and 2) differing arrangements between CRCs, end-users, and brokers that dictate how much scrap revenue CRCs receive. Crowe and DOH decided to base the handling fee calculation only on the cost of recycling, using the adjusted statewide averages. The result is that handling fees are higher than they would have been had DOH utilized the equation on the prior page.

To ensure that handling fees better reflect the costs of recycling in 2019, Crowe also incorporated several adjustments to increase the cost per recycling from the FY16/FY17 baseline. **Exhibit 2** provides an overview of the three adjustment factors.

Handling Fee Recommendations

In total, these three adjustments increased the cost of recycling by 21.95 percent as compared to the FY16/FY17 average costs. Crowe applied these adjustment factors to the cost per container for each material type and overall statewide, by county, and for processor/non-processors.

Exhibit 3 illustrates the recommended handling fees (in bold), as compared to the initial handling fee results, initial cost of recycling, and the current handling fees.

The recommended handling fees represent an increase in per container payments across all container types for Honolulu County CRCs and an increase for all container types except aluminum and bi-metal for Hawaii, Maui, and Kauai County CRCs. Note that the DOH and Crowe utilized the recommended aluminum handling fee for bi-metal due to the extremely low quantity of bi-metal recycled.

The recommended HF results in the following:

- \$6.7 million increase in overall HF payments, based on FY18 redemption volumes
- 42 percent average increase in HF payments per CRC, based on FY18 redemption volumes
- 17 percent to 71 percent increase in individual CRC HF payments, based on FY18 redemption volumes.

Impact of Recommended Handling Fees on the DBC Special Fund

Crowe performed a fiscal impacts analysis to determine whether the DBC Special fund could support the handling fee recommendations through FY22. In total, Crowe developed seven scenarios based on varying economic, recycling, and regulatory conditions to project the handling fees fiscal impact on the DBC Special Fund.

The fiscal impacts analysis results indicate the DBC Special Fund should maintain a positive ending balance and a substantial fund reserve through FY22 in all scenarios, with the exception of the peak recycling scenario. The DOH would not need to adjust the recommended handling fees or increase the non-refundable per container fee unless there is a significant increase in recycling rates.

Evaluation of Handling Fee Adjustments in Future Years

Crowe developed a Handling Fee Adjustment Model, a Microsoft Excel-based tool, for the DOH to evaluate and determine potential handling fee adjustments in future years. On an annual basis, the DOH may review key indicators representing CRC cost categories.

There are six potential adjustment factors in the model:

- Wage index
- Minimum wage adjustment
- Cost of living adjustment (COLA)
- Health care adjustment
- Shipping adjustment
- Fuel adjustment.

The DOH may determine whether those indicators have changed significantly enough to warrant an upward adjustment in handling fees and/or a new cost survey.