
To: Lane M Otsu;
Michael Burke
Marienna Jimenez

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cc: Hawai'i DOH/OSWM

Memo No.: 6

From: Tetra Tech Team (TT Team)

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Subject: Hawai'i Integrated Solid Waste Management Plan (ISWMP) Update
Packaging Materials 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 packaging materials 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 March 14, 2024, to discuss and receive input on how to manage packaging materials.

Hawai'i has rules and regulations currently in place to manage packaging materials on the various islands including:

- Hawai'i Revised Statutes (HRS) 342G-3(b))
- HRS 342G-41
- HRS 342G-42(a)
- HRS 342G-44
- HRS 342G-45
- HRS 103D-1005
- Act 254 (2019)
- HRS §321-602

However, more can be done to manage packaging materials now and, in the future, as well as the potential problems with illegal dumping, packaging diversion, contamination, and the need for additional packaging processing infrastructure. This memorandum will present potential solutions relating to the management of packaging materials 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, less wasteful alternatives, and public education components will be sought, as applicable.

2.0 ISSUE STATEMENT

2.1 Packaging

Increased awareness and public pressure regarding packaging waste has led to businesses implementing some source reduction methods to reduce packaged waste. Plastic packaging is cost-effective and generally preferred for fast-moving consumer goods which generates a significant amount of waste. Packaging waste generation has

also significantly increased as a result of the COVID-19 pandemic (i.e., take-out instead of dine-in). As consumer behavior shifts globally (i.e., preference for online shopping due to convenience versus in-store shopping), this will further contribute to the packaging problem unless properly addressed.

3.0 POTENTIAL SOLUTION CATEGORIES

There are many strategies to more effectively manage waste. The 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.

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 management of packaging materials across the state were developed in consideration with potential EPR legislation, government programs and subsidies, free market solutions, less wasteful alternatives, and public education components, which were previously described in the Tires Potential Solutions memorandum.

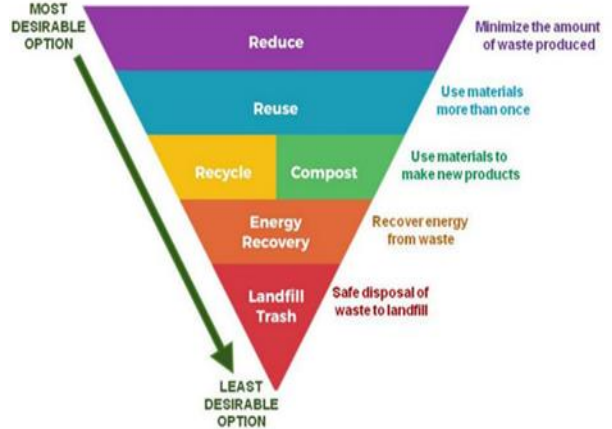


Figure 3-1: US EPA Waste Management Hierarchy

4.0 POTENTIAL SOLUTIONS FOR PACKAGING

4.1 Potential Solutions to Consider

This section presents potential solutions that could be considered for management of packaging materials. These potential solutions were identified through benchmarking other states with packaging management 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 packaging materials management options are limited for each of the Counties and the State.
- **Extended Producer Responsibility** – The **Break Free from Plastic Pollution Act** was first introduced in 2020 and reintroduced in 2021. 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 would 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 bill failed to advance. In October 2023, Senator Jeff Merkley and U.S. Representative Jared Huffman reintroduced the bill. The **Break Free from Plastic Pollution Act** of 2023 expands upon earlier versions of the bill, requiring all single-use beverage containers and packaging to be reusable, recyclable or compostable, establishing “robust requirements” for incorporating postconsumer recycled content in beverage containers, and inclusion of “stronger language” regarding toxic substances elimination in beverage containers.

In 2022, **Senate Bill 54** was signed into law in California, requiring the State to reduce 25 percent of single-use plastics (packaging and food ware), recycle 65 percent of single-use plastics, and ensure 100 percent of single-use packaging and plastic food ware are recyclable or compostable. The bill also establishes an extended producer responsibility (EPR) program for managing packaging and single-use plastic food ware products. The program requires producers to design, fund, and operate a statewide program to collect and recycle/composts discarded products. The bill also requires producers to join a Producer Responsibility Organization (PRO).

Colorado’s **Producer Responsibility Program for Statewide Recycling Act (House Bill 22-1355)** was signed into law in June 2022. The law establishes a statewide recycling system to help contribute towards a circular economy for recyclable materials. The law aims to reduce plastic waste, improve the state’s diversion rate, and reduce the landfill disposal of recyclable materials. Packaging and printed paper producers are responsible for funding the recycling system (i.e., capital, operating, education, and promotion costs), which are built into producers’ wholesale prices and distributed throughout the supply chain.

Chapter 70A.245 of Washington’s 2021 **Plastics Law, the Post-Consumer Recycled Content Law** requires certain producers to register with the state, pay annual fees, and include a minimum amount of recycled plastic in their product packaging. As of January 2023, the law applies to plastic trash bags, plastic beverage bottles (excluding dairy products and 187ml wine bottles), and plastic bottles for personal care and household cleaning products. Producers that sell or distribute plastic trash bags within the state of Washington must also label packages with the name and location of the producer, a uniform resource locator, or a QR code to a website with the information. The law aims to reduce the production of new plastic materials and incentivize the development of new markets for recyclable plastic within the state. The State of Washington also aims to expand the scope of its packaging EPR legislation with their proposed bill (**SB 5154**).

- **Resource Reduction Alternatives** – California **Assembly Bill 619** was passed in July 2019, allowing consumers to bring their own reusable food containers to be refilled by either the owner/operator of a food facility or the consumer. Facilities may accept returned containers from consumers for reuse. The law allows consumers to bring reusable containers to a food facility, provided certain conditions are met:
 1. Consumer-owned containers must be isolated from the serving surface, or the surface must be sanitized after each filling.
 2. Food facilities are required to prepare, maintain, and adhere to written procedures regarding cross-contamination prevention and wastewater disposal.

3. Food facilities shall ensure compliance with handwashing requirements specified in the California Retail Food Code (CRFC).

California is one of twelve states in the U.S. that have implemented some sort of statewide plastic bag ban. However, there are certain exceptions, as California's existing plastic bag ban (**Senate Bill 270**) still allows customers to purchase a thicker plastic or paper bags for ten cents. Two new proposed bills (**SB 1053 and AB 2236**) would close this loophole by banning all plastic shopping bags by 2026.

In California, Marin County's **Reusable Foodware Ordinance** requires reusables for on-site dining and allows customers to bring their own containers for take-out. Adopted in 2022, the law also requires compostable or recyclable aluminum containers for take-out if customers do not bring their own and adds a fee on disposable cups. It also bans plastic and plastic-lined paper take-out containers. Other cities in California including Pacifica, Truckee, San Raphael, and Half Moon Bay have also passed similar laws to require or encourage reusables for on-site dining.

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.

The County of Maui offers a free BYO (bring your own) utensil kit with each purchase of a HuiZero reusable stainless steel takeout container at participating restaurants.

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.

Some alternatives to traditional packaging materials include:

- **Bamboo** is the Earth's fastest growing plant, making it an abundant resource. Bamboo packaging products include envelopes, boxes, retail bags, boxes, tissue, plates, trays, bowls, containers, lids, and cups.
- **Banana leaves** have been used throughout history for food packaging, providing an eco-friendly alternative to paper and plastic food packaging.
- **Coconut fiber** is a versatile natural material derived from coconut husks. It can be molded into several shapes and sizes to create packaging materials such as trays, containers, and cushioning pads.
- **Coconut shells** can also be repurposed into bowls.
- **Cornstarch packaging** is a biodegradable packaging material that can replace polystyrene and plastic. Cornstarch packaging includes items such as packaging peanuts, trays, lids, bags, plates, and bowls.
- **Hemp packaging** is a sustainable alternative to certain packaging products including bowls, boxes, folding cartons, reusable totes, and hemp paper.
- **Lauhala boxes** are handcrafted by weaving the leaves (lau) of the hala tree and can be used as a sustainable alternative to certain packaging materials (i.e., plastic container or cardboard box).
- **Mushroom packaging** is a sustainable and home-compostable alternative to expanded polystyrene.

- **Organic fabrics** can be used to replace certain paper and plastic packaging products, including bags and wrapping paper.
 - **Reusable bags** as an alternative to disposable bags can encourage consumers to reuse their bags as they are often larger and sturdier than disposable bags, making them more suitable for carrying heavy items.
 - **Seaweed-based packaging** can provide sustainable alternatives for plastic packaging products. Seaweed based products include sauce sachets, edible single-use liquid packaging, disposable cups, biodegradable cardboard coating, compostable takeaway boxes, lids, bags, and films.
 - **Sheep wool** is an abundant natural material, as a by-product of rearing sheep. It can be used as an alternative to polystyrene and polyethylene foam to provide insulation.
- **Outreach and Education** – In California, the PRO is required to fund and implement outreach and education programs in coordination with existing outreach programs. Municipalities implement local education programs and receive reimbursements for the expenses. The PRO must develop a producer responsibility plan regarding **Senate Bill 54** compliance, and the plan must include efforts to use education and promotion to encourage proper participation in recycling, composting collection, and reuse and refill systems.

In Colorado, **House Bill 22-1355** requires the Colorado Department of Public Health and Environment to designate a nonprofit organization to develop and implement a statewide education and outreach program. The program will be designed to increase recycling and reuse of covered materials and include education and outreach on proper end-of-life management of covered materials, the location and availability of recycling services under the program, and contamination reduction.

Under **RCW 70A.245.140**, Washington’s Department of Ecology is responsible for providing a website with education and outreach resources with regulatory information regarding single-use plastic packaging to lodging establishments, consumers, and other interested individuals.

The City of Honolulu promotes commercial recycling through the Peer Consultants program. The program was developed by the City and the business community to enhance the recycling resources available to businesses in an effort to divert more material from WGSL. Peer consultants from different businesses are available for free to advise interested companies on starting recycling programs or purchasing recycled-content products.

All public schools in O’ahu have recycling collection programs, which are funded by the State through the Department of Education’s refuse collection contract. Collection services are provided by private haulers. In addition, the City of Honolulu provides up to \$2,000 in program start-up reimbursement costs for multi-unit properties looking to establish a recycling program for the collection of recyclables, including cardboard, office paper, newspaper, and bottles.

The City and County of Honolulu has tips on their website for reducing packaging waste, including:

- Buying in bulk
- Asking suppliers to minimize packaging
- Requesting orders to be shipped in returnable packaging
- Reusing incoming packaging (bags, boxes, peanuts) to package goods for consumers
- Using newspaper and shredded office paper for packaging materials
- Returning, reusing, and repairing wood pallets.

The County of Hawai’i periodically runs public education campaigns on proper recycling techniques. According to the 2019 County ISWMP, the County has established a polystyrene reduction education and

outreach program to not only educate the public about the Polystyrene Foam Container & Food Service Ware Reduction program, but also to provide the food service industry with resources. A flyer is available to businesses explaining how food service establishments can meet County requirements.

The County of Kaua'i also has a webpage dedicated to plastics recycling and packaging reuse as well as a list of acceptable compostable alternatives to containers and utensils.

Maui Huliau Foundation is a non-profit organization that provides environmental education programs to Maui's Youth. One of the programs (Huliau Green Events program) provides training, pre-event planning services, zero waste stations, and food scraps recycling services for events with as many as 10,000 attendees. To date, over 9,000 pounds of recyclables have been collected through the Huliau Green Events program. The program also features a reusable rental program for items such as cups, plates, bowls, and clamshells.

According to the 2009 Maui County ISWMP, approximately 15,000 reusable shopping bags had been purchased in the County in the past two years, with purchases continuing. The bags contained printed educational information on one side of the bag. The bags were made available to individuals who signed a pledge designed to educate the public about plastic bag reduction, reuse, and proper disposal (i.e., "knot your bag" to prevent the bags from blowing out into the ocean).

- **Government Programs and Subsidies** – In addition to creating an EPR policy, the **Break Free from Plastic Pollution Act** would:
 - Establish source reduction targets for single-use plastic products and beverage containers.
 - Create a nationwide beverage container refund program.
 - Eliminate exposure to toxic substances by banning retailers from selling specific types of beverage containers.
 - Establish a carry-out bag fee.
 - Ban certain non-recyclable single-use products (i.e., food service products made from foam, single-use condiment packaging, plastic personal care products at hotels, black plastics, and non-compostable produce stickers).
 - Prevent plastic waste from being exported to developing countries that cannot manage the materials.
 - Establish grant programs to support reusable and refillable products.
 - Inclusion of the Protecting Communities from Plastics Act and Plastic Pellet-Free Waters Act.

The US EPA's **Solid Waste Infrastructure for Recycling (SWIFR) Grant Program** allocates \$275 million to support Building a Better America. The funds are dispersed as \$55 million per year from Fiscal Years 2022 to 2026 to remain available until expended. Funds are being awarded towards improving post-consumer materials management, infrastructure, and recycling programs. The DOH was awarded \$670,000 to conduct a waste characterization study to measure solid waste disposal streams in all counties, and conduct targeted outreach on the findings to inform state and local waste reduction priorities.

The County of Hawai'i's Department of Environmental Management also received a \$1.5 million grant from the grant program. Funds will be used to design and implement a city-scale reusable foodware and refillable bottle system in Hilo, including procurement of reuse collection bins, transport vehicles, crates and totes, a dishwashing machine, reuse infrastructure installation, QR code scanners, and a technology platform to track and manage data.

The EPA's **Pollution Prevention Grant: Environmental Justice Through Safer and More Sustainable Products** allocates funding towards providing pollution prevention technical assistance to businesses by increasing the supply, demand, and use of safer, more sustainable products. In October 2023, the US EPA awarded the University of Hawai'i's Sea Grant College Program with \$2.1 million to help create a city-wide

reusable foodware system in Hilo. The system will focus on training, technical assistance, and infrastructure.

An additional \$75 million have been allocated for FY 2022 to 2026 towards the EPA's **Consumer Recycling Education and Outreach Grant Program**. The grant provides funding towards public education regarding community recycling or composting programs and increasing collection rates while decreasing contamination. Materials that are included within the scope of the grant program include aluminum and steel containers, glass, cardboard paper, plastics, and organics (including wood), among other materials.

In California, the **Recycled Fiber, Plastic, and Glass Grant Program** aims to reduce overall greenhouse gas emissions by expanding existing capacity or establishing new facilities within the state that use California-generated post-consumer recycled plastic, glass, or fiber such as old cardboard and paper to manufacture into new products.

The Colorado Department of Public Health and Environment administers two waste diversion grant programs: 1) the **Recycling Resources Economic Opportunity Program** and the **Front Range Waste Diversion Program**. The CDPHE offers technical assistance for end-market and municipal waste diversion planning through both programs.

In Washington, the Department of Ecology's **Waste Reduction and Recycling Education Grants Program** provides funding to qualified local governments and nonprofit organizations for local or statewide public education programs designed to support with litter control, waste reduction, recycling, or composting, or for the implementation of a contamination reduction and outreach plan.

In 2012, Hawai'i became the first state in the U.S. to enforce a single-use plastic grocery bags in all counties. This was achieved not through state legislature, but rather through each County council at the local level. Hawai'i also became the fifth "foam free" state in the U.S. after the passage of **Bill 2775** in Kaua'i, prohibiting retail and food establishments from using, distributing, or selling disposable food service ware made from expanded polystyrene.

The **Green Business Program** is a free state program that assists and recognizes businesses that strive to operate in an environmentally and socially responsible manner. The program is a partnership between the Hawai'i State Energy Office, the State's Department of Health (DOH), and the Board of Water Supply. The program highlights Hawaiian businesses that are dedicated to sustainability. The program's mission is to help businesses reduce waste, conserve energy, and preserve natural resources.

In the City and County of Honolulu, approximately 160,000 households may recycle certain packaging materials in their blue cart for bi-weekly curbside collection. Acceptable items include metal cans, glass bottles and jars, newspaper, corrugated cardboard, plastic containers, and office paper. According to the 2019 County ISWMP, the County is investigating options to expand the existing curbside recycling program to include households in manual collection. The City also services two blue bins located on the North Shore (Waialua Refuse Collection Yard and Kawailoa Transfer Station) for use by residents. In November 2023, the Honolulu City Council approved **Bill 47**, allowing residents to recycle certain packaging materials (i.e., paper bags, certain takeout containers, coffee pods, and other manufactured compostable materials) into the green bin for curbside collection effective beginning April 2025.

In addition to curbside collection, Honolulu has city ordinances related to packaging materials. **City Ordinance, Chapter 9-1.7** sets disposal limits for commercial and government trucks to a maximum of 10 percent cardboard per load. Effective since July 1996, **City Ordinance, Chapter 9-3.1** requires office buildings with 20,000 square feet or more of office space to recycle office paper, newspaper, and cardboard. Per **City Ordinance, Chapter 9-1.11**, city agencies are required to recycle newspaper, cardboard, office paper, aluminum, glass, and plastics through government mandatory recycling program. The County of Kaua'i has passed similar ordinances, including **Ordinance 902**, which bans the landfill disposal of

commercially generated loads exceeding ten percent corrugated cardboard by volume. Since 2011, the County of Kaua'i has required all bulk purchases of office paper to have a minimum of 30 percent post-consumer content.

In Hawai'i, Kaua'i, and Maui Counties, there are no island-wide or large-scale curbside recycling programs currently being implemented. Some companies offer recycling collection services for a fee in limited areas for both residential and commercial customers. As an alternative to curbside recycling, Hawai'i, Kaua'i, and Maui County residents may use the County Drop-Off recycling bins for certain packaging materials. In addition to the existing drop-off recycling bin system, implementation of a statewide curbside recycling program would increase diversion and reduce the amount of packaging materials being sent to landfills.

The County of Maui's **Green Grants Program** also allocates an estimated \$100,000 for FY 2024 to support small-scale projects related to sustainability, environmental protection, natural resource protection, conservation, and restoration. The County's **Recycling Grants Program** allocates an estimated \$500,000 for FY 2024 to support projects related to landfill diversion, zero waste initiatives, education, equipment upgrades, program expansion, materials collection, and the collection and processing of waste resource materials. A county-funded and managed program has proven to be a viable option to better manage organics.

- **Free Market Solutions –**

The development of a Material Recovery Facility in each of the counties would further promote the reduction, reuse, and recycling of packaging materials and could encourage the implementation of curbside recycling programs in all counties.

Located in Arizona, **Circular Plastics Microfactory** is a new plastics recycling and remanufacturing "microfactory" that will convert sorted plastics into pellets, which will be used to create new products. Presently, the facility is able to process plastic types 2 and 5 (including food packaging) but has the capability to expand and include types 1 and 4 (including water bottles and shopping bags) in the future.

In Hawai'i, some local businesses accept newspaper to produce shredded paper products used primarily by local agriculture businesses for use in growing and shipping of agricultural products. Located throughout the Big Island, Circlepack is an organization that works with local community members to shred cardboard to create soil for farmers. Circlepack also creates compostable packaging, garden and art supplies, and other upcycled materials. According to the founder, Evan Lam, the organization has managed to shred over 22,000 pounds of cardboard, most of which has gone towards creating soil for local farmers.



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|------------------------------|--|--------------------|-----------|
| County: | Hawai'i | Solid Waste Issue: | Packaging |
| Population (2020 Census): | 200,700 | | |
| Last Update to SWMP: | 2019 | | |
| Waste Characterization Data: | <p>According to the 2001 and 2008 Waste Composition Studies at the landfills, the waste stream disposed at the landfills was comprised of the following quantities of materials - a portion of which is assumed to be packaging materials:¹</p> <ol style="list-style-type: none"> 1. Paper <ul style="list-style-type: none"> • Cardboard: 16,182 tons (7.7 percent of the total waste stream) • Bags: 723 tons (0.3 percent of the total waste stream) • Newspaper: 4,193 tons (2.0 percent of the total waste stream) • White Ledger: 1,540 tons (0.7 percent of the total waste stream) • Colored Ledger: 280 tons (0.1 percent of the total waste stream) • Computer: 92 tons (0.0 percent of the total waste stream) • Office: 1,510 tons (0.7 percent of the total waste stream) • Miscellaneous: 8,634 tons (4.1 percent of the total waste stream) • R/C Paper: 11,443 tons (5.4 percent of the total waste stream) 2. Plastic: <ul style="list-style-type: none"> • Film: 6,170 tons (2.9 percent of the total waste stream) • R/C Plastic: 4,543 tons (2.2 percent of the total waste stream) | | |
| Waste Diversion Data: | <p>In FY 2023, the following quantities of materials were estimated to be diverted through a County funded program - a portion of which is assumed to be packaging:</p> <ol style="list-style-type: none"> 1. Paper <ul style="list-style-type: none"> • Cardboard & brown paper bags: 2,321 tons 2. Plastic: <ul style="list-style-type: none"> • Rigid Plastics (HI-5): 151 tons <p>The quantity of non-County Program or other diverted packaging materials in FY 2023 is unknown.</p> | | |
| County Ordinances: | <p>Hawai'i County Ordinance 17-63 passed in 2017 and has been effective as of July 1, 2019 (subsequently amended in 2019), prohibits food service vendors from providing food to a customer in disposable (single use) polystyrene foam food service ware. Hawai'i County Code Chapter 20 Article 5 – Polystyrene Foam Food Container and Food Service Ware Reduction and SW Rule 2-10 Relating to Polystyrene Foam Food Container and Food Service Ware Reduction identify the prohibitions, requirements, exemptions, and administrative fines for violations related to polystyrene foam food containers and disposable food service ware.²</p> <p>Effective as of January 2013, Hawai'i County Ordinance 12-1 prohibits businesses from providing single-use plastic checkout bags to their customers.³ Hawai'i County Code Chapter 20 Article 6 – Plastic Bag Reduction and SW Rule 2-11 Plastic Bag Reduction identify prohibitions, exemptions, permissible bags, and administrative fines for violations related to single-use plastic checkout bags.²</p> <p>In 2007, the County adopted Resolution 356-07, “A Resolution to Embrace and Adopt the Principles of Zero Waste as a Long-term Goal for Hawai'i County.” The resolution highlights the zero-waste philosophy of solid waste management and commits to taking the necessary actions towards incorporating the zero-waste philosophy into legislation, policies, and actions.</p> | | |





Overview: In Hawai'i County, there is no island-wide or large-scale curbside recycling program currently being implemented. However, several companies offer recycling collection services in limited areas of the County for both residential and commercial customers.



Large retailers such as Walmart, KTA Superstores, Costco, and Home Depot typically maintain in-house recycling programs. Cardboard and plastic (i.e., plastic bags and shrink wrap) constitute most of the materials recycled at these stores. Depending on the retailer, some also accept mixed paper and wood pallets. Most of these retailers ship the collected materials, especially cardboard and plastic, to third-party brokers on the West Coast or to the retailer's distribution center. Other recycled materials are picked up by permitted haulers.

Presently, most of the recycled paper and cardboard generated on the island is shipped to domestic and international markets for reuse. Additionally, several local businesses accept newspaper to produce shredded paper products used primarily by local agriculture businesses for use in growing and shipping of agricultural products.

Hawai'i County residents may also use the Drop-Off recycling bins at County Recycling and Transfer Stations to recycle certain materials (i.e., clean corrugated cardboard, brown paper bags, and non-HI-5 glass containers).⁴ In December 2018, the County stopped accepting #5 plastics, (polypropylene), plastic grocery bags, and clamshell-type plastic containers at their drop-off bins, and in October 2019, the County stopped collecting non-HI-5 #1 and #2 plastic containers (however, the HI-5 program still collects #1 and #2 deposit beverage container plastics on Hawai'i Island). According to the Hawai'i County Department of Environmental Management, "the market does not allow for recycled plastics," and "there is no local outlet on the island who can benefit from plastic recycling." The recyclables that are still being collected at the drop-off bins are sold to foreign markets or the U.S. mainland. Corrugated cardboard is sold to Taiwan.

Contamination in the drop-off recycling program increased after the types of acceptable recyclables decreased in 2018 and 2019. According to Hawai'i County Department of Environmental Management (DEM) officials, recurring issues with recycling include the contamination of recyclables and "wish-cycling" of nonrecyclable materials. To combat this, the County periodically runs public education campaigns on proper recycling techniques.

According to DEM officials, the County has considered developing its own recycling plant to process recyclables on island. However, a recycling plant has not been built due to budgetary constraints, union concerns, regulatory and permitting requirements, and contract acquisitions needed to sell the recyclables. "The County will continue to consider the feasibility of all options," according to DEM officials.

According to the 2019 County ISWMP, the County established a polystyrene reduction education and outreach program to not only educate the public about the Polystyrene Foam Container & Food Service Ware Reduction program, but also to provide the food service industry with resources. A flyer is available to businesses explaining how food service establishments can meet County requirements.

County Programs & Funding:

- Drop-Off Recycling Program

Estimated Annual Material Type Generation: There is no Countywide information available on the quantity of packaging materials being generated due to the unknown quantity of privately recycled packaging materials.



Permitted Collectors and Recyclers/Processors:^{5, 5.}

- Atlas Recycling (cardboard)
- Business Services Hawai'i (paper fibers, small clean #2 plastic containers, offers crushed glass aggregate/fill and glasscrete)
- Glenwood Recycling & Transfer Station (clean non-HI-5 glass containers only)
- Hāwī Recycling & Transfer Station (clean corrugated cardboard & brown paper bags, non-HI-5 glass containers)
- Hilo Recycling & Transfer Station (clean corrugated cardboard & brown paper bags, non-HI-5 glass containers)
- Honoka'a Recycling & Transfer Station (clean corrugated cardboard & brown paper bags, non-HI-5 glass containers)
- Honomū Recycling & Transfer Station (clean corrugated cardboard & brown paper bags, non-HI-5 glass containers)
- Ke'ei Recycling & Transfer Station (clean corrugated cardboard & brown paper bags, non-HI-5 glass containers)
- Kea'au Recycling & Transfer Station (clean corrugated cardboard & brown paper bags, non-HI-5 glass containers)
- Kealakehe (Kailua-Kona) Recycling & Transfer Station (clean corrugated cardboard & brown paper bags, non-HI-5 glass containers)
- Keauhou Recycling & Transfer Station (clean corrugated cardboard & brown paper bags, non-HI-5 glass containers)
- Laupāhoehoe Recycling & Transfer Station (clean corrugated cardboard & brown paper bags, non-HI-5 glass containers)
- Mr. K's Recycle & Redemption (non-glossy newspaper)
- Ocean View Recycling & Transfer Station (clean corrugated cardboard & brown paper bags, non-HI-5 glass containers)
- Pāhala Recycling & Transfer Station (clean corrugated cardboard & brown paper bags, non-HI-5 glass containers)
- Pāhoa Recycling & Transfer Station (clean corrugated cardboard & brown paper bags, non-HI-5 glass containers)
- Pāpa'ikou Recycling & Transfer Station (clean corrugated cardboard & brown paper bags, non-HI-5 glass containers)
- Puakō Recycling & Transfer Station (clean corrugated cardboard & brown paper bags, non-HI-5 glass containers)
- Volcano Recycling & Transfer Station (clean corrugated cardboard & brown paper bags)
- Wai'ōhinu Recycling & Transfer Station (clean corrugated cardboard & brown paper bags, non-HI-5 glass containers)
- Waiea Recycling & Transfer Stations (clean corrugated cardboard & brown paper bags, non-HI-5 glass containers)
- Waimea Recycling & Transfer Station (clean corrugated cardboard & brown paper bags, non-HI-5 glass containers)

Other Recycling Collection Facilities:

- Puna Kamali'i Flowers, Inc. (non-glossy newspaper)
- Waipio Valley Artworks (intact bubble wrap and foam peanuts)

News Articles:

[Spectrum News](#): "What happens to Hawai'i Island's trash and recyclables?"

[Hawaii News Now](#): "Grabbing a plate lunch on the Big Island? It will no longer be served in Styrofoam"

[Big Island Now](#): "Advice to Manage County Recycling Rollback"

[Star Advertiser](#): "Hawaii County recycling bins will no longer accept papers and plastics"

[Hawaii Tribune-Herald](#): "Dirty recycling dooms Hawaii County program - Hawaii Tribune-Herald"



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| | <p><u>Hawaii Tribune-Herald</u>: “Key to coping with recycling changes is finding other ways to reduce, reuse unaccepted items”</p> <p><u>KHON2</u>: “Shredding away Hawaii's cardboard problem”</p> |
| <p>Solid Waste Management Issue Statement:</p> | <p>Increased awareness and public pressure regarding packaging waste has led to businesses implementing some source reduction methods to reduce packaged waste. Plastic packaging is cost-effective and generally preferred for fast-moving consumer goods which generates a significant amount of waste. Packaging waste generation has also significantly increased as a result of the COVID-19 pandemic (i.e., take-out instead of dine-in). As consumer behavior shifts globally (i.e., preference for online shopping due to convenience versus in-store shopping), this will further contribute to the packaging problem unless properly addressed.</p> |
| <p>Solid Waste Management Issue Statement: (County to provide issue statement and potential solutions regarding the management of this material type.)</p> | <p>Issue Statement – With Hawaii’s remote location, 85% of its goods are imported and single use packaging and plastics has contributed to environmental degradation and ocean pollution. It also takes up valuable landfill space and contributes to green house gas emissions. Creative solutions and strategic roadmaps should be implemented as the state shifts toward a system of responsible re-use and resource management.</p> <p>Potential Solutions – Statewide Packaging Waste Reduction and Reduce Outreach Programs to reduce the amount of packaging waste sent to landfills or incinerators.</p> <p>Statewide Extending Producer Responsibility (EPR) programs funded in whole or in part by the producers of consumer packaging materials.</p> |

¹ [Hawaii County Waste Composition Study \(hawaii.gov\)](#)

² [County of Hawai'i Department of Environmental Management Rules of Practice and Procedure \(hawaiicounty.gov\)](#)

³ [Ordinance 12-1 \(hawaiizerowaste.org\)](#)

⁴ [Drop-Off Recycling Program \(hawaiizerowaste.org\)](#)

⁵ [Other Commodities \(hawaiizerowaste.org\)](#)



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| County: | Honolulu | Solid Waste Issue: | Packaging |
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| Population (2020 Census): | 1.02 million |
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| Last Update to SWMP: | 2019 |
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| Waste Characterization Data: | <p>According to the 2017 Waste Characterization Study, the following amounts of material were disposed – a portion of which is assumed to be packaging materials¹:</p> <ol style="list-style-type: none"> 1. <u>Paper:</u> <ul style="list-style-type: none"> • Uncoated Corrugated Cardboard: 51,967 tons (6.5 percent of total of waste stream) • Newspaper: 12,070 tons (1.5 percent of the total waste stream) • Paper Bags: 5,131 tons (0.6 percent of the total waste stream) • White and Colored Ledger Paper: 7,056 tons (0.9 percent of the total waste stream) • Mixed Recyclable Paper: 43,298 tons (5.5 percent of the total waste stream) • Compostable Paper: 45,660 tons (5.7 percent of the total waste stream) • Other Paper: 15,464 tons (1.9 percent of the total waste stream) 2. <u>Plastic:</u> <ul style="list-style-type: none"> • Plastic Bags: 838 tons (0.1 percent of the total waste stream) • Non-HI-5 Plastic PET Containers: 983 tons (0.5 percent of the total waste stream) • Non-HI-5 Plastic HDPE Containers: 1,722 tons (0.9 percent of the total waste stream) • Other Bottles/Containers: 3,018 tons (1.6 percent of the total waste stream) • Other Plastic Film/Wrap: 35,339 tons (4.4 percent of the total waste stream) • Other Plastic: 3,696 tons (0.5 percent of the total waste stream) 3. <u>Expanded Polystyrene:</u> <ul style="list-style-type: none"> • Expanded Polystyrene: 6,268 tons (0.8 percent of the total waste stream) 4. <u>Wood:</u> <ul style="list-style-type: none"> • Pallets: 46,722 tons (5.9 percent of the total waste stream) | |
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| Waste Diversion Data: | <p>In FY 2023, the following quantities of paper and plastic were estimated to be diverted – a portion of which is assumed to be packaging materials:</p> <ol style="list-style-type: none"> 1. <u>Paper:</u> <ul style="list-style-type: none"> • Corrugated Cardboard: 28,687 tons • Newspaper: 5,534 tons • High Grade: 2,595 tons • Mixed Paper: 261 tons • Magazines: 452 tons 2. <u>Plastic:</u> |
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- **Rigid Plastic:** 1,754 tons
- **Plastic Film:** 174 tons

In 2022, the following quantities of materials were diverted – a portion of which is assumed to be packaging materials²:

3. **Wood:**
 - **Wood Waste/Pallets:** 4,525 tons

County Ordinances:

City Ordinance, Chapter 42-1.7 sets disposal limits for commercial and government trucks to a maximum of 10 percent cardboard per load.

Effective since July 1996, **City Ordinance, Chapter 42-3.1** requires office buildings with 20,000 square feet or more of office space to recycle office paper, newspaper, and cardboard.

Per **City Ordinance, Chapter 42-1.11**, city agencies are required to recycle newspaper, cardboard, office paper, aluminum, glass, and plastics through government mandatory recycling program.

Chapter 42, Article 9 of the **Revised Ordinances of Honolulu** regulates the types of bags provided to customers on O’ahu, effective July 1, 2015 (**Ordinance 12-8**), with amendments effective July 1, 2018 (**Ordinance 14-29**), January 1, 2020 (**Ordinance 17-37**), and January 1, 2021 (**Ordinance 19-30**). Ordinance 19-30 restricts the use and sale of polystyrene foam food ware, disposable plastic food ware, and disposable plastic service ware.³ Additionally, it dictates when disposable service ware may be provided.⁴

In November 2023, the Honolulu City Council approved **Bill 47**, allowing residents to recycle certain packaging materials (i.e., paper bags, certain takeout containers, coffee pods, and other manufactured compostable materials) into the green bin for curbside collection effective beginning April 2025.

Overview:

In the City and County of Honolulu, approximately 160,000 households may recycle certain packaging materials in their blue cart for bi-weekly curbside collection.⁵ Acceptable items include metal cans, glass bottles and jars, newspaper, corrugated cardboard, plastic containers, and office paper.⁶ According to the 2019 County ISWMP, the County is investigating options to expand the existing curbside recycling program to include households in manual collection areas. The City also services two blue bins located on the North Shore (Waialua Refuse Collection Yard and Kawaihoa Transfer Station) for use by residents.⁷

Since 2007, the City and County of Honolulu has contracted RRR Recycling Services to receive all the recyclables collected from the blue bin. The collected recyclables are sold by RRR Recycling Services to the mainland or foreign countries. Corrugated cardboard, newspaper and office paper are sold to manufacturers in Taiwan, Vietnam, China, Indonesia, Thailand, and Korea.

In addition to the blue bin, certain packaging materials (i.e., paper bags, certain takeout containers, coffee pods, and other manufactured compostable materials) will also be acceptable in the green bin for curbside beginning in April 2025.

City offices are required to recycle white and colored office paper, newspaper, cardboard, and beverage containers (i.e., plastic, aluminum, and glass). The segregated paper collection system was changed to a mixed paper system in September 2015, allowing cardboard, white and colored paper, and newspaper to be collected together. Under the new system, recovery rates increased by over 15 percent.



The City also promotes commercial recycling through the Peer Consultants program. The program was developed by the City and the business community to enhance the recycling resources available to businesses in an effort to divert more material from WGS. Peer consultants from different businesses are available for free to advise interested companies on starting recycling programs or purchasing recycled-content products.

All public schools in O'ahu have recycling collection programs, which are funded by the State through the Department of Education's refuse collection contract. Collection services are provided by private haulers. In addition, the City of Honolulu provides up to \$2,000 in program start-up reimbursement costs for multi-unit properties looking to establish a recycling program for the collection of recyclables, including cardboard, office paper, newspaper, and bottles.⁸

The City and County of Honolulu has established a Source Reduction Working Group (SRWG), which aims to determine the best approaches to increase source reduction efforts and provide recommendations that promote the reduction of waste generation.⁹ During the second meeting, the SWRG came together and voted to focus on specific topics, including product packaging. A permitted interaction group (PIG) was established for each topic, and each PIG was tasked with investigating ways to incentivize source reduction, policies or regulations needed, and public education strategies.

In the City and County of Honolulu Department of Environmental Services' most recent semi-annual report to the State Land Use Commission dated February 2024, the City's current source reduction efforts focus on providing public education to increase awareness of existing source reduction resources and encourage waste prevention at the source.¹⁰ Recycling education efforts have included the distribution of brochures and print materials, dissemination of information via City's refuse website, Wasteline e-newsletter, and virtual presentations. There has also been an increase in social media participation to assist with the public education program.

The City and County of Honolulu has tips on their website for reducing packaging waste, including:¹¹

- Buying in bulk
- Asking suppliers to minimize packaging
- Requesting ordered to be shipped in returnable packaging
- Reusing incoming packaging (bags, boxes, peanuts) to package goods for consumers
- Using newspaper and shredded office paper for packaging materials
- Returning, reusing, and repairing wood pallets

County Programs & Funding:

- Blue Bin Program
- Peer Consultants Program

Estimated Annual Material Type Generation:

There is no Countywide information available on the amount packaging materials being generated.

Permitted Collectors and Recyclers/Processors^{12, 13, 14.}

- **Hawaiian Earth Recycling – Wahiawa Facility** (wood pallets)
- **Future City composting contract (manufactured compostable materials or MCM)**
- **Honolulu Recovery Systems** (corrugated cardboard, and office paper)
- **Island Recycling** (cardboard, paper: computer, newspaper, white, and colored ledger)
- **RRR Recycling Services** (corrugated cardboard, paper: white ledger and newspaper)

Other Recycling Collection Facilities:

- **Hawaii Mailbox Service** (polystyrene: packing peanuts, loose-fill)
- **Island Shell** (paper)
- **UPS Store** (polystyrene: packing peanuts, loose-fill)



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| <p>News Articles:</p> | <p>Spectrum Local News: “What happens to O’ahu’s trash and recyclables?”</p> <p>Honolulu Star-Advertiser: “Manufactured compostable waste to be accepted in O’ahu’s green recycling bins”</p> <p>Hawaii News Now: “Giving cardboard new life: Nanakuli students awarded for efforts in sustainability”</p> |
| <p>Solid Waste Management Issue Statement:</p> | <p>Increased awareness and public pressure regarding packaging waste has led to businesses implementing some source reduction methods to reduce packaged waste. Plastic packaging is cost-effective and generally preferred for fast-moving consumer goods which generates a significant amount of waste. Packaging waste generation has also significantly increased as a result of the COVID-19 pandemic (i.e., take-out instead of dine-in). As consumer behavior shifts globally (i.e., preference for online shopping due to convenience versus in-store shopping), this will further contribute to the packaging problem unless properly addressed.</p> |
| <p>Solid Waste Management Issue Statement: (County to provide issue statement and potential solutions regarding the management of this material type.)</p> | <p>Issue Statement – Source reduction is the highest priority among the solid waste management practices and processing methods.</p> <p>Potential Solutions – The City’s source reduction efforts currently focus on providing public education to increase awareness of existing source reduction resources and encourage residents and businesses to prevent waste at the source. Ordinance 19-30 includes the plastic bag ban and the Disposable Food Ware Ordinance, or DFWO.</p> <p>In accordance with the 2019 Integrated Solid Waste Management Plan, ENV has established a Source Reduction Working Group to determine the topics of interest related to source reduction and the initiatives that can be pursued by the City and other groups to encourage source reduction. ENV has engaged a consultant to facilitate the group and assist coordination and planning of the SRWG process. The SRWG is planned to have five (5) meetings, including packaging waste throughout the 2023 – 2024 calendar years. More information can be found at: https://www.honolulu.gov/opala/source-reduction-working-group.html.</p> <p>The City’s efforts to increase residential recycling rates have continued with its ongoing efforts to educate residents about the value and benefits of its three-cart curbside program, and the continued promotion and rejuvenation of its condominium recycling assistance program. Additionally, the City requires commercial sector recycling through mandatory laws established by City ordinance, and provides assistance to businesses to setup and expand their recycling programs.</p> |

¹ [2017 Waste Composition Study \(honolulu.gov\)](#)
² [Rates and Data \(honolulu.gov\)](#)
³ [Ordinance 19-30 \(Bill 40\) \(honolulu.gov\)](#)
⁴ [Plastic Bag Ban Information Sheet \(hawaii.gov\)](#)
⁵ [What happens to O’ahu’s trash and recyclables? \(spectrumlocalnews.com\)](#)
⁶ [Recycling and Disposal Guide for O’ahu \(honolulu.gov\)](#)
⁷ [HI 5 Recycling Centers \(honolulu.gov\)](#)
⁸ [2019 Integrated Solid Waste Management Plan Update \(honolulu.gov\)](#)
⁹ [Source Reduction Working Group \(honolulu.gov\)](#)



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- ¹⁰ [Eighth Semi-Annual Report to LUC \(final\).docx \(honolulu.gov\)](#)
 - ¹¹ [Waste Prevention \(honolulu.gov\)](#)
 - ¹² [Recycling Drop Off Locations \(honolulu.gov\)](#)
 - ¹³ [Recycling and Disposal Guide for O'ahu \(honolulu.gov\)](#)
 - ¹⁴ [HI 5 Recycling Centers \(honolulu.gov\)](#)



County: **Kaua'i**

Solid Waste Issue: **Packaging**

Population (2020 Census): 73,300

Last Update to SWMP: 2021

Waste Characterization Data:

According to the 2016 Waste Characterization Study, the Countywide waste stream comprised of the following quantities of materials - a portion of which is assumed to be packaging:

1. **Paper**

- **Uncoated Corrugated Cardboard:** 3,674 tons (4.4 percent of the total waste stream)
- **Kraft Paper Bags:** 1,149 tons (1.4 percent of the total waste stream)
- **Newspaper:** 626 tons (0.8 percent of the total waste stream)
- **White Ledger Paper:** 1,096 tons (1.3 percent of the total waste stream)
- **Mixed Paper:** 3,472 tons (4.1 percent of the total waste stream)
- **Compostable Paper:** 3,771 tons (4.4 percent of the total waste stream)
- **Non-Recyclable Paper:** 1,386 tons (1.7 percent of the total waste stream)

2. **Plastic**

- **Non-HI-5 PETE Containers:** 246 tons (0.3 percent of the total waste stream)
- **Non-HI-5 HDPE Containers:** 430 tons (0.5 percent of the total waste stream)
- **Plastic Containers #3 – #7:** 959 tons (1.1 percent of the total waste stream)
- **Plastic Grocery and Other Merchandise Bags:** 41 tons (0.0 percent of the total waste stream)
- **Other Clean Film:** 385 tons (0.5 percent of the total waste stream)
- **Non-Recyclable Film Plastic:** 3,407 tons (4.1 percent of the total waste stream)
- **Non-Recyclable Plastic:** 1,345 tons (1.6 percent of the total waste stream)

3. **Expanded Polystyrene**

- **Expanded Polystyrene Food Service Ware:** 364 tons (0.4 percent of the total waste stream)
- **Other Expanded Polystyrene:** 236 tons (0.3 percent of the total waste stream)

4. **Wood**

- **Clean Lumber (including pallets):** 4,167 tons (5.0 percent of the total waste stream)



Waste Diversion Data:

In FY 2023, the following quantities of paper and plastic were estimated to be diverted - a portion of which is assumed to be packaging:

1. **Paper:**

- **Cardboard:** 3,960 tons
- **Mixed Paper:** 221 tons

2. **Plastic:**

- **Rigid Plastic:** 611 tons

In 2020, the following quantities of materials were diverted—a portion of which is assumed to be packaging¹:

1. **Plastic:**

- **Plastic Film:** 86 tons
- **Non-HI-5 Plastic:** 89 tons

2. **Wood:**

- **Pallets:** 1,689 tons



County Ordinances:

In October of 2009, the Kaua'i County Council adopted **Ordinance No. 855**, requiring all retail establishments to provide only recyclable paper bags or reusable bags to their customers effective beginning January 11, 2011.² The Administrative Rules associated with the Ordinance were approved in January 2011.³

In August 2010, the County adopted **Ordinance 902**, banning the landfill disposal of commercially generated loads exceeding ten percent corrugated cardboard by volume.⁴

In September 2020, the Kaua'i County Council passed **Bill 2775**, which was signed into an ordinance (**Ordinance 1079 Article 27, Chapter 22**).⁵ Effective as of January 1, 2022, the ordinance restricts the use and sale of polystyrene foam food containers, making Kaua'i the fifth county in the State of Hawai'i to do so. The Administrative Rules associated with the Ordinance were finalized on October 6, 2021.⁶

In February 2020, Mayor Derek Kawakami signed a resolution prohibiting the purchase, use, or distribution of "disposable plastics" (i.e., bottled water, plastic bags, plastic beverage straws, plastic cutlery, plastic food service containers, and plastic stirrers) with County funds, at County permitted events, by County employees, or by County Facility Users.⁷

Overview:

The Kaua'i Recycles Program is a residential recycling program that features eight drop bins located throughout the island. Residents must pre-sort all recyclables. Acceptable materials include glass containers, cardboard, mixed paper including newspaper and paperboard, aluminum and tin cans, and bottles and jars made from plastics #1 and #2.



The County has a contract with Garden Isle Disposal (GID) to operate the program, which includes providing and maintaining the recycling drop bins, hauling the recyclables, collecting office paper from County office buildings, processing all materials, and marketing them.

In addition to the drop bins, the program includes bins for cardboard collection at the Civic Center and the police complex. Non-HI-5 cans and bottles are also collected at the Civic Center. Most of the recyclable materials are transported off-island to markets, and GID retains the revenue from the sales.

GID is the largest commercial refuse hauler in the County, and also offers recycling hauling services to businesses. The County has a contract with GID to accept and process commercially generated recyclables at their facility. Corrugated cardboard and mixed paper are among some of the materials accepted for recycling by GID for processing at their facility in Līhū'e.

Both the residential and commercial paper streams end up at the GID facility. GID is the only permitted recycling facility in Kaua'i with capacity to bale and ship recyclable materials to market. In FY 2019, approximately 4,700 tons of paper were marketed - 83 percent of which was corrugated cardboard. As of FY 2019, GID shipped corrugated cardboard and mixed paper to brokers in O'ahu, who then shipped the materials to off-island markets in Asia. Some corrugated cardboard and office paper are being marketed by certain commercial entities (e.g., home supply stores or institutions).

In 2018, the County stopped accepting plastic #1 and #2 clamshell, tray, and tub-shaped containers as a result of China's new limitations on acceptable recyclables and restrictions on the amount of contamination allowed in plastic and mixed paper bales. Since the State of Hawai'i does not have a facility to process recyclables into new materials, the County ships most of its recyclables out of the state. The County sells its recyclables to markets in Asia (excluding China). The Asian countries that Kaua'i sends its recyclables to change depending on market demand.



Since 2011, the County has required all bulk purchases of office paper to have a minimum of 30 percent post-consumer content. The County’s recycling office hosts a free “drop and swap” at the Kaua’i Resource Center where polystyrene, packing peanuts and bubble wrap can be dropped off. In addition, the County of Kaua’i has a webpage dedicated to plastics recycling and packaging reuse as well as a list of acceptable compostable alternatives to containers and utensils.⁸ According to the County’s ISWMP, the County is considering expanding collection services and solid waste management options to include curbside recycling.

County Programs & Funding:

- Kaua’i Recycles Program
- Recycling and Waste Diversion Grant Program

Estimated Annual Material Type Generation:

According to the 2016 Waste Characterization Study, the Countywide waste generation comprised of the following quantities of materials - a portion of which is assumed to be packaging:⁹

- **Uncoated Corrugated Cardboard:** 8,170 tons
- **Newspaper:** 763 tons
- **Mixed Paper:** 6,408 tons
- **Compostable Paper:** 3,711 tons
- **Non-Recyclable Paper:** 1,386 tons
- **Non-HI-5 Plastic:** 745 tons
- **Plastic Film:** 1,185 tons
- **Plastic Grocery and Other Merchandise Bags:** 41 tons
- **Non-Recyclable Film Plastic:** 3,407 tons
- **Expanded Polystyrene Food Service Ware:** 364 tons
- **Other Expanded Polystyrene:** 236 tons
- **Non-Recyclable Plastic:** 1,345 tons
- **Clean Lumber (including pallets):** 4,717 tons

Permitted Collectors and Recyclers/Processors:¹⁰

- **Hanalei Transfer Station:** 5-3751 Kuhio Hwy. (cardboard and mixed paper)
- **Hanapepe Refuse Transfer Station:** 4380 Lele Rd. (cardboard and mixed paper)
- **Garden Isle Disposal** (cardboard and mixed paper)
- **Kapa’a at the end of Kahau Road past the Kapa’a Skate Park:** 4900 Kahau Rd. (cardboard and mixed paper)
- **Kekaha at the Kekaha Landfill:** 6900-D Kaumuali’i Hwy. (cardboard and mixed paper)
- **Lawai Post Office:** 2-3675 Kaumuali’i Hwy. (cardboard and mixed paper)
- **Lihu’e in the back of the Target parking lot:** 4303 Nawiliwili Rd. (cardboard and mixed paper)
- **Po’ipu in the Brenneke's Parking Lot:** 2100 Hoone Rd. (cardboard and mixed paper)
- **Waimea at the Waimea Athletic Field:** turn up Huakai Rd. (cardboard and mixed paper)

News Articles:

- [Spectrum News:](#) “What happens to Kaua’i’s trash and recyclables?”
- [Hawaii Public Radio:](#) “Kaua’i is Last Hawai’i County to Ban Plastic Foam Containers”
- [KITV:](#) “Kaua’i County asks public to report eateries not complying with foam ban”
- [Hawaii Tribune-Herald:](#) “Kaua’i ban on single-use plastics to take effect in new year”



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| <p>Solid Waste Management Issue Statement:</p> | <p>Increased awareness and public pressure regarding packaging waste has led to businesses implementing some source reduction methods to reduce packaged waste. Plastic packaging is cost-effective and generally preferred for fast-moving consumer goods which generates a significant amount of waste. Packaging waste generation has also significantly increased as a result of the COVID-19 pandemic (i.e., take-out instead of dine-in). As consumer behavior shifts globally (i.e., preference for online shopping due to convenience versus in-store shopping), this will further contribute to the packaging problem unless properly addressed.</p> |
| <p>Solid Waste Management Issue Statement: (County to provide issue statement and potential solutions regarding the management of this material type.)</p> | <p>Issue Statement – Packaging materials are ubiquitous in our consumer society. Many people are unaware of the environmental and human health issues surrounding these materials. It is imperative that producers of these materials are held to account for producing non-reusable, non-recyclable packaging.</p> <p>Potential Solutions – Companies should be required to produce only packaging that is either reusable or a highly marketable material for recycling. Further, companies should strive to reduce the amount of packaging a product requires. Finally, an effort to phase out single-use items should be enacted as they waste natural resource, are energy inefficient, and take up landfill space.</p> |

¹ [2016 to 2020 Comparison \(kauai.gov\)](#)
² [Plastic Bag Reduction Ordinance 885 \(kauai.gov\)](#)
³ [Administrative Rules Pertaining to the Implementation of Ordinance 885 \(kauai.gov\)](#)
⁴ [Ordinance No. 902 \(kauai.gov\)](#)
⁵ [Polystyrene Food Service Container Ban \(kauai.gov\)](#)
⁶ [County of Kauai Administrative Rules Pertaining to the Implementation of of Ordinance 1079 Article 27, Chapter 22 \(kauai.gov\)](#)
⁷ [Policy to Prohibit the Purchase, use, or Distribution of Disposable Plastics on County Property \(kauai.gov\)](#)
⁸ [Plastics Recycling and Packaging Reuse \(kauai.gov\)](#)
⁹ [County of Kaua'i Waste Characterization Study 2017 Final Report \(kauai.gov\)](#)
¹⁰ [Residential Drop Bin Program \(kauai.gov\)](#)



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| County: | Maui | Solid Waste Issue: Packaging |
| Population (2020 Census): | 165,000 | |
| Last Update to SWMP: | 2009, 2024 draft pending | |
| Waste Characterization Data: | <p>According to the County ISWMP, the Countywide waste stream in 2012 comprised of the following quantities—a portion of which is assumed to be packaging materials.¹</p> <ol style="list-style-type: none"> 1. Paper: <ul style="list-style-type: none"> • OCC (Recyclable) Kraft: 11,183 tons (5.0 percent of the total waste stream) • Newspaper: 4,249 tons (1.9 percent of the total waste stream) • Mixed Recyclable Paper: 15,209 tons (6.8 percent of the total waste stream) • Compostable Paper: 8.9% 19,905 tons (8.9 percent of the total waste stream) • Non-Recoverable Paper: 1,789 tons (0.8 percent of the total waste stream) • High Grade Office Paper: 2,012 tons (0.9 percent of the total waste stream) 2. Plastic: <ul style="list-style-type: none"> • #1 PET Bottles (Non-HI-5): 671 tons (0.3 percent of the total waste stream) • Other Bottles and Containers: 1,566 tons (0.7 percent of the total waste stream) • Plastic Film and Wrap: 10,735 tons (4.8 percent of the total waste stream) • Other Plastic Products: 12,524 tons (5.6 percent of the total waste stream) 3. Wood: <ul style="list-style-type: none"> • Wood Pallets: 3,355 tons (1.5 percent of the total waste stream) | |
| Waste Diversion Data: | <p>In FY 2023, 2,677 tons of recyclables were diverted through the County recycling Centers - a portion of which is assumed to be packaging:</p> <p>The quantity of other diverted packaging materials in FY 2023 is unknown. Efforts for packaging waste reduction has been ongoing and listed under the County Programs and Funding Section below. Measurables are in development to track program(s) effectiveness.</p> | |
| County Ordinances: | <p>County of Maui Ordinance 3587, also known as the Plastic Bag Reduction Ordinance was signed into law in 2010 and incorporated into the Maui County Code in Title 20 Environmental Protection, Chapter 20.18 Plastic Bag Reduction.³ The ordinance prohibits businesses from providing plastic bags to customers, at the point of sale, for transporting groceries or other goods. As an option, the Ordinance allows businesses to provide reusable bags or recyclable paper bags for sale or at no charge to customers at the point of sale.</p> <p>County of Maui Ordinance 4457, also known as the Polystyrene Foam Food Service Container Prohibition, was signed into law in 2016 and incorporated into the Maui County Code in Title 20 Environmental Protection, Chapter 20.26, restricting the use and sale of polystyrene foam food service containers. ⁴ The ordinance prohibits food providers and County facilities, authorized concessions, programs, or events from selling, using, providing or offering polystyrene foam food service containers, including packaging. Exemptions are allowed for raw or butchered meats, protective packaging, and other unique situations. Environmentally preferred alternatives are encouraged, such as containers made from recyclable and compostable materials.</p> | |





County of Maui Ordinance 5236⁵ amends Ordinance 4457 to include disposable bodyboards.

County of Maui Ordinance 5084, also known as the Plastic Disposable Foodware Prohibition, went into effect on March 1, 2022. The ordinance prohibits food providers and County facilities, authorized concessions, programs, and events from selling, using, providing, or offering plastic disposable foodware.

Overview:

In Maui, residents can recycle cardboard, newspaper, glass containers, plastic bottles #1 and #2, and aluminum and steel cans at the County's Recycling Centers. The collected recyclables are taken to a Materials Recovery Facility in Kahului to be sorted and baled. Most recyclables from the County's Recycling Centers are shipped off island. Cardboard is shipped to either Newport CH International in China, Green Hills International in China, or Genesis Resource Enterprise in New Jersey, newspaper, including mixed office paper and magazines & catalogs, is shipped to either Newport CH International in China or Green Hills International in China, and plastic #1 and #2 are shipped to Newport CH International in China, glass is shipped to Strategic Materials Inc in California, and aluminum and bi-metal cans are shipped to Newport CH International in China or Korea. Presently, there is no curbside recycling collection services being implemented in Maui County. In 2012, the county launched a curbside recycling pilot program that serviced 2,000 homes in South Maui until 2020. The program was originally meant to be expanded island-wide, but was canceled in 2020 due to a rise in processing costs. An updated County Integrated Solid Waste Management Plan is currently being drafted, which may include planning a new curbside recycling program over the next 10 years. Some local companies offer commercial and residential recycling services for a fee.



The Aloha + Challenge is a statewide commitment to achieve Hawaii's sustainability goals, and locally driven framework to implement the United Nations Sustainable Development Goals.

County Programs & Funding:

1. Recycling Grants (estimated funds for FY 2024 are \$500,000) related to packaging:
 - a. Teens on Call- program that sorts and recycles waste stream generated by TSA
 - b. Zero Waste Maui Coalition provides education surrounding zero waste principles and practices including packaging wastes.
 - c. Maui Huliau Foundations provides zero waste event services as well as education and outreach surrounding packaging and other zero waste principles and practices.
 - d. Hoahu Zero Waste Refill Store offers bulk purchases of common household items such as cleaners and toiletries.
 - e. HuiZero LLC, has a reusable container program that offers reusable containers for "to go" food purchases.
 - f. West Maui Green Cycle is conducting a compostable foodware pilot that will actively test the viability and methods required to effectively compost "compostable" foodware.
 - g. Ridge to Reefs is piloting glass to aggregate capabilities for glass containers generated from Maui County waste stream.
 - h. West Maui Green Cycle-School Reusables program



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| | <ul style="list-style-type: none"> i. Marine debris and litter clean ups through Malama Maui Nui, Hawaii Association for Marine debris and Research, and Malama Hamakua. 2. County Recycling Centers⁸ 3. Bring Your Own Program, the County of Maui distributes thousands of reusable shopping bags, and utensil kits every year to promote Maui County Plastic Bag, Polystyrene, and Single Use Plastic Ordinances. 4. General education around shipping packaging, on the Recycling A-Z guide, is to reuse whenever possible and to check with local pack and ship stores since most all on Maui accept packaging materials for reuse dependant upon available space. 5. County Reusable Container Program- the Recycling Section has partnered with various organizations to provide reusable meal containers to replace disposable food containers including UHMC college campus and Saint Anthony School. |
| <p>Estimated Annual Material Type Generation:</p> | <p>There is no Countywide information available on the amount packaging materials being generated.</p> |
| <p>Permitted Collectors and Recyclers/Processors:</p> | <p>Recycling Drop Box Centers^{9, 10}:</p> <ul style="list-style-type: none"> • Central Maui Landfill Refuse and Recycling Center (cardboard, newspaper, glass containers, plastic bottles, and aluminum and steel cans) • Haiku Recycling and Redemption Center (cardboard, newspaper, glass containers, plastic bottles, and aluminum and steel cans [may include HI-5 redemption bottle and cans]) • Hana Landfill Refuse & Recycling Center (cardboard, newspaper, glass containers, plastic bottles, and aluminum and steel cans) • Kahului Recycling Center (cardboard, newspaper, glass containers, plastic bottles, and aluminum and steel cans) • Kihei Recycling and Redemption Center (cardboard, newspaper, glass containers, plastic bottles, and aluminum and steel cans [may include HI-5 redemption bottle and cans]) • Makawao Recycling and Redemption Center (cardboard, newspaper, glass containers, plastic bottles, and aluminum and steel cans [may include HI-5 redemption bottle and cans]) • Molokai-Naiwa Landfill and Recycle Center (, cardboard, newspaper, glass containers, plastic bottles, and aluminum and steel cans [may include HI-5 redemption bottle and cans]) • Olowalu Recycling and Refuse Convenience Center (cardboard, newspaper, glass containers, plastic bottles, and aluminum and steel cans) • Maui EKO Systems (organics processing including pallets)¹¹ |
| <p>News Articles:</p> | <p>Spectrum Local News: “What happens to Maui County’s trash and recyclables?”</p> <p>Maui News: “Container ban shows small improvement on beaches”</p> <p>Maui Now: “1,000 free reusable utensil kits distributed on Maui for Earth Day”</p> |
| <p>Solid Waste Management Issue Statement:</p> | <p>Increased awareness and public pressure regarding packaging waste has led to businesses implementing some source reduction methods to reduce packaged waste. Plastic packaging is cost-effective and generally preferred for fast-moving consumer goods which generates a significant amount of waste. Packaging waste generation has also significantly increased as a result of the COVID-19 pandemic (i.e., take-out instead of dine-in). As consumer behavior shifts globally (i.e., preference for online shopping due to convenience versus in-store shopping), this will further contribute to the packaging problem unless properly addressed.</p> |
| <p>Solid Waste Management Issue Statement:</p> | <p>Issue Statement – From Chapter 3-Source Reduction of the Drafted County of Maui Integrated Solid Waste Management Plan: Source reduction strategies can include changes</p> |



(County to provide issue statement and potential solutions regarding the management of this material type.)

to product design and packaging, reduction of consumer purchases, reuse of consumer materials or goods and bans on use of certain products.

Data tracking has been inaccurate due to outdated information. The most recent waste characterization study was conducted in 2012 and the last diversion rate study of the private/business sector of Maui County was done in 2014.

Potential Solutions – The County of Maui can greatly benefit from a waste characterization study as well as updated diversion statistics.

The County of Maui could follow the recommendations set forth in the drafted ISWMP for Maui County that include implementing a long-term waste management strategy that recommends waste reduction, reuse, recycling, recovery and residual disposal to correlate with the County's mission statement, goals and objectives relating to solid waste handling and well as:

- Establish waste diversion goals
- Continue to support zero waste events
- Expand education and outreach programs
- Partner with the hospitality sector

¹ [County of Maui ISWMP Chapter 2 Waste Stream \(mauicounty.gov\)](#)

³ [Ordinance No. 3587 \(mauicounty.gov\)](#)

⁴ [Ordinance No. 4457 \(mauicounty.gov\)](#)

⁵ [Ordinance No. 5236 \(mauicounty.gov\)](#)

⁸ [County of Maui ISWMP Chapter 4 Recycling \(mauicounty.gov\)](#)

⁹ [County of Maui Residential Recycling Guidelines \(mauicounty.org\)](#)

¹⁰ [Facilities \(mauicounty.gov\)](#)

¹¹ [Residential Recycling Guide A-Z \(mauicounty.gov\)](#)



State: **State of Hawai'i** Solid Waste Issue: **Packaging**

Population (2020 Census): 1.45 million

Last Update to ISWMP: 2000

Waste Characterization Data: According to the 2000 ISWMP, the estimated Statewide disposal quantities in 1998 for the following materials were as follows (a portion of which is assumed to be packaging)¹:

1. **Paper:**
 - **Old Corrugated Cardboard:** 92,579 tons
 - **Old Newspaper:** 43,344 tons
 - **Office Paper/Mixed Paper:** 105,847 tons
2. **Plastic:**
 - **Plastic Bottles:** 10,279 tons

The quantity of other disposed packaging materials is unknown.

Overview:



Hawai'i's geographically remote location demands for the importation of shipped commercial goods, which are typically packaged in materials such as cardboard and other paper, plastic, expanded polystyrene, and wood pallets.

In 2012, Hawai'i became the first state in the U.S. to enforce a single-use plastic grocery bags ban in all counties. This was achieved not through the state legislature, but rather through each County Council at the local level. Hawai'i also became the

fifth "foam free" state in the U.S. after the passage of Bill 2775 in Kaua'i, prohibiting retail and food establishments from using, distributing, or selling disposable food service ware made from expanded polystyrene.

In Honolulu County, approximately 160,000 households have access to bi-weekly curbside recycling collection, in which certain packaging materials may be recycled. Honolulu County residents may also recycle certain packaging materials at either of the City's two blue bins, located on the North Shore. In addition, all public schools in O'ahu have recycling collection programs, which are funded by the State through the Department of Education's refuse collection contract.

In Hawai'i, Kauai, and Maui Counties, there is no island-wide or large-scale curbside recycling program currently being implemented. Some companies offer recycling collection services for a fee in limited areas for both residential and commercial customers. As an alternative to curbside recycling, Hawai'i, Kauai, and Maui County residents may use the County Drop-Off recycling bins for certain packaging materials. In addition, large retailers such as Walmart, Kmart, Costco, and Home Depot typically maintain in-house recycling programs. Some local businesses also accept newspaper to produce shredded paper products used primarily by local agriculture businesses for use in growing and shipping of agricultural products. In each of the counties, most of the collected recyclables are shipped off island to markets in Asia.

The Green Business Program is a free state program that assists and recognizes businesses that strive to operate in an environmentally and socially responsible manner. The program is a



partnership between the Hawai'i State Energy Office, the State's Department of Health (DOH), and the Board of Water Supply. The program highlights Hawaiian businesses that are dedicated to sustainability.

**Legislative Actions and
State Statute**

"It is the goal of the state to reduce by not less than twenty-five percent the amount of office paper generated by all state and county agencies by January 1, 1995, through source reduction." (HRS 342G-3(b))

"It shall be the policy of all state and county public agencies to give preference to the purchase of products made from recycled materials, that are themselves recyclable, and that are designed for durability." (HRS 342G-41)

"The Department of Accounting and General Services, with the assistance of the office, shall develop the recycled product procurement program." (HRS 342G-42(a))

"Double-sided copying shall be standard operating practice for all state and county agencies, offices, and facilities, as available and appropriate." (HRS 342G-44)

"By June 30, 1993, all state and county agencies shall establish an office paper and other materials recovery program." (HRS 342G-45)

Hawai'i State procurement laws encourage State agencies to give preference to bidders who use recycled-content materials, and to *"ensure, to the maximum extent economically feasible, the purchase of materials that may be recycled or reused when discarded, and to avoid the purchase of products deemed environmentally harmful."* (HRS 103D-1005)

Act 254 (2019) created the statewide Plastic Source Reduction Working Group, who was responsible for submitting a report to the Legislature of its findings and recommendations for reducing and recovering plastic from Hawai'i's waste stream.^{2,3}

"Beginning December 31, 2024, it shall be unlawful to manufacture, sell, offer for sale, distribute for sale, or distribute for use in the State any food packaging...to which PFAS chemicals have been intentionally introduced in any amount. The prohibition under this section shall apply to wraps and liners, plates, food boats, and pizza boxes." (HRS §321-602)⁴

H.B. 2399 (2022) would have established an Extended Producer Responsibility Program (EPR), requiring certain producers of fast-moving consumer goods to register with the DOH and pay an annual fee based on the amount of packaging volume the covered producer places on the market each calendar year.⁵ It also would have allocated the deposit of fees into an EPR Special Fund for the development of a report to assess the resources needed to reduce the volume of packaging waste sent to landfills or power plants that by 50 percent and 80 percent by a date to be determined by rule. The latest status update to the proposed bill was in April 2022, when the bill received notice of Senate conferees.

H.B. 85 (2023) was a proposed bill to prohibit lodging establishments from providing personal care products in plastic containers.⁶ However, the measure was deferred.

H.B.1326 (2023) is a proposed bill to establish a statewide program to reduce packaging waste by 70 percent by 2030 and require producers of certain packaging products to fund the program. If enacted, the bill will have reduced plastic pollution and costs to taxpayers by tasking the State DOH to collaborate with relevant parties to develop:

- The Packaging Waste Reduction and Reuse Program would reduce the volume of landfilled or incinerated packaging waste 70 percent by 2030, funded in whole or in part by large producers of consumer-packaged materials. The program will be implemented



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| | <p>by DOH and Hawai'i's counties beginning in July 2027, after review of the program's implementation plan by the public and an advisory council of relevant stakeholders.</p> <ul style="list-style-type: none"> • A statewide assessment of the resources that would be needed to reduce each county's packaging waste 70 percent by 2030. • The Zero Waste Initiative, in which the DOH would facilitate the transition to a zero-waste circular economy through: 1) establishing interim waste reduction goals and programs to maximize reuse, 2) seeking market-based solutions, including giving ample consideration to products that have successful EPR programs in other jurisdictions, and 3) providing annual reports to the legislature on the progress of the initiative. <p>The latest status update to the proposed bill was in March 2023, when it was referred to the Ways and Means committee. ⁷</p> <p>S.B. 2427 (2024) would amend HRS §321 to expand on the materials prohibited for manufacturing, sale, offer for sale, distribution for sale, and distribution to also include food service ware, cosmetic, or personal care product that contain intentionally added PFAS. The bill was introduced in January 2024, and passed first reading. The bill was referred to the Agriculture and Environment (AEN) and Commerce and Consumer Protection (CPN) committees.</p> |
| <p>Hawai'i Administrative Rules (HAR):</p> | <p>HAR 11-58.1 - "Recoverable material" means material that can be diverted from disposal for recycling or bioconversion. This term does not include those materials that are generated and normally used on-site for manufacturing purposes.</p> <p>HAR 11-58.1 - "Recycling" means the collection, separation, recovery, and sale or reuse of secondary resources that would otherwise be disposed of as municipal solid waste and is an integral part of a manufacturing process aimed at producing a marketable product made of postconsumer material.</p> <p>HAR 11-58.1-32 regulates the construction and operation of recyclables handling and recovery facilities including but not limited to the following: (1) Recycling centers which process only source separated materials such as batteries, motor oil, and metal sludges. (2) Recycling facilities which separate recyclables from nonrecyclables on-site. (3) Recycling facilities which only collect, buy, broker, bale, compact or shred recyclable materials.</p> |
| <p>Federal Government:</p> | <p>The Break Free from Plastic Pollution Act, which was first introduced in 2020 and reintroduced in 2021, 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 would 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 bill failed to advance. In October 2023, Senator Jeff Merkley and U.S. Representative Jared Huffman reintroduced the bill once again.</p> <p>In addition to creating an EPR policy, the bill would:</p> <ul style="list-style-type: none"> • Establish source reduction targets for single-use plastic products and beverage containers. • Create a nationwide beverage container refund program. • Eliminate exposure to toxic substances by banning retailers from selling specific types of beverage containers. • Establish a carry-out bag fee. • Ban certain non-recyclable single-use products (i.e., food service products made from foam, single-use condiment packaging, plastic personal care products at hotels, black plastics, and non-compostable produce stickers). • Prevent plastic waste from being exported to developing countries that cannot manage the materials. |



- Establish grant programs to support reusable and refillable products.
- Inclusion of the Protecting Communities from Plastics Act and Plastic Pellet-Free Waters Act.

The Break Free from Plastic Pollution Act of 2023 expands upon earlier versions of the bill, requiring all single-use beverage containers and packaging to be reusable, recyclable or compostable, establishing “robust requirements” for incorporating postconsumer recycled content in beverage containers, and inclusion of “stronger language” regarding toxic substances elimination in beverage containers.

Although the Federal Food, Drug, and Cosmetic Act assigns responsibility to the FDA for ensuring the safety of packaging, the National Environmental Policy Act (NEPA) also requires the FDA to evaluate the environmental impact of the packaging. The FDA’s assessment focuses on the use and disposal of packaging materials, and primarily its recycling impact.

As part of its solid waste management policies, the U.S. Environmental Protection Agency (EPA) is involved in regulating the disposal of packaging materials and making recommendations on preferred waste management options. However, decisions are largely left to state and local authorities.

One way EPA has sought to increase recycling is by encouraging government procurement of recycled products. **Section 6002 of the Resource Conservation Recovery Act (RCRA)** requires EPA to develop guidelines for government agencies to use in the procurement of products containing recycled materials.⁸

Executive Order No. 14057

Sec. 207. Reducing Waste and Pollution. *“Each agency shall minimize waste, including the generation of wastes requiring treatment and disposal; advance pollution prevention; support markets for recycled products; and promote a transition to a circular economy, as defined in section 2 of the Save Our Seas 2.0 Act (Public Law 116–224), by annually diverting from landfills at least 50 percent of non-hazardous solid waste, including food and compostable material...by fiscal year 2025; and 75 percent by fiscal year 2030.”*

Sec. 208. Sustainable Acquisition and Procurement. *“(a) Agencies shall reduce emissions, promote environmental stewardship, support resilient supply chains, drive innovation, and incentivize markets for sustainable products and services by prioritizing products that can be reused, refurbished, or recycled; maximizing environmental benefits and cost savings through use of full lifecycle cost methodologies; purchasing products that contain recycled content, are biobased, or are energy and water efficient, in accordance with relevant statutory requirements; and, to the maximum extent practicable, purchasing sustainable products and services identified or recommended by the Environmental Protection Agency (EPA).”*

While not federally regulated, some state governments have established packaging EPR laws.

Estimated Annual Generation and Diversion:

Estimated Generation: According to the 2000 ISWMP the estimated Statewide generation quantities for the following materials were as follows (a portion of which is assumed to be packaging)⁹

1. **Paper:**
 - **Old Corrugated Cardboard:** 130,900 tons
 - **Old Newspaper:** 55,800
 - **Office Paper/Mixed Paper:** 118,600 tons
2. **Plastic:**
 - **Plastic Bottles:** 10,700 tons



Estimated Diversion: In FY 2023, the following quantities of paper and plastic were estimated to be diverted—a portion of which is assumed to be packaging materials:

1. **Paper:**
 - Cardboard: 40, 558 tons
 - Newspaper: 5,534 tons
 - High Grade: 2,594 tons
 - Mixed: 538 tons
 - Magazines: 453 tons
2. **Plastic:**
 - Rigid Plastics: 3,828 tons
 - Plastic Film: 174 tons

The quantity of other diverted packaging materials in FY 2023 is unknown.

Number of Permitted Recyclers/Processors, and Landfills¹⁰:

See County Packaging Fact Sheets.

Advanced Disposal Fee:

Not available.

Solid Waste Stream Issue Statement:

Increased awareness and public pressure regarding packaging waste has led to businesses implementing some source reduction methods to reduce packaged waste. Plastic packaging is cost-effective and generally preferred for fast-moving consumer goods which generates a significant amount of waste. Packaging waste generation has also significantly increased as a result of the COVID-19 pandemic (i.e., take-out instead of dine-in). As consumer behavior shifts globally (i.e., preference for online shopping due to convenience versus in-store shopping), this will further contribute to the packaging problem unless properly addressed.

Industry Expert Speaker(s):

- Sustainable Packaging Coalition – Lucy Pierce, Project Manager
Email: lucy.pierce@greenblue.org
Phone: (434) 658-1774
- California Product Stewardship Council – Doug Kobold, Executive Director
Email: doug@calpsc.org
Phone: (916) 413-5262

¹ [Hawai'i 2000 ISWMP \(hawaii.gov\)](http://hawaii.gov)

² [Gov. Msg. No. 1356 \(hawaii.gov\)](http://hawaii.gov)

³ [Act 254 Plastic Source Reduction Working Group \(hawaii.gov\)](http://hawaii.gov)

⁴ [HRS 321-602 \(hawaii.gov\)](http://hawaii.gov)

⁵ [HB 2399 \(hawaii.gov\)](http://hawaii.gov)

⁶ [HB 85 \(hawaii.gov\)](http://hawaii.gov)

⁷ [Hawai'i State Legislature \(hawaii.gov\)](http://hawaii.gov)

⁸ [RCRA Section 6002 \(fedcenter.gov\)](http://fedcenter.gov)

⁹ [Hawai'i 2000 Plan for Integrated Solid Waste Management \(hawaii.gov\)](http://hawaii.gov)

¹⁰ Multiple sources. See County fact sheets for details.