TETRA TECH

MEMO

To:	Lane M Otsu; Michael Burke	**Date:**	September 20, 2023
cc:	Hawai‘i DOH/OSWM	**Memo No.:**	4
From:	Tetra Tech Team (TT Team)	**File:**	197-2022-0127
Subject:	Hawai‘i Integrated Solid Waste Management Plan (ISWMP) Update State Solid Waste Programs Potential Solutions		

1.0 INTRODUCTION

The Tetra Tech Team (TT Team) is providing the Hawai‘i State Department of Health, Office of Solid Waste Management (DOH/OSWM) herein with an issue statement and description of potential solutions evaluated for the State Solid Waste Programs identified by the State (i.e., Deposit Beverage Container Program [HI-5 Program], Electronic Device Recycling Program, and Glass Advance Disposal Fee Program) for inclusion in an update to the Statewide Integrated Solid Waste Management Plan (ISWMP). According to Hawai‘i Revised Statutes (HRS) Chapter 342G Section 29, OSWM must convene a state integrated solid waste management task force (Task Force) and incorporate their comments to revise and update the materials contained in the previous state ISWMP. A Task Force consisting of county, industry and non-profit representatives, and members of the public was formed and a meeting will be held on September 28, 2023, to discuss and receive input on how to manage the existing State Solid Waste Programs waste streams.

Hawai‘i has rules and regulations currently in place to implement solid waste programs on the various islands including:

Deposit Beverage Containers Program (HI-5 Program):

- Act 176
- HRS Chapter 342G-102
- Act 285
- Act 151
- Act 12
- HAR §11-282

Electronic Device Recycling Program:

- HRS Chapter 339D
- Act 151 (2022)

Glass Advance Disposal Fee Program:

- HRS 342G-82

However, more can be done to enhance the solid waste management programs now and in the future, as well as the potential problems with accurate reporting and data collection, and the programs direct and indirect costs. This memorandum will present potential solutions relating to the management of solid waste programs across the state. Once the Task Force meeting is held, additional feedback on potential Extended Producer Responsibility (EPR) legislation, government programs and subsidies, free market solutions, and public education components will be sought.

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2.0 ISSUE STATEMENT

2.1 State Solid Waste Programs

Deposit Beverage Container Program (HI-5 Program) – Since January 2005, the HI-5 program has assisted residents with recycling billions of containers. In prior years' audits, it has been noted that the program has failed to develop and execute procedures to verify the accuracy and completeness of data used to support claims of the deposit and container fees paid to the program by the distributors as well as deposits and handling fees paid to the redemption centers. Without these procedures, the program relies on self-reported data and accepts that cash receipts from the distributors and payments made to redemption centers are accurate and complete. Existing redemption value may not be enough to cover program expenses or be attractive for recycling markets.

Electronic Device Recycling Program – Since its inception in 2009, one of the key challenges to electronic waste recycling program was the lack of infrastructure. However, major changes to the program that took effect in January 2023 aim to increase public convenience and to collect more electronic waste for recycling.

Glass Advance Disposal Fee Program – The 1994 act that established the glass container recovery law also contained goals of a 25 percent glass recovery rate by the end of 1996, 50 percent by the end of 1998, and thereafter, the maximum recovery rate practicable. The glass advance disposal fee rate was tied to achievement of these recycling goals. However, when the Deposit Beverage Container Program was established in 2002, the Legislature removed the glass recovery goals, leaving the program with no baseline recovery rate or target recovery goals against which to measure its progress and success.

3.0 POTENTIAL SOLUTION CATEGORIES

There are many strategies to more effectively manage waste. The United States Environmental Protection Agency (US EPA) has categorized and prioritized these strategies from the most effective option to the least effective option. According to HRS 342G-2, solid waste management practices to be considered by the DOH (in order of priority) are source reduction, recycling and bioconversion, and landfill and incineration. The differences between the US EPA's waste management hierarchy and solid waste management priorities identified in HRS 342G-2 are minimal. As seen in Figure 3-1, the US EPA's waste management hierarchy includes energy recovery (e.g., incineration, which is referenced in HRS 342-G) as a solid waste management approach to be considered. The US EPA Waste Management Hierarchy also identifies reuse as an option, which is not explicitly identified in HRS 342G-2.

Figure 3-1: US EPA Waste Management Hierarchy

The 3R's must be considered in order to effectively manage waste, starting with the most effective:

- Reducing waste means purchasing less and minimizing the amount of waste we produce therefore disposing of less. There are many ways to reduce consumption such as better planning and preparation

when we shop, or by evaluating if we can go without the product(s). Waste reduction can also be achieved by redesigning materials, products and services to be less resource intensive.

- Reusing items slows the process of purchasing new items and disposing of old items. We can reuse materials that were meant to be disposed of, giving them a second life, or we can choose materials that are intended to be reused, making sure to take good care of them and extending their lifespan.
- Recycling keeps valuable materials in the materials economy and prevents the environmentally harmful extraction process of raw materials, which benefits both the economy and the planet.

The potential solutions relating to the improvement of state solid waste programs were developed in consideration with potential EPR legislation, government programs and subsidies, free market solutions, and public education components, which were previously described in the Tires Potential Solutions memorandum.

4.0 POTENTIAL SOLUTIONS FOR SOLID WASTE PROGRAMS

4.1 Potential Solutions to Consider

This section presents potential solutions that could be considered for the improvement of the three solid waste programs. These potential solutions were identified through benchmarking other states with similar solid waste programs. The DOH is seeking input from the Task Force and industry representatives, taking into consideration the solution categories identified in Section 3. These include:

- **Status Quo** – Existing solid waste programs conditions are adequate for each of the Counties and the State.
- **Outreach and Education -**

  Deposit Beverage Container Program (HI-5 Program): In Oregon, LD 1909 will require collectors of beverage containers to submit a publicly accessible report each year with a description of the education and outreach efforts implemented under the beverage container redemption program in the prior calendar year to promote participation in the program, reduce instances of fraud in redemption, and educate businesses and consumers on the value and safety of refillable beverage containers. The report must include the results of an assessment of the effectiveness of the efforts and the assessment must be completed by an independent, third-party auditor. The report must also include any recommendations for consumer education or program evaluation. Beverage container collectors may expend unclaimed deposit amounts towards the costs of educational material and to support outreach and education to manufacturers, retailers, restaurants, and consumers.

  Electronic Device Recycling Program: In Washington, WAC 173-900-980 requires the state and local government, manufacturers, retailers, and collection sites to collaborate in developing and implementing a public information campaign to promote covered electronics recycling. Responsibilities for each entity are as follows:

  1. **State (Department of Ecology)**
     - Post information on the state website describing where to recycling covered electronics;
     - Provide information on covered electronics recycling through a toll-free phone service; and
     - Develop and provide artwork for use in flyers, signage, web content, and other advertising mechanisms.

2. **Local Governments**
   - Promote covered electronics recycling, including listings of local collection sites and services through existing outreach and education efforts.

3. **Manufacturers**
   - Administer an independent and standard plan to inform covered entities about where and how to reuse and recycle their covered electronics. At a minimum, the plan must: 1) include an informational website or toll-free number about the recycling program in sufficient detail to educate covered entities on how to recycle their covered electronics, 2) describe the method(s) used to provide outreach to covered entities, and 3) ensure outreach throughout the state.

4. **Retailers**
   - Provide take-home information to consumers describing where and how to recycle covered electronic devices.

- **Extended Producer Responsibility (EPR) –** EPR legislation is a driving force behind the adoption of remanufacturing initiatives, typically in the form of a dedicated state law or statute.

  Deposit Beverage Container Program (HI-5 Program): Senator Jeff Merkley (OR) and Representative Alan Lowenthal (CA) introduced the Break Free from Plastic Pollution Act of 2021 in the 117th Congress. The Break Free from Plastic Pollution Act would require producers with annual revenues greater than $1 million, or who produce more than one ton of covered products to design, manage, and finance programs to collect and process waste. Producers will cover the costs of waste management, clean-up, and awareness-raising measures. Covered products include packaging, containers, paper, and food-service products, regardless of their ability to be recycled, composted, and their material type (including plastic, paper, glass, metal, etc.). The most recent action on the bills were hearings held in June 2022 by the House Energy and Commerce Subcommittee on Environment and Climate Change.

  Electronic Device Recycling Program: Several states have implemented e-waste laws that require manufacturers to cover recycling costs. In Washington, SB 6428 established the E-Cycle Washington program, a producer responsibility system for recycling covered electronics through manufacturer-financed opportunities. The bill requires a public authority made up of manufacturers to administer a standard plan to implement the system.

  Most states (including Hawaiʻi) have performance mandates, in which collection targets are generally set by weight. On the other hand, some states have convenience mandates, requiring manufacturers to provide enough broadly distributed collection sites to make it convenient for residents. One example is the state of Washington, who has 224 E-Cycle Washington locations statewide. According to the Electronics TakeBack Coalition, states that are implementing convenience mandates are outperforming states that employ the target-setting approach.

  Glass Advance Disposal Fee Program: In California, SB 1013 will expand the definition of “beverage” to include wine and distilled spirts beginning in 2024. Wineries will need to pay a processing fee to CalRecycle for all containers they sell.

- **Government Programs and Subsidies –**

  Deposit Beverage Container Program (HI-5 Program): Presently, there are ten states with bottle bills. Deposit values range between 5 cents and 15 cents. Michigan and Oregon have the highest return rates of U.S. bottle bill states, with over 85 percent of eligible beverage containers returned by consumers for recycling. This is largely attributed to the higher 10-cent deposit, which offers a compelling incentive to recycle beverage containers.

  The state of Connecticut only has a 44 percent redemption rate, which could be attributed to the low five-cent deposit value relative to local consumer's purchasing power and underfunded redemption system. To address these issues, the state of Connecticut recently voted to increase the deposit value to 10 cents beginning in 2024.

  In Hawaiʻi, Act 12 requires DOH to develop and enforce procedures to verify the accuracy and completeness of data collected from beverage distributors and redemption centers as recommended in the Office of the Auditor's biennial reports, including periodic audits of certain deposit beverage distributor and redemption center reports that have been submitted to the DBC program. DOH will be revising the program's administrative rules to implement Act 12's requirements to address auditor comments. Furthermore, updating the segregated rates for DBC containers may improve redemption rates and reduce customer complaints.

  The Counties of Hawaiʻi and Honolulu have recommended increasing the 5-cent fee to 10 cents. In addition to increasing the fee, some counties (i.e., Honolulu and Kauaʻi) have proposed expanding the list of containers covered under the HI-5 program by adding wine and distilled spirits. The Counties of Honolulu and Maui have also recommended implementing auditor recommendations to improve the program, especially accountability of recyclers. Increasing state allocated funding for outreach and education opportunities in schools, businesses, institutions, residences, etc., would further promote the DBC program and increase redemption rates.

  In September 2023, the USEPA awarded the County of Hawaiʻi $1.5 million for reuse programs, including a city-scale bottle system in Hilo. The funding will be used towards reuse infrastructure installation, QR code scanners, and a technology platform to support asset tracking and management.

  Electronic Device Recycling Program: In California, consumers must pay electronics retailers a set fee for purchase of any new covered electronic waste (i.e., computers, DVD players, laptops, tablets, televisions, monitors, printers, and various other electronics). The covered electronic waste recycling fee is reimbursed by the state to covered electronic devices recyclers and collectors. It is the only advanced recovery fee e-waste program in the United States. The Electronic Waste Recycling Act (SB 20, Sher, Chapter 526, Statutes of 2003) sets the collection fees as follows:

  1. Four dollars ($4) for each covered electronic device with a screen size >4 inches measured diagonally and <15 inches measured diagonally.
  2. Five dollars ($5) for each covered electronic device with a screen size ≥15 inches and <35 inches measured diagonally.
  3. Six dollars ($6) for each covered electronic device with a screen size ≥35 inches measured diagonally.

  By August 1, 2023, California's Department of Resources Recycling and Recovery (CalRecycle) must determine whether any fee adjustments are necessary to determine whether the program is generating

sufficient revenue. CalRecycle has proposed adopting emergency e-scrap regulations to maintain the current covered e-scrap recycling fee for covered electronic devices. The proposed emergency regulations will go into effect Jan. 1, 2024, and remain in effect for two years, or until revised by the department.

According to CalRecycle, maintaining the current fee levels will ensure collectors and recyclers are able to continue providing consumers with opportunities to recycle covered electronics, reducing the amount of e-scrap sent to landfills. The objective of the proposed regulations is to maintain the fee to ensure program funding, while not overcharging consumers.

Furthermore, the Counties of Hawaiʻi and Maui have recommended expanding the list of covered electronics.

The County of Maui has noted the importance of supporting EPR initiatives that may increase recyclability of a wider range of electronics. The City & County of Honolulu has also recommended implementing additional collection options for residents (i.e., separate curbside pickup and/or drop-off at transfer stations/convenience centers and retailers) in order to reduce the quantity of e-waste being sent to H-power.

Glass Advance Disposal Fee Program: Each of the four counties have advocated for increasing the advance disposal fee for non-deposit glass to incentivize recyclers. As previously noted, the County of Kauaʻi also recommends expanding the HI-5 program to be inclusive of glass containers that are currently not being accepted (i.e., wine bottles).

- **Resource Reduction Alternatives –**

  Deposit Beverage Container Program (HI-5 Program): Installing water bottle refill dispensers in public facilities may encourage individuals to bring and use a reusable bottle as an alternative to single use plastic and glass water bottles. Additionally, installing refill dispensers for carbonated drinks may further promote the reduction of plastic and glass containers as well as aluminum cans. Furthermore, refill dispensers have the capability of tracking the number of bottles saved. One example is PepsiCo's SodaStream Professional, which enables users to customize flavors, level of carbonation, temperature, and also tracks hydration through a mobile app and a QR-coded reusable bottle.

  Glass Advance Disposal Fee Program: In April 2013, Oregon passed House Bill 2443, allowing customers to fill reusable growlers (≤2 gallons) with wine and cider at restaurants, bars, grocery stores or wine shops.

  An alternative to glass wine bottles is boxed wine, a bag-in-box method which is typically cheaper and easier to recycle than wine bottles.

- **Free Market Solution –**

  Glass Advance Disposal Fee Program: In Maui, a company called Revive Glassworks promotes the reuse of glassware sourced from recycled glass bottles, primarily wine, beer, and liquor bottles received from Maui Recycling Services. Revive Glassworks repurposes the collected bottles into items such as drinking glasses, candle holders, platters, and vases.